



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD
KING OF PRUSSIA, PENNSYLVANIA 19406**

June 8, 2012

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

**SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 - NRC
TRIENNIAL FIRE PROTECTION INSPECTION REPORT 05000277/2012007
AND 05000278/2012007**

Dear Mr. Pacilio:

On May 18, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed a triennial fire protection inspection at your Peach Bottom Atomic Station (PBAPS), Unit Nos. 2 and 3. The enclosed inspection report documents the inspection results, which were discussed on May 18, 2012, with Mr. Garey Stathes 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 station personnel. The inspectors also reviewed mitigation strategies for addressing large fires and explosions.

Based on the results of this inspection, no findings were identified.

In accordance with 10 CFR 2.390 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 Public Document Room or from the Publicly Available Records System (PARS) component of the NRC's document system, 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,

A handwritten signature in black ink, appearing to read "John F. Rogge".

John F. Rogge, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50-277; 50-278
License Nos. DPR-44; DPR-56

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

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 - NRC
 TRIENNIAL FIRE PROTECTION INSPECTION REPORT 05000277/2012007
 AND 05000278/2012007

Dear Mr. Pacilio:

On May 18, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed a triennial fire protection inspection at your Peach Bottom Atomic Station (PBAPS), Unit Nos. 2 and 3. The enclosed inspection report documents the inspection results, which were discussed on May 18, 2012, with Mr. Garey Stathes 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 station personnel. The inspectors also reviewed mitigation strategies for addressing large fires and explosions.

Based on the results of this inspection, no findings were identified.

In accordance with 10 CFR 2.390 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 Public Document Room or from the Publicly Available Records System (PARS) component of the NRC's document system, 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/

John F. Rogge, Chief
 Engineering Branch 3
 Division of Reactor Safety

Docket Nos. 50-277; 50-278
 License Nos. DPR-44; DPR-56

DOCUMENT NAME: G:\DRS\Engineering Branch 3\Young\PEACH BOTTOM FP 2012007a.docx
 ADAMS ACCESSION NUMBER: ML12160A105

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RI/DRS	RI/DRS	RI/DRP	RI/DRS	
NAME	KYoung/JFR	WCook	PKrohn	JRogge	
DATE	6/5/12	6/6/12	6/7/12	6/8/12	

OFFICIAL RECORD COPY

M. Pacilio

2

Enclosure:

Inspection Report 05000277/2012007 and 05000278/2012007
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

Distribution w/encl:

W. Dean, RA (R1ORAMAIL Resource)
D. Lew, DRA (R1ORAMAIL Resource)
D. Roberts, DRP (R1DRPMAIL Resource)
J. Clifford, DRP (R1DRPMail Resource)
C. Miller, DRS (R1DRSMail Resource)
P. Wilson, DRS (R1DRSMail Resource)
P. Krohn, DRP
A. Rosebrook, DRP
S. Ibarrola, DRP
E. Miller, DRP
S. Hansell, DRP, SRI
A. Ziedonis, DRP, RI
A. Rao, DRP, Acting RI
S. Schmitt, DRP, AA
M. McCoppin, RI OEDO
RidsNrrPMPeachBottom Resource
RidsNrrDorlLpl1-2 Resource
ROPreports Resource
D. Bearde, DRS

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos.: 50-277; 50-278

License Nos.: DPR-44; DPR-56

Report No.: 05000277/2012007 and 05000278/2012007

Licensee: Exelon Generating Company, LCC

Facility: Peach Bottom Atomic Power Station (PBAPS) Units 2 and 3

Location: 1848 Lay Road
Delta, PA 17314

Dates: April 30, 2012 through May 18, 2012

Inspectors: K. Young, Senior Reactor Inspector (Team Leader), Division of Reactor
Safety (DRS)
W. Cook, Senior Reactor Analyst, DRS
L. Scholl, Senior Reactor Inspector, DRS
J. Rady, Reactor Inspector, DRS
J. Patel, Reactor Inspector, DRS
D. Helton, Senior Reliability and Risk Engineer, Office of Nuclear
Regulatory Research, Division of Risk Analysis (Observer)

Approved by: John F. Rogge, Chief
Engineering Branch 3
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000277/2012007, 05000278/2012007; 04/30/2012 - 05/18/2012; Exelon Generation Company, LLC; Peach Bottom Atomic Power Station, Unit Nos. 2 and 3; Triennial Fire Protection Baseline Inspection.

This report covered a two week on-site triennial fire protection team inspection by specialist 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.

Cornerstone: Mitigating Systems

No findings were identified.

Other Findings

One violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by Exelon have been entered into the corrective action program (CAP). This violation and the corrective action tracking numbers are listed in Section 4OA7.

Background

This report presents the results of a triennial fire protection inspection conducted in accordance with the U.S. Nuclear Regulatory Commission (NRC) Inspection Procedure (IP) 71111.05T, "Fire Protection." The objective of the inspection was to assess whether Exelon Generating Company, LLC has implemented an adequate fire protection program and that post-fire safe shutdown capabilities have been established and are being properly maintained at the Peach Bottom Atomic Power Station (PBAPS), Unit Nos. 2 and 3 facilities. The following fire areas (FAs) and/or fire zones (FZs) were selected for detailed review based on risk insights from the PBAPS Individual Plant Examination (IPE)/Individual Plant Examination of External Events (IPEEE).

- FA 6S, Unit 2, South Control Rod Drive (CRD) Equipment Area (Reactor Building)
- FA 31, Unit 3, Battery Room 266
- FA 35/FZ 122, Unit 3, Emergency Switchgear Room 263
- FA 44/FZ 133, Diesel Generator (E3) Building Bay C

Inspection of these areas/zones fulfills the inspection procedure requirement to inspect a minimum of three samples.

