



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

January 9, 2014

Mr. Michael J. Pacilio
Senior Vice President, Exelon Generation Co., LLC
President and Chief Nuclear Officer, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BYRON STATION, UNITS 1 AND 2,
TRIENNIAL FIRE PROTECTION INSPECTION REPORT
05000454/2013008; 05000455/2013008

Dear Mr. Pacilio:

On December 13, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed a Triennial Fire Protection Inspection at your Byron Station. The enclosed inspection report documents the inspection results, which were discussed on December 13, 2013, with Mr. R. Kearney, Site Vice-President 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.

No findings were identified during this inspection.

In accordance with Title 10, *Code of Federal Regulations* (CFR), Section 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS), 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. 50-454; 50-455
License Nos. NPF-37; NPF-67

Enclosure: Inspection Report 05000454/2013008; 05000455/2013008
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ™

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-454; 50-455
License No: NPF-37; NPF-66

Report No: 05000454/2013008; 05000455/2013008

Licensee: Exelon Generation Company, LLC

Facility: Byron Station

Location: Byron, IL

Dates: November 18, 2013 thru December 13, 2018

Inspectors: R. Langstaff, Senior Reactor Inspector (Lead)
M. Munir, Reactor Inspector
R. Winter, Reactor Engineer

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

Enclosure

SUMMARY

IR 05000454/2013008, 05000455/2013008; 11/18/2013 – 12/13/2013; Byron Station, 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 NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealed Findings

No findings of significance were identified.

B. Licensee-Identified Violations

No violations of significance were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events and Mitigating Systems

1R05 Fire Protection (71111.05T)

The purpose of the fire protection triennial baseline inspection was to conduct 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 Fire Protection Program shall extend the concept of defense-in-depth to fire protection in 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' evaluation focused on the design, operational status, and material condition of the reactor plant's fire protection program, post-fire safe shutdown systems, and B.5.b mitigating strategies. The objectives of the inspection were to assess whether the licensee had implemented a Fire Protection Program that: (1) provided adequate controls for combustibles and ignition sources inside the plant; (2) provided adequate fire detection and suppression capability; (3) maintained passive fire protection features in good material condition; (4) established adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems or features; (5) ensured that procedures, equipment, fire barriers and systems exist so that the post-fire capability to safely shut down the plant was ensured; (6) included feasible and reliable operator manual actions when appropriate to achieve safe shutdown; and (7) identified fire protection issues at an appropriate threshold and ensured these issues were entered into the licensee's problem identification and resolution program.

In addition, the inspectors' review and assessment focused on the licensee's post-fire safe shutdown systems for selected risk significant fire areas. Inspector emphasis was placed on determining that the post-fire safe shutdown capability and the fire protection features were maintained free of fire damage to ensure that at least one post fire safe shutdown 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 Title 10, *Code of Federal Regulations* (10 CFR) 50.54 (hh)(2). Inspector 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 and B.5.b mitigating strategies selected for review during this inspection are listed below and in Section 1R05.13. The fire areas selected constituted four

inspection samples and the B.5.b mitigating strategies selected constituted two inspection samples, respectively, as defined in Inspection Procedure 71111.05T.

Fire Area	Description
2.1-0	Control Room
3.1-1	Unit 1 Cable Tunnel
3.2 A-1	Unit 1 Non-segregated Bus Duct Area
11.4-0	Auxiliary Building General Area 383 Feet - 0 Inches

.1 Protection of Safe Shutdown Capabilities

a. Inspection Scope

For each of the selected fire areas, the inspectors reviewed the fire hazards analysis, safe shutdown analysis, and supporting drawings and documentation to verify that safe shutdown capabilities were properly protected.

The inspectors also reviewed the licensee's design control procedures to ensure that the process included appropriate reviews and controls to assess plant changes for any potential adverse impact on the Fire Protection Program and/or post-fire safe shutdown analysis and procedures.

b. Findings

No findings of significance were identified.

.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 barriers, and fire rated electrical cables. The inspectors observed the material condition and configuration of the installed barriers, seals, doors, and cables. The inspectors reviewed approved construction details and supporting fire tests. In addition, the inspectors reviewed license documentation, such as NRC safety evaluation reports, and deviations from NRC regulations and the National Fire Protection Association (NFPA) standards to verify that fire protection features met license commitments.

The inspectors walked down accessible portions of the selected fire areas to observe material condition 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 the installation, repair, and qualification records for a sample of penetration seals to ensure the fill material was of the appropriate fire rating and that the installation met the engineering design.

b. Findings

No findings of significance were identified.

