



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

November 22, 2016

EA-16-246

Mr. Robert Coffey
Site Vice President
NextEra Energy Point Beach, LLC
6610 Nuclear Road
Two Rivers, WI 54241

**SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 - TRIENNIAL FIRE
PROTECTION INSPECTION REPORT 05000266/2016008; 05000301/2016008
AND EXERCISE OF ENFORCEMENT DISCRETION**

Dear Mr. Coffey:

On October 20, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed a Triennial Fire Protection Inspection at your Point Beach Nuclear Plant, Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on October 20, 2016, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

The NRC inspectors did not identify any findings or violations of more-than-minor significance. However, two licensee-identified violations are listed in Section 4AO7 of this report. One of the licensee-identified violations was eligible for enforcement discretion under the NRC's Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues and Section 11.05(b) of Inspection Manual Chapter 0305. The inspectors concluded that this violation met the criteria established by Section 9.1 of the NRC's Enforcement Policy.

If you contest the subject or severity of the Non-Cited-Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Point Beach Nuclear Plant.

R. Coffey

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In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Robert C. Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50-266; 50-301
License Nos. DPR-24; DPR-27

Enclosure:
IR 05000266/2016008; 05000301/2016008

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-266; 50-301
License Nos: DPR-24; DPR-27

Report Nos: 05000266/2016008; 05000301/2016008

Licensee: NextEra Energy Point Beach, LLC

Facility: Point Beach Nuclear Plant, Units 1 and 2

Location: Two Rivers, WI

Dates: September 19 - October 20, 2016

Inspectors: G. Hausman, Senior Reactor Inspector (Lead)
A. Shaikh, Senior Reactor Inspector
D. Szwarc, Senior Reactor Inspector

Accompanying Personnel: P. Lain, Senior Fire Protection Engineer

Approved by: Robert C. Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Enclosure

SUMMARY

Inspection Report 05000266/2016008, 05000301/2016008; 09/19/2016 – 10/20/2016; Point Beach Nuclear Plant, Units 1 and 2; Routine Triennial Fire Protection Baseline Inspection.

This report covers an announced Triennial Fire Protection Baseline Inspection. The inspection was conducted by Region III inspectors. The U.S. Nuclear Regulatory Commission's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG 1649, "Reactor Oversight Process," Revision 6, dated July 2016.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events and Mitigating Systems

1R05 Fire Protection (71111.05XT)

The inspectors conducted the inspection in accordance with U.S. Nuclear Regulatory Commission (NRC) Inspection Procedure 71111.05XT, "Fire Protection-National Fire Protection Association [NFPA] 805 (Triennial)," issued January 31, 2013. The inspectors reviewed the licensee's Fire Protection Program against the requirements of NFPA 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition," as incorporated by Title 10, *Code of Federal Regulations* (CFR) 50.48(c). The NFPA 805 standard establishes a comprehensive set of requirements for Fire Protection Programs at nuclear power plants. The standard incorporates both deterministic and risk-informed performance-based concepts. The deterministic aspects of the standard are comparable to traditional requirements.

The inspectors conducted a design-based, plant-specific, risk-informed, onsite inspection of the licensee's Fire Protection Program's defense-in-depth elements used to mitigate the consequences of a fire. The inspectors reviewed the licensee's Fire Protection Program to ensure that it met the fire protection concept of defense-in-depth for plant areas important to safety by:

- preventing fires from starting;
- rapidly detecting, controlling and extinguishing fires that do occur;
- providing protection for structures, systems, and components important to safety so that a fire that is not promptly extinguished by fire suppression activities will not prevent the safe-shutdown of the reactor plant; and
- taking reasonable actions to mitigate postulated events that could potentially cause loss of large areas of power reactor facilities due to explosions or fires.

The inspectors evaluated the licensee's Fire Protection Program by focusing on the design, installation, operational status, testing, and material condition of the Fire Protection Program, post-fire safe shutdown (SSD) systems, and B.5.b mitigating strategies. The inspectors verified that the licensee's program is sufficiently implemented and maintained to satisfy that nuclear safety and radioactive release goals, objectives, and performance criteria for all operational modes and plant configurations.