The inspection team evaluated the licensee's fire protection program against applicable requirements which included plant Technical Specifications, Operating License Condition 2.C.(4), NRC Safety Evaluations, Title 10 of the *Code of Federal Regulations* (10 CFR) 50.48, and 10 CFR Part 50, Appendix R. The team also reviewed related documents that included the Updated Final Safety Analysis Report (UFSAR), Section 10.12, the fire protection program (FPP), the fire hazards analysis (FHA), and the post-fire safe shutdown analyses.

The team also evaluated five licensee mitigating strategies for addressing large fires and explosions as required by Operating License Condition 2.C.(11) and 10 CFR 50.54 (hh)(2). Inspection of these strategies fulfills the inspection procedure requirement to inspect a minimum of one sample.

Specific documents reviewed by the team are listed in the attachment to this report.

Report Details

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R05 Fire Protection (IP 71111.05T)

.01 Protection of Safe Shutdown Capabilities

a. Inspection Scope

The team reviewed the FHA, safe shutdown analyses and supporting drawings and documentation to verify that safe shutdown capabilities were properly protected. The team ensured that applicable separation requirements of Section III.G of 10 CFR Part 50, Appendix R, and the licensee's design and licensing bases were maintained for the credited safe shutdown equipment and their supporting power, control, and instrumentation cables. This review included an assessment of the adequacy of the selected systems for reactivity control, reactor coolant makeup, reactor heat removal, process monitoring, and associated support system functions.

b. Findings

No findings were identified.

.02 Passive Fire Protection

a. Inspection Scope

The team walked down accessible portions of the selected fire areas to evaluate whether the material conditions of the fire area boundaries were adequate for the fire hazards in the area. The team compared the fire area boundaries, including walls, ceilings, floors, fire doors, fire dampers, penetration seals, electrical raceway and conduit fire barriers, and redundant equipment fire barriers and radiant energy heat barriers to design and licensing basis requirements, industry standards, and the PBAPS FPP, as approved by the NRC, to identify any potential degradation or non-conformances.

The team reviewed selected engineering evaluations, installation and repair work orders, and qualification records for a sample of penetration seals to determine whether the fill material was properly installed and whether the as-left configuration satisfied design requirements for the intended fire rating. The team also reviewed similar records for selected fire protection wraps to verify whether the material and configuration was appropriate for the required fire rating and conformed to the engineering design.

Enclosure

The team also reviewed recent inspection and functional test records for fire dampers, and the inspection records for penetration seals and fire barriers, to verify whether the inspection and testing was adequately conducted, the acceptance criteria were met, and any potential performance degradation was identified. In addition, the team reviewed recent test results for the carbon dioxide (CO₂) and fire damper functionality tests for the areas protected to verify the testing was adequately conducted, the acceptance criteria were met, and any performance degradation was identified.

b. Findings

No findings were identified.

.03 Active Fire Protection

a. Inspection Scope

The team evaluated manual and automatic fire suppression and detection systems in the selected fire areas to determine whether they were installed, tested, maintained, and operated in accordance with NRC requirements, National Fire Protection Association (NFPA) codes of record, and the PBAPS FPP, as approved by the NRC. The team also assessed whether the suppression systems capabilities were adequate to control and/or extinguish fires associated with the hazards in the selected areas.

The team reviewed the as-built capability of the fire water supply system to verify the design and licensing basis and NFPA code of record requirements were satisfied, and to assess whether those capabilities were adequate for the hazards involved. The team reviewed the fire water system hydraulic analyses to assess the adequacy of a single fire water pump to supply the largest single hydraulic load on the fire water system plus concurrent fire hose usage. The team evaluated the fire pump performance tests to assess the adequacy of the test acceptance criteria for pump minimum discharge pressure at the required flow rate, to verify the criteria was adequate to ensure that the design basis and hydraulic analysis requirements were satisfied. The team also evaluated the underground fire loop flow tests to verify the tests adequately demonstrated that the flow distribution circuits were able to meet design basis requirements. In addition, the team reviewed recent pump and loop flow test results to verify the testing was adequately conducted, the acceptance criteria were met, and any potential performance degradation was identified.

The team reviewed initial discharge testing, design specifications, vendor requirements, modifications and engineering evaluations, and routine functional testing for the CO₂ suppression systems for the areas protected. The team walked down accessible portions of the CO₂ system, including storage tanks and supply systems, to independently assess the material condition, operational lineup, and availability of the systems. The team also reviewed and walked down the associated fire fighting strategies and CO₂ system operating procedures.

The team walked down accessible portions of the detection and water suppression systems in the selected areas and major portions of the fire water supply system,

Enclosure

including motor and diesel driven fire pumps, interviewed system and program engineers, and reviewed selected issue reports (IRs) to independently assess the material condition of the systems and components. In addition, the team reviewed recent test results for the fire detection and suppression systems for the selected fire areas to verify the testing was adequately conducted, the acceptance criteria were met, and any performance degradation was identified.

The team assessed the fire brigade capabilities by reviewing training, qualification, and drill critique records. The team also reviewed PBAPS's fire fighting strategies (i.e., pre-fire plans) and smoke removal plans for the selected fire areas to determine if appropriate information was provided to fire brigade members and plant operators to identify safe shutdown equipment and instrumentation, and to facilitate suppression of a fire that could impact post-fire safe shutdown capability. The team independently inspected the fire brigade equipment, including personnel protective gear (e.g., turnout gear) and smoke removal equipment, to determine operational readiness for fire fighting. In addition, the team reviewed PBAPS's fire brigade equipment inventory and inspection procedure and recent inspection and inventory results to verify adequate equipment was available, and any potential material deficiencies were identified.

b. Findings

No findings were identified.