.3 Active Fire Protection

a. Inspection Scope

For the selected fire areas, the inspectors evaluated the adequacy of fire suppression and detection systems. The inspectors observed the material condition and configuration of the installed fire detection and suppression systems. The inspectors reviewed design documents and supporting calculations. In addition, the inspectors reviewed license basis documentation, such as, NRC safety evaluation reports, deviations from NRC regulations, and NFPA standards to verify that fire suppression and detection systems met license commitments.

b. Findings

No findings of significance were identified.

.4 Protection from Damage from Fire Suppression Activities

a. Inspection Scope

For the selected fire areas, the inspectors verified that redundant trains of systems required for hot shutdown would not be subject to damage from fire suppression activities or from the rupture or inadvertent operation of fire suppression systems including the effects of flooding. The inspectors conducted walkdowns of each of the selected fire areas to assess conditions such as the adequacy and condition of floor drains, equipment elevations, and spray protection.

b. Findings

No findings of significance were identified.

.5 Alternative Shutdown Capability

a. Inspection Scope

The inspectors reviewed the licensee's systems required to achieve alternative safe shutdown to determine if the licensee had properly identified the components and systems necessary to achieve and maintain safe shutdown conditions. The inspectors also focused on the adequacy of the systems to perform reactor pressure control, reactivity control, reactor coolant makeup, decay heat removal, process monitoring, and support system functions.

The inspectors conducted selected area walkdowns to determine if operators could reasonably be expected to perform the alternate safe shutdown procedure actions and that equipment labeling was consistent with the alternate safe shutdown procedure. The review also looked at operator training, as well as consistency between the operations shutdown procedures and any associated administrative controls.

b. Findings

No findings of significance were identified.

.6 Circuit Analyses

a. Inspection Scope

The inspectors verified that the licensee performed a post-fire safe shutdown (SSD) analysis for the selected fire areas and the analysis appropriately identified the structures, systems, and components important to achieving and maintaining safe shutdown. Additionally, the inspectors verified that the licensee's analysis ensured that necessary electrical circuits were properly protected and that circuits that could adversely impact safe shutdown due to hot shorts, shorts to ground, or other failures were identified, evaluated, and dispositioned to ensure spurious actuations would not prevent safe shutdown.

The inspectors' review considered fire and cable attributes, potential undesirable consequences, and common power supply/bus concerns. Specific items included the credibility of the fire threat, cable insulation attributes, cable failure modes, and actuations resulting in flow diversion or loss of coolant events.

The inspectors also reviewed cable raceway drawings for a sample of components required for post-fire safe shutdown to verify that cables were routed as described in the cable routing matrices.

The inspectors reviewed circuit breaker coordination studies to ensure equipment needed to conduct post-fire safe shutdown activities would not be impacted due to a lack of coordination. Additionally, the inspectors reviewed a sample of circuit breaker maintenance records to verify that circuit breakers for components required for post-fire safe shutdown were properly maintained in accordance with procedural requirements.

The inspectors verified for cables that are important to SSD, but not part of the success path, and that do not meet the separation/protection requirements of Section III.G.2 of 10 CFR Part 50, Appendix R, that the circuit analysis considered the cable failure modes. In addition, the inspectors have verified that the licensee has either: (1) determined that there is not a credible fire scenario (through fire modeling), (2) implemented feasible and reliable manual actions to assure SSD capability, or (3) performed a circuit fault analysis demonstrating no potential impact on SSD capability exists.

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 safe shutdown functions and fire brigade duties. The inspectors verified that plant telephones, page systems, sound powered phones, and radios were available for use and maintained in working order.

The inspectors reviewed the electrical power supplies and cable routing for these systems to verify that either the telephones or the radios would remain functional following a fire.

b. Findings

No findings of significance were identified.

.8 Emergency Lighting

a. Inspection Scope

The inspectors performed a plant walkdown of selected areas in which a sample of operator actions would be performed in the performance of alternative safe shutdown functions. 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 locations and positioning of the emergency lights were observed during the walkdown and during review of manual actions implemented for the selected fire areas.

b. Findings

No findings of significance were identified.