In addition, the inspectors' review and assessment focused on the licensee's post-fire SSD systems for selected risk-significant fire areas. Inspector emphasis was placed on determining that the post-fire SSD capability and the fire protection features were maintained free of fire damage to ensure that at least one post-fire SSD success path was available. The inspectors' review and assessment also focused on the licensee's B.5.b related license conditions, and the requirements of 10 CFR 50.54(hh)(2). The inspector's emphasis was to ensure that the licensee could maintain or restore core cooling, containment, and spent fuel pool cooling capabilities utilizing the B.5.b

mitigating strategies following a loss of large areas of power reactor facilities due to explosions or fires. Documents reviewed are listed in the Attachment to this report.

The fire areas/compartments and the B.5.b mitigating strategy selected for review during this inspection are listed below and in Section 1R05.15. The fire areas/compartments selected constituted four inspection samples and the B.5.b mitigating strategy selected constituted one inspection sample, respectively, as defined in Inspection Procedure 71111.05XT.

Fire Area	Compartment ID	Description
A24	305	Unit 1 4160V Vital Switchgear Room
A30	318	Unit 1 Cable Spreading Room
A01-E	301GRP	Unit 1 Turbine Building General Area
A02	151	Unit 1 Safety Injection Pump Room

.1 Protection of Safe Shutdown Capabilities

a. Inspection Scope

The licensee was in the process of revising their post-fire SSD procedures as part of the transition to NFPA 805. However, the inspectors reviewed the licensee's current fire response abnormal operating procedures (AOPs) to verify that the shutdown methodology properly identified the components and systems necessary to achieve and maintain safe and stable plant conditions. The inspectors reviewed portions of the shutdown from outside of the control room procedure AOP-10A, "Safe Shutdown – Local Control," Revision 72, to ensure that operators could reasonably perform the actions specified in the procedure. The inspectors performed walk-throughs of several AOPs and system operating procedures. For each of the selected fire areas, the inspectors reviewed the fire hazards analysis, and supporting drawings and documentation to verify that SSD capabilities were properly protected.

b. Findings

A licensee identified violation is discussed in Section 4OA7.

.2 Passive Fire Protection

a. Inspection Scope

For the selected fire areas, the inspectors evaluated the adequacy of fire area barriers, penetration seals, fire doors, electrical raceway fire barrier systems, and fire rated electrical cables. The inspectors walked down accessible portions of the selected fire areas to observe material condition, construction details, and the adequacy of design of fire area boundaries (including walls, fire doors, and fire dampers) to ensure they were appropriate for the fire hazards in the area. The inspectors reviewed license documentation, such as NRC NFPA 805 Safety Evaluation Reports, and NFPA standards to verify that Fire Protection Program features met license commitments. In addition, the inspectors reviewed a sample of surveillance and maintenance procedures for selected fire doors, fire dampers, and fire barrier penetration seals to assure they were properly inspected and repaired.

b. Findings

No findings of significance were identified.

.3 Active Fire Protection

a. Inspection Scope

The inspectors walked down and evaluated the adequacy of fire suppression and detection systems to determine that they were installed, tested, and maintained to adequately control and/or extinguish fires associated with the hazards of the selected fire areas. The inspectors observed the material condition, operational lineup, and design of the installed fire detection and suppression systems, including the electric motor driven, diesel motor driven, jockey fire pumps, halon system, manual fire hose and standpipe systems, and fire extinguishers in the selected fire areas. The inspectors reviewed fire pre-plans, and procedures for the selected fire areas to determine if appropriate information was provided to fire brigade members. In addition, the inspectors observed the placement of the fire hoses, fire extinguishers, fire hose nozzle types, and fire hose lengths to verify they were not blocked, and that adequate reach and coverage was provided consistent with the fire protection features and potential fire conditions described in the NFPA 805 fire safety analysis calculations.

b. Findings

No findings of significance were identified.

.4 Protection from Damage from Fire Suppression Activities

a. Inspection Scope

The inspectors evaluated that one success path to achieve and maintain the Nuclear Safety Performance Criteria could be achieved, and would not be adversely affected due to damage from fire suppression activities or from the rupture or inadvertent operation of manual fire suppression systems. The inspectors walked down the selected fire areas to assess in-plant conditions including adequacy and material condition of equipment spray protection, elevations of vulnerable equipment and checked that water would either be contained in the fire affected area, or be safely drained off through floor drains or to other areas. The inspectors addressed the possibility that a fire in one fire area could lead to the migration of smoke or hot gases to other plant areas.

b. Findings

No findings of significance were identified.