.04 Protection from Damage from Fire Suppression Activities

a. Inspection Scope

The team walked down the selected fire areas and adjacent areas, and reviewed selected documents to determine whether redundant safe shutdown trains could be potentially damaged from fire suppression activities or from the rupture or inadvertent operation of fire suppression systems. During the walkdowns, the team evaluated the adequacy and condition of floor drains, equipment elevations, and spray protection. Specifically, to determine whether a potential existed to damage redundant safe shutdown trains, the team evaluated whether:

- A fire in one of the selected fire areas would not release smoke, heat, or hot gases that could cause unintended activation of suppression systems in adjacent fire areas which could potentially damage all redundant safe shutdown trains; or
- A fire suppression system rupture, inadvertent actuation, or actuation due to a fire, in one of the selected fire areas, could not directly damage all redundant trains (e.g. sprinkler caused flooding of other than the locally affected train); and
- Adequate drainage was provided in areas protected by water suppression systems.

b. Findings

No findings were identified.

.05 Normal and Alternative Shutdown Capability

a. Inspection Scope

The team reviewed the safe shutdown analysis, operating procedures, piping and instrumentation drawings (P&IDs), electrical drawings, the UFSAR, and other supporting documents for the selected fire areas to verify that the licensee had properly identified the systems and components necessary to achieve and maintain safe shutdown conditions.

The team assessed the adequacy of the selected systems and components for reactivity control, reactor coolant makeup, reactor heat removal, process monitoring, and support system functions. This review included verification that alternative post-fire shutdown could be performed both with and without the availability of offsite power. Plant walkdowns were also performed to verify that the plant configuration was consistent with that described in the safe shutdown and fire hazards analyses. The team verified that the systems and components credited for use during shutdown would remain free from fire damage.

The team verified that the training program for licensed and non-licensed operators included alternative shutdown capability. The team also verified that personnel required for safe shutdown using the normal or alternative shutdown systems and procedures are trained and available onsite at all times, exclusive of those assigned as fire brigade members. Additionally, the team observed fire protection training provided to the operations department to determine its adequacy.

The team reviewed the adequacy of procedures utilized for post-fire shutdown and performed an independent walk through of procedure steps to ensure the implementation and human factors adequacy of the procedures. The team also verified that the operators could be reasonably expected to perform specific actions within the time required to maintain plant parameters within specified limits.

Specific procedures reviewed for normal and alternative post-fire shutdown included the following:

- ON-114, Actual Fire Reported in the Power Block, Diesel Generator Building, Emergency Pump, Inner Screen or Emergency Cooling Tower Structures – Procedure, Rev. 18;
- SE-10, Alternative Shut Down, Sheets 1 & 2, Revs. 18 and 16;
- T-306S-2(3), Area 06S Fire Guides, Revs. 6(3);
- T-331-2(3), Area 31 Fire Guides, Revs. 1(3);
- T-335-2(3), Area 35 Fire Guides, Revs. 1(1); and
- T-344-2(3), Area 44 Fire Guides, Revs. 1(1).

Enclosure

The team reviewed manual actions to ensure that they had been properly reviewed and approved and that the actions could be implemented in accordance with plant procedures in the time necessary to support the safe shutdown method for each fire area. The team also reviewed the periodic testing of the alternative shutdown transfer capability and instrumentation and control functions to ensure the tests are adequate to ensure the functionality of the alternative shutdown capability.

b. Findings

No findings were identified.

.06 Circuit Analysis

a. Inspection Scope

The team verified that the licensee performed a post-fire safe shutdown 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 team 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 or shorts to ground were identified, evaluated, and dispositioned to ensure spurious actuations would not prevent safe shutdown.

The team's review considered fire and cable attributes, cable routing, 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 team also reviewed cable raceway drawings and/or cable routing databases for a sample of components required for post-fire safe shutdown to verify that cables were routed as described in the safe-shutdown analysis. The team also reviewed equipment important to safe shutdown, but not part of the success path, to verify that the licensee had taken appropriate actions in accordance with the design and licensing basis and NRC Regulatory Guide 1.189, Revision 2.

Cable failure modes were reviewed for the following components:

- 0AP57, Emergency Service Water Pump A;
- 2AP37, Unit 2 Core Spray Pump A;
- FI2-14-50A, Unit 2 Core Spray Loop A Flow Indicator;
- LI2(3)-2-3-113, Units 2 and 3 Reactor Vessel Water Level Indicator;
- MO-2-13-030, Unit 2 Reactor Core Isolation Cooling (RCIC) Full Flow Test Valve (Multiple Spurious Operation (MSO) scenario 2aa);
- MO-2-14-012A, Core Spray Loop Inboard Isolation Valve (MSO scenario 2q);
- MO-2-23-016, Unit 2 High Pressure Coolant Injection (HPCI) Steam Supply Isolation Valve;

- MO-3-10-034A, Unit 3 Residual Heat Removal (RHR) Loop A Full Flow Test Line Block Valve (MSO scenario 5k);
- MO-3-23-015, Unit 3 HPCI Turbine Steam Line Inboard Isolation Valve (MSO scenario 5k);
- MO-3-23-019, Unit 3 HPCI Discharge to Feedwater Line A (MSO scenario 5k); and
- RV-3-02-071G, Unit 3 Main Steam Line C Safety Relief Valve (SRV) (MSO scenario 3a/b/c).

The team reviewed a sample of 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 that could result in a common power supply or common bus concern.