.9 Cold Shutdown Repairs

a. Inspection Scope

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 safe shutdown equipment, systems, or features (e.g., detection and suppression systems, and equipment, passive fire barriers, pumps, valves or electrical devices providing safe shutdown 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 Review and Documentation of Fire Protection Program Changes

a. Inspection Scope

The inspectors reviewed changes to the approved fire protection program to verify that the changes did not constitute an adverse effect on the ability to safely shutdown. The inspectors also reviewed the licensee's design control procedures to ensure that the process included appropriate reviews and controls to assess plant changes for any potential adverse impact on the Fire Protection Program and/or post-fire safe shutdown analysis and procedures.

b. Findings

No findings of significance were identified.

.12 Control of Transient Combustibles and Ignition Sources

a. Inspection Scope

The inspectors reviewed the licensee's procedures and programs for the control of ignition sources and transient combustibles to assess their effectiveness in preventing fires and in controlling combustible loading within limits established in the fire hazards analysis. A sample of hot work and transient combustible control permits were also reviewed. The inspectors performed plant walkdowns to verify that transient combustibles and ignition sources were being implemented in accordance with the administrative controls.

b. Findings

No findings of significance were identified.

.13 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 (TI) 2515/171 or subsequent performances of these inspections.

The B.5.b mitigating strategies selected for review during this inspection are 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 Nuclear Energy Institute (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)
2.3.1	Spent Fuel Pool Makeup (A.2-2)
2.3.2	Spent Fuel Pool Spray (A.2-3)

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 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 Corrective Action Program. 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.

4OA6 Management Meetings

.1 Exit Meeting Summary

On December 13, 2013, the inspectors presented the inspection results to Mr. R. Kearney, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

R. Kearney, Site Vice-President
F. Beutler, Design Engineering
T. Edwards, Fire Marshal
J. Fiesel, Director, Maintenance
E. Hernandez, Director, Engineering
M. Krawczyk, Fire Protection Program Owner
R. Lawlor, Superintendent, Shift Operations
B. Ledger, Manager, Design Electrical Branch
J. Martinez, Fire Protection System Manager
K. McGuire, Manager, Balance of Plant Branch
C. Pragman, Corporate Engineering
M. Taylor, Corporate Engineering
L. Wehner, Manager, Nuclear Oversight

Nuclear Regulatory Commission

J. Robbins, Resident Inspector

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

None

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 of 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.

AUDITS AND SELF ASSESSMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
1463332	Byron Triennial Fire Protection Inspection Preparatory Self-Assessment	June 30, 2013
NOSA-BYR-11-09	Fire Protection Audit Report	December 14, 2011
NOSA-BYR-12-14	Fire Protection Increased Frequency Audit Report	December 31, 2012
NOSA-BYR-13-09	Fire Protection Audit Report	October 15, 2013

CALCULATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
BYR 11-048	Multiple Spurious Operations Scenario Analysis (Main Body)	Revision 0
BYR 11-048, Appendix 01	MSO Scenario 01 Isolation of RCP Seal Injection	Revision 1
EC 049312	RWST Inventory Following Valve SI8811A/B	Revision 0

CORRECTIVE ACTION PROGRAM DOCUMENTS ISSUED DURING INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
1587304	Need Light Bulb Replaced for Lamp in LCSR Near P/8	November 19, 2013
1591916	NRC ID: Enhancement to EDMG-4	December 2, 2013
1593392	NRC FPTE – 4 Valves not Included in BOP FR-1 Table 3	December 5, 2013
1594467	Minor Discrepancy in EMD Detection Surveillance Procedures	December 9, 2013
1595140	Repair Cable Routing Report inventory List Out-of-Date	December 10, 2013
1595358	NRC ID – Post Fire Cold Shutdown C/S Repairs	December 10, 2013
1595871	NRC ID'D: Enhancement Opportunity for ELBP 0LL033E	December 11, 2013
1596138	NRC ID: Emergency Light 0LL061E	December 12, 2013
1596378	NRC ID'D: Compliance Issue with OP-BY-201-009	December 12, 2013

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
1281873	NOS Finding: Incomplete Functional Testing of CO2 System	October 26, 2011
1282927	NOS ID: Fire Door Surveillances Lack Condition Monitoring	October 28, 2011
1284023	NOS ID: Compressed Gas Hazard not in Fire Pre Plans	October 31, 2011
1278666	NOS ID: Stairway Sprinkler has Multiple Interferences	October 19, 2011
1409288	Two 29 YR Old Gas Cyls in AB Passed (Past) The Test Date	September 25, 2012
1585632	Flammable Gas Cylinders Not Being Used Should Be Removed	November 15, 2013
1344418	Missed TLCO Fire Watches	March 22, 2012
1569783	Unable to Gain Access With key into 111 Battery Room	October 9, 2012
1555323	Misapplication of 15 Min Grace During Fire Watches	September 7, 2013
1583665	Degrading Trend in Fire Watch Responsibilities	November 11, 2013

DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
6E-0-4B0WO01	Schematic Diagram Control Room Refrigeration Unit 0A-0WO01CA	Revision O
6E-1-4030AF01	Schematic Diagram Auxiliary Feedwater Pump 1A 1AF01PA	Revision AD
6E-1-4030CC01	Schematic Diagram Component Cooling Pump 1A 1CC01PA	Revision U
6E-1-4030CS01	Schematic Diagram Containment Spray Pump 1A 1CS01PA	Revision W
6E-1-4030CV01	Schematic Diagram Centrifugal Charging Pump 1A 1CV01PA	Revision S
6E-1-4030DG31	Schematic Diagram Diesel Generator 1A Starting Sequence Control 1DG01KA Part 1	Revision AN
6E-1-4030DG32	Schematic Diagram Diesel Generator 1A Starting Sequence Control 1DG01KA Part 2	Revision AG
6E-1-4030RH01	Schematic Diagram Residual Heat Removal Pump 1A 1RH01PA	Revision O
6E-1-4030SI01	Schematic Diagram Safety Injection Pump 1A 1SI01PA	Revision N
6E-1-4030SX07	Schematic Diagram Essential Service Water Return Header Crosstie Valves 1SX010 and 1SX011	Revision G
6E-1-4030SX13	Schematic Diagram Essential Service Water Pumps 1A and 1B Crosstie Valves 1SX033 and 1SX034	Revision G

DRAWINGS

Number	Description or Title	<u>Date or Revision</u>
FPI-104	TRM FP Inspection Auxiliary Building Units 1 and 2 EL 383'-0"	Revision A
M-603	Auxiliary Building Viking Sprinkler Systems EL 383'-0"	Revision C
S-1309	Auxiliary Building Floor Framing Plan EI 451'-0"	Revision BP
S-696	Auxiliary Building Floor Framing Plan EI 401'-0" Area 2	Revision DD
S-697	Auxiliary Building Floor Framing Plan EI 401'-0" Area 3	Revision DD

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	Byron/Braidwood Station Post-Fire Safe Shutdown Area Analysis Equipment Access/Environment/Emergency Lighting Evaluation Report	
12-01	Fire Drill Record, Crew A	January 24, 2012
12-01	Fire Drill Record, Crew B	January 17, 2012
12-01	Fire Drill Record, Crew C	February 15, 2012
12-01	Fire Drill Record, Crew D	March 24, 2012
12-01	Fire Drill Record, Crew E	March 6, 2012
12-02	Fire Drill Record, Crew A	May 8, 2012
12-02	Fire Drill Record, Crew B	June 5, 2012
12-02	Fire Drill Record, Crew C	April 24, 2012
12-02	Fire Drill Record, Crew D	April 17, 2012
12-02	Fire Drill Record, Crew E	May 16, 2012
12-03	Fire Drill Record, Crew A	July 18, 2012
12-03	Fire Drill Record, Crew B	July 11, 2012
12-03	Fire Drill Record, Crew C	August 8, 2012
12-03	Fire Drill Record, Crew D	July 31, 2012
12-03	Fire Drill Record, Crew E	August 28, 2012
12-04	Fire Drill Record, Crew A	November 6, 2012
12-04	Fire Drill Record, Crew B	October 30, 2012
12-04	Fire Drill Record, Crew C	November 3, 2012
12-04	Fire Drill Record, Crew D	October 16, 2012
12-04	Fire Drill Record, Crew E	November 13, 2012
13-01	Fire Drill Record, Crew A	January 15, 2013
13-01	Fire Drill Record, Crew B	February 24, 2013
13-01	Fire Drill Record, Crew C	February 16, 2013
13-01	Fire Drill Record, Crew D	January 29, 2013
13-01	Fire Drill Record, Crew E	January 23, 2013
13-02	Fire Drill Record, Crew A	June 11, 2013
13-02	Fire Drill Record, Crew B	June 15, 2013
13-02	Fire Drill Record, Crew C	June 9, 2013
13-02	Fire Drill Record, Crew D	June 1, 2013