.5 Shutdown from a Primary Control Station

a. Inspection Scope

The licensee was in the process of developing the nuclear safety capability assessment (NSCA) and revising their post-fire SSD procedures as part of the implementation of NFPA 805. The inspectors' reviews focused on ensuring that the required functions for post-fire SSD, and the corresponding equipment necessary to perform those functions

were included in the fire response AOPs. The licensee did not credit any primary control stations outside the main control room. The inspectors reviewed existing procedures and conducted interviews with operators and other station personnel.

b. Findings

No findings of significance were identified

.6 Circuit Analyses

a. Inspection Scope

The inspectors verified that the licensee performed an NSCA for the selected fire areas, and that the assessment identified the structures, systems, and components important for achieving safe and stable conditions. For each fire area, the inspectors reviewed the NSCA to identify any potential fire-induced cable damage that could directly affect post-fire SSD. The inspectors reviewed the NSCA to verify that all appropriate cables had been selected. The inspectors then evaluated selected circuits to ensure all fire scenarios had been identified, and dispositioned for all modes of operation including shut down operations, and abnormal plant configurations.

The inspectors verified that the NSCA demonstrated that hot shorts, shorts to ground, or other failures that would result in a spurious actuation will not affect the capability to meet the performance criteria. The inspectors reviewed the licensee's breaker selected coordination analysis between 4.16 kilovolt essential safety features buses, and standby transformers. The inspectors verified that the licensee's assessment identified circuits that may impact the Nuclear Safety Performance Criteria. The assessment demonstrated that hot shorts, shorts to ground or other failures that would not result in a spurious actuation will not affect the capability to meet the performance criteria. The inspectors reviewed fire scenarios and cable attributes, potential undesirable consequences, and common power supply/bus concerns.

The inspectors also reviewed the licensee's response to multiple spurious operations (MSOs) as identified by Nuclear Energy Institute's document, NEI 00-01, and the site's Expert Panel. The review ensured that the licensee followed the approved guidance provided by NEI 00-01, evaluated all appropriate MSO scenarios, and properly addressed any discrepancies.

b. Findings

No findings of significance were identified

.7 Communications

a. Inspection Scope

The inspectors reviewed, on a sample basis, the adequacy of the communication system to support plant personnel in the performance of alternative SSD functions and fire brigade duties. The inspectors verified that the plant telephones, the public address system, and radios were maintained in working order. During a fire, the licensee could

not ensure that the plant telephones and the public address system would remain free of fire damage but would be utilized when available. The inspectors verified that the peer to peer radios would remain functional during and following a fire.

b. Findings

No findings of significance were identified.

.8 Emergency Lighting

a. Inspection Scope

The inspectors performed walkdowns of the selected fire zones, and observed the placement and coverage area of the fixed battery pack emergency lights credited for SSD. As part of the walkdowns, the inspectors focused on the existence of sufficient emergency lighting for access and egress to areas, and for performing necessary equipment operations. The inspectors verified that battery power supplies had sufficient capacity to support recovery actions necessary to meet the Nuclear Safety Performance Criteria. The inspectors reviewed the operability testing and maintenance of the lightning units to ensure that they followed licensee procedures, and accepted industry practice.

b. Findings

No findings of significance were identified.

.9 Cold Shutdown Repairs

a. Inspection Scope

The inspectors determined that the licensee will not credit cold shutdown repairs to meet the Nuclear Safety Performance Criteria outlined in NFPA 805. The inspectors reviewed the NSCA to verify that the licensee had evaluated the need for cold shutdown repairs. However, because the licensee has not fully transitioned to NFPA 805 for their Fire Protection Program, the licensee currently maintains cold shutdown procedures and equipment to satisfy Appendix R requirements. Therefore, the inspectors reviewed the licensee's procedures to determine whether repairs were required to achieve cold shutdown and to verify that dedicated repair procedures, equipment, and material to accomplish those repairs were available onsite. The inspectors also evaluated whether cold shutdown could be achieved within the required time using the licensee's procedures and repair methods. The inspectors also verified that equipment necessary to perform cold shutdown repairs was available onsite and properly staged.

b. Findings

No findings of significance were identified.