The team verified that the transfer of control from the control room to the alternative shutdown location(s) would not be affected by fire-induced circuit faults (e.g., by the provision of separate fuses and power supplies for alternative shutdown control circuits).

b. Findings

No findings were identified.

.07 Communications

a. Inspection Scope

The team reviewed safe shutdown procedures, the safe shutdown analysis, and associated documents to verify an adequate method of communications would be available to plant operators following a fire. During this review the team considered the effects of ambient noise levels, clarity of reception, reliability, and coverage patterns. The team also inspected the designated emergency storage lockers to verify the availability of portable radios for the fire brigade and for plant operators. The team also verified that communications equipment such as repeaters and transmitters would not be affected by a fire.

b. Findings

No findings were identified.

.08 Emergency Lighting

a. Inspection Scope

The team observed the placement and coverage area of eight-hour emergency lights throughout the selected fire areas to evaluate their adequacy for illuminating access and egress pathways and any equipment requiring local operation or instrumentation monitoring for post-fire safe shutdown. The team also verified that the battery power supplies were rated for at least an eight-hour capacity. Preventive maintenance

procedures, the vendor manual, completed surveillance tests, and battery replacement practices were also reviewed to verify that the emergency lighting was being maintained consistent with the manufacturer's recommendations and in a manner that would ensure reliable operation.

b. Findings

No findings were identified.

.09 Cold Shutdown Repairs

a. Inspection Scope

The team verified that the licensee had dedicated repair procedures, equipment, and materials to accomplish repairs of components required for cold shutdown which might be damaged by the fire to ensure cold shutdown could be achieved within the time frames specified in their design and licensing bases. The team verified that the repair equipment, components, tools, and materials (e.g. pre-cut cables with prepared attachment lugs) were available and accessible on site.

b. Findings

No findings were identified.

.10 Compensatory Measures

a. Inspection Scope

The team verified 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 team evaluated whether the short term compensatory measures adequately compensated for the degraded function or feature until appropriate corrective action could be taken and whether Exelon was effective in returning the equipment to service in a reasonable period of time.

b. Findings

No findings were identified.

.11 Review and Documentation of the Fire Protection Program Changes

a. Inspection Scope

The team reviewed recent changes to the approved fire protection program to verify the changes did not constitute an adverse effect on the ability to safely shutdown.

Enclosure

b. Findings

No findings were identified.

12 Control of Transient Combustibles and Ignition Sources

a. Inspection Scope

The team 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 FHA. A sample of hot work and transient combustible control permits were also reviewed. The team performed plant walkdowns to verify that transient combustibles and ignition sources were being implemented in accordance with the administrative controls.

b. Findings

No findings were identified.

13 Large Fires and Explosions Mitigation Strategies

a. Inspection Scope

The team conducted a review of selected mitigation strategies intended to maintain or restore core cooling, containment integrity, and spent fuel pool cooling capabilities under the circumstances associated with the loss of large areas of the plant due to explosions and/or fires. The team assessed whether Exelon continued to meet the requirements of Operating License Condition 2.C(11) and 10 CFR 50.54(hh)(2). The team reviewed the following mitigation strategies:

- TSG 4.1, Attachment 1 - Internal Spent Fuel Pool (SFP) Makeup & Spray;
- TSG 4.1, Attachment 2 - External SFP Makeup & Spray;
- TSG 4.1, Attachment 9 - Reactor Core Isolation Cooling (RCIC) System Manual Start on Loss of DC Power;
- TSG 4.1, Attachment 11 - Alternate Injection into the Residual Heat Removal (RHR) System; and,
- TSG 4.1, Attachment 16 - Manual Operation of Containment (Drywell) Vent Valves.

The team's review included: a detailed assessment of the procedural guidance; a walkdown of the strategy with trained operators to assess the feasibility of the strategy and operator familiarity; maintenance and surveillance testing of all designated strategy equipment; and an inventory check of all strategy equipment to ensure the appropriateness of equipment storage and availability. The team also evaluated the adequacy of corrective actions associated with issues identified during previous

inspections in this area. A list of documents reviewed is provided in the Supplemental Information attached to this report.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems (IP 71152)

a. Inspection Scope

The team verified that the licensee was identifying fire protection and post-fire safe shutdown issues at an appropriate threshold and entering them into the CAP. The team also reviewed a sample of selected issues to verify that the licensee had taken or planned appropriate corrective actions.

b. Findings

No findings were identified.

4OA3 Follow-up of Events and Notices of Enforcement Discretion

.1 (Closed) Licensee Event Report (LER) 05000278/11-004-00: HPCI Cable Routing Error Results in Degraded Post-Fire Safe Shutdown (FSSD) Analysis

On November 15, 2011, a fire protection program document impact review was performed for the MSO modifications installed during the Unit 3 refueling outage (RFO) P3R18 in September 2011. As a result of the review, the licensee determined that the modification for the HPCI turbine steam supply valve (MO-3-23-014) control circuit adversely impacted the PBAPS post-FSSD analysis. Specifically, the modification routed a new cable through a fire area (fire area 13S, room 257, south CRD Equipment Room) that relies on the HPCI system to achieve post-fire safe shutdown following a fire in that specific fire area.

PBAPS determined that the cause of the cable routing error was plant procedures and administrative controls were not followed. This resulted in the FSSD analysis of the modification not being performed until after it was completed. Plant procedures provide control to ensure such analyses are completed and approved before a FSSD modification is installed. PBAPS entered this issue into the CAP (IR 01290922), established compensatory measures, performed an extent of condition review for other MSO modifications, and performed a root cause analysis. PBAPS also revised configuration change procedures and accountability standards to prevent recurrence. Additionally, PBAPS modified the circuit design for the HPCI turbine steam supply valve at the motor operated valve (MOV) MO-3-23-014 and at the motor control center (MCC) so that the new cable was not needed for MSO fire scenarios. There was no actual

Enclosure

safety consequences associated with this event. The enforcement aspects of this LER are discussed in Section 4OA7. This LER is closed.