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
13-02	Fire Drill Record, Crew E	May 15, 2013
13-03	Fire Drill Record, Crew A	September 7, 2013
13-03	Fire Drill Record, Crew B	August 13, 2013
13-03	Fire Drill Record, Crew D	July 30, 2013
13-03	Fire Drill Record, Crew E	July 23, 2013
13-03a	Fire Drill Record, Crew C	September 10, 2013
13-04	Fire Drill Record, Crew A	November 10, 2013
13-04	Fire Drill Record, Crew B	November 9, 2013
13-04	Fire Drill Record, Crew C	November 2, 2013
13-04	Fire Drill Record, Crew D	November 13, 2013
13-04	Fire Drill Record, Crew E	November 17, 2013
CHEMETRON FL-21352	Low Pressure CO2 System Test Report – Cable Tunnel Unit 1	June 14, 1984
CHEMETRON FL-21352	Low Pressure CO2 System Test Report – Lower Cable Spreading Room Unit 1	June 14, 1984
FDRP 24-051	Fire Protection Report Change	Revision 0
FZ 11.3-0 West	Aux Bldg 364' 0" ELEV General Area West	Revision 2
FZ 11.4-0 North	Aux Bldg 383' 0" ELEV General Area West	Revision 0
FZ 11.4-0 South	Aux Bldg 383' 0" ELEV General Area West	Revision 0
FZ 11.4-0 West	Aux Bldg 383' 0" ELEV General Area West	Revision 0
FZ 2.1-0	Aux Bldg 451' 0" ELEV Control Room	Revision 0
FZ 2.1-0	Aux Bldg 451' 0" ELEV Control Room	Revision 0
FZ 3.1-1	Aux Bldg 414' ELEV Cable Tunnel	Revision 0

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
1BOA PRI-5	Control Room Inaccessibility, Unit 1	Revision 108
BAP 1100-10T5	B.5.B And Flex Equipment Inventory	Revision 12
BAP 1100-16	Administrative Controls For Required Fire Watch/PBI Inspections	Revision 15
BHP 4200-33	Installation of Appendix "R" Emergency Cable	Revision 10
BOP FR-1	Fire Response Guidelines	Revision 15
BOP FR-1T27	Fire Zones 3.2A-1 and -2; Unit 1/Unit 2 Non-segregated Bus Duct Area (Lower Cable Spreading Rooms); 1D-49/1D- 50/2D-49/2D-50	Revision 7
BOP FR-1T38	Fire Zone 2.1-0, Main Control Room, 1D- 75	Revision 10
BOP FR-1T6	11.4-0, 11.4A-1, 11.4A-2; 383' Auxiliary Building General Area and 1B / 2B AF Pump Rooms; 1D-11, 1D-12, 1S-41, 1S- 42, 2S-41, 2S-42, 2S-54	Revision 11

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
BOP-FP-27	Smoke Removal Plan And NCR/AEER Supplemental Cooling Plan	Revision 6
EDMG-1	Extensive Damage Mitigation Guideline	Revision 9
EDMG-3	External Spent Fuel Pool (SFP Makeup Strategy	Revision 4
EDMG-4	External Spent Fuel Pool (SFP Spray Strategy	Revision 6
OB-BY-201-009	Control of Transient Combustible Materials	Revision 6
OP-AA-201-003	Fire Drill Performance	Revision 12

WORK ORDER DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
01348297 01	Tech Spec Fire Damper Visual Inspection	April 9, 2012
01438427 01	FP Surv Fire Detection Zone 1D-64 , 1D- 65 Cable Tunnel	March 12, 2013
01499721 01	Fire Detection Zones 8,9,11,14,15,17,29,40 Surveillance	October 22, 2013
01500659 01	LCSR AREA 2S-46 Low Pressure CO2 Det Zone 2D-55, -56	October 25, 2013
01501134 01	Fire Barrier Penetration Visual Insp -18 Month Surveillance	7/1/13
01620888 01	Semi Annual Inspection of TRM Fire Doors	8/26/13

List of Acronyms Used

ADAMS	Agencywide Document Access Management System
CFR	Code of Federal Regulations
NEI	Nuclear Energy Institute
NFPA	National Fire Protection Association
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records
SSD	Safe Shutdown
TI	Temporary Instruction

Mr. Michael J. Pacilio
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Letter to Michael J. Pacilio from Robert C. Daley dated January 9, 2014.

SUBJECT: BYRON STATION, UNITS 1 AND 2,
TRIENNIAL FIRE PROTECTION INSPECTION REPORT
05000454/2013008; 05000455/2013008

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