.10 Compensatory Measures

a. Inspection Scope

The inspectors conducted a review to verify that compensatory measures were in place for out of service, degraded, or inoperable fire protection, and post fire SSD equipment, systems, or features (e.g., detection and suppression systems, and equipment, passive

fire barriers, pumps, valves or electrical devices providing SSD functions or capabilities). The inspectors also conducted a review of the adequacy of short term compensatory measures to compensate for a degraded function or feature until appropriate corrective actions were taken.

b. Findings

No findings of significance were identified.

.11 Radiological Release

a. Inspection Scope

The inspectors verified that the licensee had provided reasonable assurance that a fire would not result in a radiological release that adversely affects the public, plant personnel, or the environment in accordance with NFPA 805, Section 1.3.2. The inspectors verified that the licensee had evaluated the potential for radioactive releases to any unrestricted areas resulting from fire suppression activities were as-low-as-reasonably-achievable. The inspectors verified that the licensee had analyzed radioactive release on a fire area basis in accordance with NFPA 805, Section 2.2.4. The inspectors walked down the selected fire zones, and verified that the pre-fire plan tactics, and instructions were consistent with the potential radiological conditions identified in the fire hazards analysis.

b. Findings

No findings of significance were identified.

.12 Non-Power Operations

a. Inspection Scope

The plant did not enter an outage during the inspection. However, the inspectors verified that the licensee had defined specific pinch points where one or more key safety functions could be lost during non-power operations. The inspectors reviewed the actions that the licensee would take during higher-risk evolutions where those key safety functions could be lost.

b. Findings

No findings of significance were identified.

.13 Monitoring Program

a. Inspection Scope

The inspection occurred during the licensee's 12-month implementation window for certain items listed in Table S-3, "Implementation Items," of NextEra Energy Point Beach letter NRC-2016-0021, dated May 3, 2016. The NRC approved a 12-month implementation window for items listed in that table in the Safety Evaluation Report dated September 8, 2016. During the inspection the licensee was in the process of

developing and implementing the NFPA 805 Monitoring Program per NFPA 805, Section 2.6. The inspectors did not review the licensee's Monitoring Program because it was not complete.

b. Findings

No findings of significance were identified.

.14 Plant Change Evaluation

a. Inspection Scope

The licensee had not completed any plant change evaluations during the time between issuance of the NFPA 805 license amendment on September 8, 2016, and the end of the inspection.

b. Findings

No findings of significance were identified.

.15 B.5.b Inspection Activities

a. Inspection Scope

The inspectors reviewed the licensee's preparedness to handle large fires or explosions by reviewing selected mitigating strategies. This review ensured that the licensee continued to meet the requirements of their B.5.b related license conditions and 10 CFR 50.54(hh)(2) by determining that:

- Procedures were being maintained and adequate;
- Equipment was properly staged, maintained, and tested;
- Station personnel were knowledgeable and could implement the procedures; and
- Additionally, inspectors reviewed the storage, maintenance, and testing of B.5.b related equipment.

The inspectors reviewed the licensee's B.5.b related license conditions and evaluated selected mitigating strategies to ensure they remain feasible in light of operator training, maintenance/testing of necessary equipment and any plant modifications. In addition, the inspectors reviewed previous inspection reports for commitments made by the licensee to correct deficiencies identified during performance of Temporary Instruction 2515/171 or subsequent performances of these inspections.

The B.5.b mitigating strategy selected for review during this inspection is listed below. The offsite and onsite communications, notifications/emergency response organization activation, initial operational response actions and damage assessment activities identified in Table A.3-1 of NEI 06-12, "B.5.b Phase II and III Submittal Guidance," Revision 2 are evaluated each time due to the mitigation strategies' scenario selected.