4OA5 Other Activities

.1 (Closed) AV 05000277, 05000278/2000003-01, Apparent Violation of 10 CFR Part 50 Appendix R Sections III.G and III.L Requirement to Protect Alternative Shutdown Equipment from the Adverse Effects of a Fire

During the 2000 triennial fire protection inspection, the NRC identified an apparent violation that the licensee adopted a licensing position that the mechanical damage scenario described in NRC Information Notice (IN) 92-18, "Potential for Loss of Remote Shutdown Capability during a Control Room Fire," was outside the design and licensing basis of the facility. As a result, the licensee did not evaluate the impact that this concern may have on their facility with regard to post-fire safe shutdown. IN 92-18 described the potential for control room fires causing "multiple hot shorts" (i.e., short circuits between control wiring and power sources) for certain MOVs needed for post-fire safe shutdown actions. These hot shorts could ultimately result in mechanical damage to the valves or other components, rendering them incapable of performing their required post-fire safe shutdown function.

The potential of multiple hot shorts during a fire and whether the accumulated effects of these multiple hot shorts should be addressed in licensee's fire protection programs became a generic issue that needed to be resolved between the NRC [Nuclear Reactor Regulation (NRR)] and the nuclear industry. In October 2009, the NRC issued guidance in Regulatory Guide (RG) 1.189, "Fire Protection for Nuclear Power Plants," Revision 2, to identify acceptable methods for resolving issues related to circuits required and important for post-fire safe shutdown. Additionally, the guidance provided the methods to evaluate circuits for single and multiple spurious operations (MSOs) and thus allowing the industry to appropriately identify and correct circuit issues. PBAPS evaluated their post-fire safe shutdown circuits per the NRC and the Nuclear Energy Institute (NEI) guidance and identified MOVs needing modifications. The licensee entered the identified issues into their corrective action program, established compensatory measures, and developed technical evaluations/modification packages to resolve the issue. The modifications for the affected MOVs needing an outage were installed during RFO P3R18 (September 2011), for Unit 3 and are scheduled to be installed for the affected MOVs for Unit 2 during RFO P2R19 (September 2012). Modifications that do not require an outage are scheduled to be completed prior to November 2012. The team verified that the licensee followed the NRC and NEI guidance to identify and resolve this issue. Additionally, the team reviewed a sample of modifications associated with IN 92-18 and identified no issues. PBAPS continues to maintain compensatory measures pending completion of the modifications. The NRC will continue to inspect this aspect of circuit evaluations in the baseline triennial fire protection inspection program. This item had remained open to track the issue until generic guidance was promulgated and appropriate corrective actions to resolve were identified, therefore this AV is now administratively closed.

Enclosure

.2 (Closed) AV 05000277, 05000278/2000003-02, Apparent Violation of 10 CFR Part 50 Appendix R Sections III.G and III.L That Multiple Spurious Actuations must be Considered in the Fire Analyses

During the 2000 triennial fire protection inspection, the NRC identified an apparent violation concerning an issue that a single fire in some plant areas could potentially cause multiple fire-induced spurious actuations of safe shutdown components to occur, as specified in Section III.G.2 of 10 CFR Part 50, Appendix R, and documented in Generic Letter (GL) 86-10, and reiterated in a March 11, 1997, letter from the NRC to the NEI. PBAPS licensing document, NE-00296, "Post-Fire Safe Shutdown Program Requirements at PBAPS," Section 5.1.5, requires only a single fire-induced spurious action to be considered at a time, except for high/low pressure interface devices.

The potential of multiple fire-induced spurious actuations in a single fire and whether the accumulated effects of these spurious actuations should be addressed in licensee's fire protection programs became a generic issue that needed to be resolved between the NRC (NRR) and the nuclear industry. In October 2009, the NRC issued guidance in RG 1.189, "Fire Protection for Nuclear Power Plants," Revision 2, to identify acceptable methods for resolving issues related to circuits required and important for post-fire safe shutdown. Additionally, the guidance provided the methods to evaluate circuits for single and MSOs and thus allowing the industry to appropriately identify and correct circuit issues. PBAPS evaluated their post-fire safe shutdown circuits per the NRC and NEI guidance and identified MSO circuit scenarios needing modifications. The licensee entered the identified issues into their corrective action program, established compensatory measures, and developed technical evaluations/modification packages to resolve the issues. The modifications for the affected circuits needing an outage were installed during RFO P3R18 (September 2011), for Unit 3 and are scheduled to be installed for the affected circuits for Unit 2 during RFO P2R19 (September 2012). Modifications that do not require an outage are scheduled to be completed prior to November 2012. The team verified that the licensee followed the NRC and NEI guidance to identify and resolve this issue. Additionally, the team reviewed a sample of modifications associated with MSO scenarios and identified no issues. PBAPS continues to maintain compensatory measures pending completion of the modifications. The NRC will continue to inspect this aspect of circuit evaluations in the baseline triennial fire protection inspection program. This item had remained open to track the issue until generic guidance was promulgated and appropriate corrective actions to resolve were identified, therefore this AV is now administratively closed.

4OA6 Meetings, including Exit

The team presented their preliminary inspection results to Mr. Garey Stathes, Plant Manager, and other members of the site staff at an exit meeting on May 18, 2012. No proprietary information was included in this inspection report.

40A7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements. This issue satisfies the criteria of the NRC Enforcement Policy for being dispositioned as a NCV.

- Licensee Event Report 05000278/2011-004-00 described a modification error in which a control cable for the HPCI turbine steam supply MOV (MO-3-23-014) was routed through the same fire area the system is credited for post-fire safe shutdown. The valve is credited for post-fire safe shutdown capability for a fire in fire area 13S, South CRD Equipment Room (Room 257) for Unit 3. This was a violation of Operating License Condition 2.C.(4) and 10 CFR Part 50, Appendix R, Section III.G.2, for failure to ensure that the cable was protected per the Appendix R, III.G.2 requirements. Contrary to the above, the control cable for the HPCI turbine steam supply MOV was routed in error during the period of time between September 2011 (RFO P3R18), and December 19, 2011. Specifically, PBAPS determined that a postulated fire in fire area 13S could cause damage to the HPCI turbine steam supply control cable and cause the HPCI pump to be unavailable. The issue was more than minor because it was associated with the protection against external events (fire) attribute of the mitigating systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team determined that the finding was of very low safety significance (Green), based on IMC 0609, Appendix F, "Fire Protection Significance Determination Process (SDP)," phase 2 screening, task number 2.3.5 because the cable was routed in conduit predominately through a transient combustible free zone. Additionally, the cable was not routed near a credible fire ignition source in the fire area. Because this finding is of very low safety significance and had been entered into Exelon's CAP under IR 01290922, this violation is being treated as a Green, licensee-identified NCV consistent with the NRC Enforcement Policy.

Attachment: Supplemental Information

Enclosure

ATTACHMENT
SUPPLEMENTAL INFORMATION
KEY POINTS OF CONTACT

Licensee Personnel

G. Stathes, Plant Manager
J. Armstrong, Regulatory Assurance Manager
T. Moore, Engineering Director
N. Alexakos, Emergency Preparedness Lead
R. Birmingham, Operations Support
R. Bleeker, Electrical Design Engineer
P. Briedenbaugh, Operations Support & Services, Senior Manager
K. Doyle, Communications System Manager
D. Dullum, Regulatory Assurance
K. Forney, System Manager, Batteries & Emergency Lighting
D. Foss, Regulatory Engineer
F. Gialo, Multiple Spurious Operations (MSO) Engineering Project Manager
P. Gigliotti, Operator Training Instructor
S. Griffiths, Security Supervisor
D. Henry, Program Manager
M. Herr, Operations Director
C. Howell, Mechanical Design Engineer
K. Kaufmann, Emergency Light System Engineer
J. Koester, Site Fire Marshal
J. Lyter, Operations Support
B. Miller, Fire Protection System Manager
C. Pragman, Corporate Fire Protection Program Manager
C. Sinopoli, Fire Protection Program Manager
F. Sturniolo, Maintenance Director
S. Sullivan, Operations Support Manager
M. Taylor, Corporate Fire Protection Engineer
B. Wargo, NOS
P. White, Plant Equipment Operator

NRC Personnel

J. Rogge, Chief, Engineering Branch 3, Division of Reactor Safety
W. Cook, Senior Reactor Analyst, Division of Reactor Safety
S. Hansell, Senior Resident Inspector, Peach Bottom Atomic Power Station
A. Ziedonis, Resident Inspector, Peach Bottom Atomic Power Station
A. Rao, Resident Inspector (Temporary), Peach Bottom Atomic Power Station

LIST OF ITEMS OPENED, CLOSED AND DISCUSSEDOpened

NONE

Opened and Closed

NONE

Closed

05000278/2011-004-00	LER	HPCI Cable Routing Error Results in Degraded Post-Fire Safe Shutdown (FSSD) Analysis (Section 4OA3.1)
05000277/2000003-01 05000278/2000003-01	AV	Apparent Violation of 10 CFR Part 50, Appendix R, Sections III.G and III.L Requirement to protect alternative Shutdown Equipment from the Adverse Effects of a Fire (Section 4OA5.1)
05000277/2000003-02 05000278/2000003-02	AV	Apparent Violation of 10 CFR Part 50, Appendix R, Sections III.G and III.L that Multiple Spurious Actuations Must be considered in the Fire Analysis (Section 4OA5.2)

Discussed

NONE

LIST OF DOCUMENTS REVIEWEDFire Protection Licensing Documents

Exemption dated 3/13/85, Exemption from the Requirements of Appendix R to 10CFR50
 Exemption dated 11/14/86, Exemption from Appendix R to 10 CFR Part 50 Concerning Penetration Seals & Fire Detection
 Exemption dated 12/31/86, Exemption from 10CFR50 Appendix R Regarding Dampers, Structural Steel & Automatic Fire Suppression
 Exemption dated 10/3/91, Exemption from the Requirements of 10 CFR Part 50, Appendix R, PBAPS, Units 2 & 3
 Exemption dated 1/30/09, PBAPS, Units 2 & 3, Request for Exemption from 10 CFR Part 50, Appendix R Requirements
 NE-00296, Specification for Post-fire Safe Shutdown Program Requirements for PBAPS, Rev. 1
 PBAPS Technical Requirements Manual, Unit 2, Rev. 16
 PBAPS Technical Requirements Manual, Unit 3, Rev. 16
 PBAPS Updated Final Safety Analysis, Section 10.12, Rev. 19