NEI 06-12, Revision 2, Section	Licensee Strategy (Table)
3.2.2	Off-site and On-site Communications (Table A.3-1)
3.2.3	Notification/Emergency Response Organization Activation (Table A.3-1)
3.2.4	Initial Operation Response Actions (Table A.3-1)
3.2.5	Initial Damage Assessment (Table A.3-1)
3.3.1	PWR Enhancement Strategy #1, Refueling Water Storage Tank (RWST) Makeup (Table A.4-1)

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems (71152)

a. Inspection Scope

The inspectors reviewed the licensee's Corrective Action Program (CAP) procedures and samples of corrective action documents to verify that the licensee was identifying issues related to the Fire Protection Program at an appropriate threshold and entering them in the CAP. The inspectors reviewed selected samples of condition reports, design packages, and fire protection system non-conformance documents.

b. Findings

No findings of significance were identified.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153)

.1 (Closed) Licensee Event Report 05000266/2007-02-00; 05000301/007-02-00: Non-Compliant Manual Actions Performed in Response to Appendix R Fires

This event, which occurred on May 9, 2007, involved the licensee's identification of 284 non-compliant operator manual actions used to achieve and maintain hot SSD. These manual actions did not meet the criteria of 10 CFR 50, Appendix R, Section III.G.2 which required, in part, that where cables or equipment of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment, one means of ensuring that one of the redundant trains is free of fire damage shall be provided. Instead of providing the required separation, the licensee relied on operator manual actions to achieve and maintain hot SSD following a fire. At the time that the licensee identified this violation in 2007, Point Beach was required to meet the requirements of 10 CFR 50, Appendix R.

The licensee documented the non-compliant manual actions in their CAP and implemented fire watches as a compensatory measure. In addition, while the manual actions were non-compliant with Appendix R they were proceduralized and provided assurance that hot SSD could be achieved and maintained following a fire.

Enforcement aspects of this Licensee Event Report are discussed in Section 4OA7. Documents reviewed as part of this inspection are listed in the Attachment. This Licensee Event Report is closed.

This event follow-up review constituted one sample as defined in Inspection Procedure 71153-05.

4OA6 Management Meetings

.1 Exit Meeting Summary

On October 20, 2016, the inspectors presented the inspection results to Mr. R. Coffey and other members of licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

No interim exits were conducted.

4OA7 Licensee-Identified Violations

The following violations of very-low safety significance (Green) were identified by the licensee and are violations of NRC requirements. These issues meet the criteria of the NRC Enforcement Policy for being dispositioned as Non-Cited Violations (NCVs) and an issue warranting enforcement discretion, respectively.

- The licensee identified a finding of very-low safety significance (Green) and associated NCV of 10 CFR 50.48(c), and NFPA Standard 805, Section 2.2.5, which required that structures, systems, and components required to achieve the selected performance criteria shall be identified on a fire area basis. Contrary to the above, the licensee failed to identify the structures, systems, and components (fire detection and suppression) required to achieve the performance criteria (availability of those systems as documented in the fire probabilistic risk assessment [PRA]) for fire area A01-E, compartment 301. Specifically, the licensee failed to list the fire detection and suppression systems in the Unit 1 turbine building general area in the "Required Fire Protection Systems and Features" table of their license amendment request submittal and in report number R2168-1002-A01-E, "Fire Risk Evaluation for Fire Area A01-E," Revision 2. The licensee credited these systems in their fire PRA model.

The performance deficiency was determined to be more-than-minor because the issue, if left uncorrected, would potentially lead to a more significant safety concern. Specifically, failing to identify the fire detection and suppression systems in the "Required Fire Protection Systems and Features" table could have resulted in the licensee failing to maintain the systems adequately in the future and could have resulted in the availability assumptions of those systems being invalid in the fire PRA. The issue was of very-low safety significance (Green) because the licensee had maintained the systems and had not yet made any changes to their maintenance or availability. The licensee entered this issue into their CAP as Action Request 2159458 and planned on revising the design basis document and perform an extent of condition review.

- The following finding of very-low safety significance (Green) that affected 10 CFR 50.48 was identified by the licensee and is a violation of NRC requirements. This finding was screened and determined to warrant enforcement discretion per the Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues.