Attachment

PBAPS Units 2 & 3 Fire Protection Program, Rev. 17
Safety Evaluation Report (SER) dated 5/23/75, Fire Protection, PBAPS, Units 2 & 3
SE dated 8/14/80, Supplement 1 to the Safety Eval. of the PBAPS Fire Protection Program
SE dated 9/15/80, Supplement 2 to the Safety Eval. of the PBAPS Fire Protection Program
SE dated 10/10/80, Supplement 3 to the Safety Eval. of the PBAPS Fire Protection Program
SE dated 11/24/80, Supplement 4 to Safety Evaluation of the PBAPS Fire Protection Program
SE (Interim) dated 5/27/81, Post Fire Shutdown Capability PBAPS Units 2 & 3
SE dated 1/26/84, Fire Protection Rule-Alternate Safe shutdown Capability-Sections III.G.3 &
III.L of Appendix R to 10CFR Part 50-PBAPS, Units 2 and 3
SER dated 5/4/94, Fire Protection Rule-Alternate Safe Shutdown Capability-Sections III.G.3 &
III.L of Appendix R to 10CFR Part 50-PBAPS, Units 2 and 3
SE dated 10/10/85, PBAPS, Units 2 and 3, Fire Protection Program
SE dated 12/28/88, Diesel Generator CO2 Fire Protection System
SE dated 9/16/93, PBAPS, Units 2 & 3, Fire Protection Program
SE dated 6/24/05, PBAPS, Units 2 & 3-Issuance of Amendment RE: FPP Changes

Design Basis Documents

P-S-51, PBAPS Fire Protection System, Rev. 10
P-T-10, PBAPS fire Safe Shutdown, Rev. 9

Design Changes

ECR PB 95-05708, PBAPS Safe S/D Analysis Error in Assumptions for Rerate, Rev. 0
ECR PB 98-02073-001, Thermo-Lag Upgrade Raceway Encapsulation-FBS, Rev. 1
ECR PB 99-01916, CS System Capability for Alternate Shutdown Cooling, Rev. 0
ECR PB 10-00449, Unit 3 MSO 5k – MCC AC and DC Bucket Mod. 50.59 Review, Rev. 3
ECR PB 10-00449-011, MSO 5k (NRC IN 92-18) MCC Bucket Rework, Rev. 11

Calculations/Engineering Evaluation Reports & Tests

A1754608-01, Technical Evaluation for Multiple Spurious Operation Scenario 2Q Evaluation,
Rev. 0
A1754773-01, Technical Evaluation for Multiple Spurious Operation Scenario 2AA, Rev. 0
A1754781-01, Technical Evaluation for Multiple Spurious Operation Scenarios 3A, 3B, and 3C,
Rev. 0
BISCO Test Report 748-14, Metal Clad Fire Wall Penetration Barrier Fire Testing, 5/21/79
BISCO Test Report 748-105, Fire Test Utilizing BISCO SF-60 Where Cable Trays Exist, 6/10/83
BISCO Test Report 1064-10, Fire Test Configuration for Silicone Foam Fire Barriers in Gypsum
Board Stud Partitions, 6/20/79
ECR 11-00136, MSO Scenario 2Q Spurious Opening of Testable Check Valve Bypass, Rev. 0
ECR 11-00137, MSO Scenario 2Q Spurious Opening of Testable Check Valve Bypass, Rev. 0
EE-0007, 10CFR50 Appendix R Electrical Coordination Study for Units 2 and 3, Rev. 8
Factory Mutual Test Report J.I. 4C3Q9.AC, Fire Endurance Test on Silicone Foam Penetration
Seal in a Masonry Seal in a Masonry Floor, Design FC-270, 12/14/78
MDE-86-0786, Safe and Alternative Shutdown Analyses – Peach Bottom Atomic Power Station
Units 2 and 3, Rev. 1

- ME-0093, Verify that Stresses in Conduit & Conduit Supports are within Allowable Limits Considering Additional Weight of Encapsulation Material, Rev. 2
- ME-0203, Verify that Stresses in Conduit & Conduit Supports are within Allowable Limits Considering Additional Weight of Encapsulation Material, Rev. 4
- NE-00296, Specification for Post-Fire Safe Shutdown Program Requirements at Peach Bottom Atomic Power Station, Rev. 1
- Peam-5, Loss of HVAC Analysis for Miscellaneous Rooms Following an Appendix R Fire, Rev. 0
- PE-0193, Coordination Study for 480V Load Centers and MCC's, Rev. 6
- PE-0194, Coordination for 4KV 1E Switchgear, Rev. 4
- PE-0195, 120VAC Coordination Study, Rev. 4
- PE-0196, 125/250VDC System Coordination, Rev. 2
- PF-0016-06S, Fire Area 6S – Fire Safe Shutdown Analysis, Rev. 1
- PF-0016-031, Fire Area 31 – Fire Safe Shutdown Analysis, Rev. 0
- PF-0016-035, Fire Area 35 – Fire Safe Shutdown Analysis, Rev. 0
- PF-0016-044, Fire Area 44 – Fire Safe Shutdown Analysis, Rev. 0
- PM-736, Battery Room Hydrogen Concentration, Rev. 3
- PM-1036, Minimum and Maximum Alternate Shutdown Cooling Pressures and Minimum Number of SRVs Required for Alternate Shutdown Cooling, Rev. 0
- PSB-0001, Re-Evaluation of Block Walls for MOD 25178 & Project P00680, Rev. 1
- PSB-0007, Re-Evaluation of Block Walls for MOD 5209 & Project P00680, Rev. 1
- PSB-0099, Re-Evaluation of Block Walls for MOD 5209 & Project P00680, Rev. 1
- SDOC 737-D-VC-5, PBAPS Thermo-Lag Fire Endurance & Ampacity Evaluation Report, Rev. 0
- SDOC 737-D-VC-63, Fire Endurance Test of Thermo-Lag 330-1, Fire Protective Envelopes (12" & 24" Cable Trays, & 5", 2", & 1" Steel Conduits Omega Point Labs Project No. 11960-97553, Rev. 0
- SDOC 737-D-VC-67, Installation & Inspection Guidelines for Thermo-Lag Fire Barrier Material Spec. No. MN-3.21, Rev. 0
- T-061-VC-1, Assessment of the Fire Sprinkler & Hose Station Supply Piping, Rev. 0
- 87RE/ACI 040.002, Masonry Wall Re-Evaluation for Additional Attachment Since 80-11, Group No. 1 Wall Nos. 40.1 through 40.26, Rev. 3
- 1047196, Technical Evaluation to Support the use of an Alternate Compensatory Measure