The licensee identified a finding of very-low safety significance (Green) and associated NCV of 10 CFR 50, Appendix R, Section III.G.2 for the licensee's failure to ensure that one of the redundant trains was free of fire damage in areas where cables or equipment of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment. Specifically, the licensee relied on the use of operator manual actions instead of providing the required separation criteria to achieve SSD in case of a fire.

The performance deficiency was determined to be more-than-minor because the issue was associated with the Mitigating Systems cornerstone attribute of Protection Against External Factors (Fire) and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The issue was of very-low safety significance (Green) because it did not impact the licensee's ability to reach hot shutdown because the operator manual actions, which were documented in procedures, would have allowed operators to shut down the plant following a fire. The inspectors walked down a sample of approximately 25 of the manual actions during the inspection to determine that they were feasible.

The licensee identified this issue during the transition to NFPA 805, entered the issue into their CAP as Action Request 1318183, and implemented compensatory measures, including fire watches. The violation was not willful and was not likely to have been previously identified because the licensee believed the manual actions were allowed under 10 CFR 50, Appendix R, Section III.G.2. As a result, the inspectors concluded that the violation met all four criteria for exercising enforcement discretion established by Section 9.1 of the NRC's Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues; therefore, the NRC is exercising enforcement discretion to not cite this violation.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

N. Christian, Design Engineer
R. Clark, Licensing
R. Coffey, Site Vice President
D. DeBoer, Plant Manager
F. Domke, Lead Project Manager
J. Fischer, Program Engineer
B. Gerbers, Program Engineering Supervisor
B. Griffin, Communications Manager
R. Harrsch, Engineering Director
R. Hastings, Chemistry Manager
B. Higgins, Operations
K. Locke, Licensing
R. Mrozinsky, Program Engineer
E. Schmidt, Program Engineering Manager
G. Siegfried, System Engineer
D. Smith, Operations
B. Thaker, Fleet Fire Protection Engineer
K. Vincent, Fire PRA
T. Wandrie, Operations
T. Wattleworth, Design Engineer
R. Webber, Site Operations Director
R. Welty, Radiation Protection (RP) Manager
B. Woyak, Licensing Manager

U.S. Nuclear Regulatory Commission

P. Rades, Office of the Inspector General
K. Barclay, Senior Resident Inspector
J. Havertape, Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Discussed

None

Closed

05000266/2007-02-00; 05000301/2007-02-00	LER	Non-Compliant Manual Actions Performed in Response to Appendix R Fires (Section 4OA3)
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LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but rather, that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

CALCULATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
R2014-003-001	NFPA 805 Radioactive Release Review	0
R2168-001-301GRP	Detailed Fire Modeling Report – Fire Compartment: 301GRP	0
R2168-001-305	Detailed Fire Modeling Report – Fire Compartment: 305	2
R2168-1002-A01-E	Fire Risk Evaluation for Fire Area A01-E	2

CORRECTIVE ACTION PROGRAM DOCUMENTS (A/Rs) ISSUED DURING INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
02159458	NFPA 805 Credited Sprinkler Not Identified In FRE	10/03/2016
02159923	2016 NRC FPTI - B.5.B Battery Charging Timer	10/03/2016
02160565	2016 NRC FPTI - Halon System Detector Testing Not Complete	10/06/2016
02160646	No Proceduralized Requirement for RP Response to WH 7 Fire	10/06/2016
02160692	Monthly Operations Inventory Report Walkdown/Inspection	10/06/2016
02160921	Quality Of Completed WO Tasks - Incomplete Procedures	10/10/2016
02161765	2016 NRC FPTI Potential Weakness In PM Program Closeout	10/12/2016
02164082	2016 NRC FPTI: LAR 271 Supporting Documentation	10/20/2016

CORRECTIVE ACTION PROGRAM DOCUMENTS (A/Rs) REVIEWED DURING INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
01318183	RIS 2006-10 Noncompliant SSD Manual Actions Fire Area A06	05/09/2007
01321911	Valves 1/2CS-02125 Not Included in Appendix R SSEL	06/26/2007
02006027	Seabrook Internal OE: B.5.b Pump Issue	11/11/2014
02025228	Radios for B.5.b Response Not Functional During PM/Call-Up	02/13/2015
02064193	Hole in Mesh Barrier (M-7-3-23-E48) Needs Repair	08/02/2015
02076333	B.5.b Hose Trailer Cabinet Shelf is Sagging Excessively	09/24/2015
02133345	B.5.b Pump Used for Pumping Fish Out of Forebay	05/21/2016

DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
E-180, Sheet 13	Electrical Layout Fire Detection System Control Building Area 3	5

DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
M-217, Sheet 1	Piping and Instrumentation Diagram Auxiliary Feedwater System	103
M-217, Sheet 2	Piping and Instrumentation Diagram Auxiliary Feedwater System	20
PB 31 MFPL14912	Fire Protection for Site Plan (Microfilm No. 290583)	12
PBC-218, Sheet 2	Fire Protection for Turbine Building, Auxiliary Building and Containment Elevation 8' – 0"	34
PBC-218, Sheet 3	Fire Protection for Turbine Building, Auxiliary Building and Containment, Elevation 26' – 0"	17 & 19
PBC-219, Sheet 26	Fire Emergency Procedure 4.12 Turbine Building and Auxiliary Building Elevation 8' – 0"	14
PBC-219, Sheet 28	Fire Emergency Procedure 4.14 Turbine Building and Auxiliary Building Elevation 8' – 0"	13
PBC-219, Sheet 36	Fire Emergency Procedure 4.16 Cable Spreading Room Elevation 26' – 0"	6

EVALUATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
FPEE 2015-001	Qualification of PCI-Promatec Silicone Elastomer, TS-MS-0045B Fire Penetration Seal	1
FPTE 002	Technical Evaluation of Inadvertent Suppression System Actuation at PBNP	1
FPTE 007	Technical Evaluation of PBNP Point-to-Point Portable Radio Communications for an Appendix R Fire	2
P2091-2100-01	EPM NextEra Energy – PBNP Fire PRA Notebook Plant Boundary Definition and Partitioning	1
PRA 8.18	P2091-2900-02, NFPA 805 Fire PRA Quantification Notebook, Revision 4	0
R2092-0001-002	EPM NextEra Energy – PBNP Fire Protection Code Conformance Review	1
R2092-1500-001	EPM NextEra PBNP NFPA 805 Transition Project Non-Power Operation Modes Transition Review	3
R2167-1019-001	EPM NextEra Energy – PBNP NFPA 805 NSCA	3

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
0-PT-FP-013	Quarterly Operations B.5.b Fire Equipment Inventory Report	7
0-SOP-DC-001	125 Vdc System, Bus D-01 & Components	21
AOP-0.2	Loss of Safety Related Instrument Busses	6
AOP-10A	PBNP Abnormal Operation Procedure SSD – Local Control	72
EDMG - 1	PBNP Emergency Management Guideline	3
EDMG - 2	Loss of Large Areas of the Plant Due to Fire or Explosion	11
EN-AA-100-1003	Control of Design Interfaces	2
EN-AA-202-1004	Fire Protection Screening	2

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
EPMP 1.1b	RP Emergency Preparedness Quarterly Checklist	44
FEP 4.0	Fire Emergency Plan	5
FEP 4.12	Auxiliary Feedwater Pump and Vital Switchgear Area	10
FEP 4.14	Turbine Hall Unit 1 Fire Emergency Plan	15
FEP 4.16	Control Room/Cable Spreading Room/Computer Room Fire Emergency Plan	10
FOP 1.2	Potential Fire Affected SSD Components	24
NP 1.9.9	Transient Combustible Control	29
NP 8.4.13	Fuse Replacement	15
OP-AA-107	Extensive Damage Management Program: Attachment 7, PBNP - B.5.b Procedure Process (PWR); and Appendix E, PBNP License Condition	7
0-PT-FP-013	Quarterly Operations B.5.b Fire Equipment Inventory Report	10
PBN-BEP-061-003Q	Auxiliary Operator Emergency Preparedness Qualification Guide	8
PBN-BEP-081-005Q	Control Operator Emergency Preparedness Qualification Guide	5
PC 6 Part 1	Monthly Operations Inventory Report	68
PC 21 Part 6	B.5.b and Miscellaneous Weekly Checks and FLEX Equipment Monthly Checks	1
RDW 14.4	Requirements for the Storage of Containers in Outside Areas Including WH 7	7
RMP 262	Emergency Replacement of Power Supply Cables to RHR and CCW Pump Motors	3
RMP 9006-4	CCW Pump Motor Emergency Replacement	12
RMP 9057	Fire Barrier Penetration Fire Seal Surveillance	26
RMP 9263	Installation for Emergency Replacement of Power Supply Cables to D-109 Battery Charger	3
RMP 9376-12	Emergency Power for Containment Motor Operated Valves	2
TS 78	Semi-Annual Halon 1301 Fire Suppression System Surveillance Test	27

OTHER DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date/Revision</u>
71111.05XT	NRC Inspection Procedure - Fire Protection - NFPA 805 (Triennial)	01/31/2013
Amendment	PBNP, Units 1 and 2 - Issuance of Amendments (256 to DPR-24 and 260 to DPR-27) Regarding Transition to a Risk-Informed, Performance-Based FP Program in Accordance with 10CFR50.48(c) (CAC Nos. MF2372 and MF2373)	09/08/2016
EC271218	Install Fire Penetration Seals for NFPA 805 Fire Protection Program Transition	13
EC283586	Compliance Elements List NFPA-805 FP Program Implementation	0

OTHER DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date/Revision</u>
ML092730314	RG 1.205, RIS-Informed, Perf-Based FP for Existing Light-Water Nuclear Power Plants dated December 2009	1
NEI 00-01	Guidance for Post-Fire SSD Circuit Analysis	2
NEI 06-12	B.5.b Phase II and III Submittal Guidance	2
NRC Letter	PBNP, Units 1 and 2 - Notification of NRC Triennial Fire Protection Baseline Inspection Request for Information 05000266/2016008; 05000301/2016008	06/17/2016
PBF-2058A	Fire Round Performance Sheet – Turbine Hall (Hourly – 09/25/2016)	13
PBF-2058A	Fire Round Performance Sheet – Turbine Hall (Every Four Hours – 09/25/2016)	13
PBF-2058B	Fire Round Performance Sheet – Primary Auxiliary Building (Hourly – 09/25/2016)	11
PBF-2058B	Fire Round Performance Sheet – Primary Auxiliary Building (Every Four Hours – 09/25/2016)	11
PBF-2058c	Fire Round Performance Sheet – Miscellaneous Areas (Every Four Hours – 09/25/2016)	7

VENDOR DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
N/A	Motorola Portable Radios Basic Service Manual	-
NPC99-02100	Teledyne Big Beam, Emergency Light Illumination Test	11/02/1983

WORK ORDERS (WOs)

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
40301875	Perform Functional Test of Portable Diesel Fire Pump	01/15/2015
40354302-01	S-78 Halon 1301 Fire Suppression NON-TS Surveillance	09/17/2015
40374550	Inspect Flood Barriers	01/27/2016
40394538-01	TS-77, Smoke Detector System Integrity Test	03/07/2016
40409709-01	Perform B.5.b Fire Equipment Inventory Check	06/21/2016
40410416	Service Testing of Fire Hose and Hose Stations	05/09/2016
40437106	Perform B.5.b Miscellaneous Weeks Checks and FLEX Equipment Monthly Checks	09/21/2016
40434673-01	PC-6.1 Operations Monthly Inventory Report	09/20/2016
4054202-01	Test Fire Damper M-7-3-23-E48	09/18/2015
94110822	Perform Vendor Inspection of Portable Diesel Driven Fire Water Pump	01/08/2015

LIST OF ACRONYMS USED

ADAMS	Agency-Wide Document Access and Management System
AOP	Abnormal Operating Procedure
CAP	Corrective Action Program
CFR	Code of Federal Regulations
NCV	Non-Cited Violation
NFPA	National Fire Protection Association
NRC	U.S. Nuclear Regulatory Commission
NSCA	Nuclear Safety Capability Assessment
PARS	Publically Available Records System
PRA	Probabilistic Risk Assessment
SSD	Safe Shutdown

R. Coffey

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Sincerely,

/RA/

Robert C. Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50-266 and 50-301
License Nos. DPR-24 and DPR-27

Enclosure:
IR 05000266/2016008; 05000301/2016008

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