Drawings and Wiring Diagrams

- A-168, Fire Detection & Suppression – Floor Plan at 135'-0", Rev. 13
- A-169, Fire Detection & Suppression – Floor Plan at 165'-0", Rev. 9
- A-170, Fire Detection & Suppression – Floor Plan at EL 195'-0", Rev. 11
- A-172, Fire Detection & Suppression – Emergency Cooling Towers, Re-combiner & Diesel Generator Buildings, Rev. 8
- A-486, Sht. 1, Barrier Plans EL 135'-0", Rev. 7
- A-487, Sht. 1, Barrier Plans EL 165'-0", Rev. 11
- A-488, Sht. 1, Barrier Plans EL 195'-0", Rev. 7
- A-490, Barrier Plans C.W. Pump Structure, Emergency Cooling Tower & Diesel Generator Building, Rev. 4
- ACS-REP-41410-23C, Peach Bottom Radio Repeater System ACS/Fire Channel, 8/5/10 E-1, Sht. 1, Single Line Diagram, Rev. 51

- E-8, Sht. 1, Single Line Meter and Relay Diagram Standby Diesel Generator and 4160V
Emergency Power System Unit 2, Rev. 17
- E-12, Sht. 1, Single Line Meter and Relay Diagram Standby Diesel Generator and 4160V
Emergency Power System Unit 3, Rev. 11
- E-26, Sht. 1, Single Line Diagram 125/250 VDC System Unit 2, Rev. 80
- E-27, Sht. 1, Single Line Diagram 125/250 VDC System Unit 3, Rev. 74
- E-183, Sht. 1, Electrical Schematic Diagram Core Spray Pump 4.16KV Circuit Breaker, Rev. 20
- E-187, Sht. 1, Electrical Schematic Diagram Emergency Service Water Pumps 4.16KV Circuit
Breaker, Rev. 30
- E-187, Sht. 2, Electrical Schematic Diagram Emergency Service Water Pumps 4.16KV Circuit
Breaker, Rev. 28
- E-1139, Sht. 1, Raceway Layout - Turbine Bldg Unit 2 Area 2 Elevation 135'-0", Rev. 43
- E-1151, Raceway Layout - Turbine Bldg., U2 H&V Fan Room, EL 195'0", Rev. 19
- E-1166, Sht. 2A, Raceway Layout - Reactor Bldg. Unit 2 Area 8 Elev. 135'-0", Rev. 77
- E-1615, Single Line Meter and Relay Diagram E124 & E224 Emergency L.C., E124-R-C &
E224-R-B Reactor MCC and E124-T-B & E224-T-B Turbine MCC 440V Unit 2, Rev. 76
- E-1617, Single Line Meter and Relay Diagram E324 & E424 Emergency L.C. and E324 -R-B,
E424-W-A, E324-R-D & E424-R-D Reactor MCC 440V Unit 2, Rev. 66
- E-1715, Single Line Meter and Relay Diagram E134 & E234 Emergency L.C., E134-W-A &
E234-R-B Reactor MCC and E134-T-B & E234-T-B Turbine MCC 440V, Rev. 75
- E-2400, Cable Block Diagram Radio Equipment, Rev. 9
- E-2472, Sht. 30, Raceway Encapsulation Layout, Rev. 26
- E-2472, Sht. 45, Raceway Encapsulation Layout, Rev. 26
- E-2472, Sht. 79, Raceway Encapsulation Layout, Rev. 34
- E-2557, Sht. 1 Alternative Control Instrumentation, Rev. 11
- E-5208, Radio Repeater System, Rev. 1
- M-1-S-36, Sht. 7, Electrical Schematic Dia. High Pressure Coolant Injection System, Rev. 75
- M-1-S-36, Sht. 17, High Pressure Coolant Injection, Rev. 74
- M-1-S-36, Sht. 17A, High Pressure Coolant Injection, Rev. 74
- M-1-S-36, Sht. 18, High Pressure Coolant Injection, Rev. 74
- M-1-S-36, Sht. 20, Schematic Drawing HPCI Valve MO3-23-19, Rev. 76
- M-1-S-36, Sht. 22, Electrical Schematic Dia. High Pressure Coolant Injection System, Rev. 78
- M-1-S-36, Sht. 30, Schematic Drawing HPCI, Rev. 82
- M-1-S-40, Sht. 13, Electrical Schematic Diagram Core Spray System, Rev. 59
- M-1-S-52, Sht. 12, Electrical Schematic Diagram Automatic Blowdown System, Rev. 39
- M-1-S-65, Sht. 31A, Electrical Schematic Diagram Residual Heat Removal System, Rev. 96
- M-1-S-65, Sht. 49, Schematic Drawing RHR Valve MO3-10-34A, Rev. 96
- M-1-S-65, Sht. 66A, Electrical Schematic Diagram Residual Heat Removal System, Rev. 96
- PD-7, Typical Penetration Seal Detail Cable Tray Wall Seal (SF-20), Rev. 1
- PD-9, Typical Penetration Seal Detail Pen. Through Barrier Less than Req. Thickness, Rev. 0
- PD-11, Typical Penetration Seal Detail Cables through Opening of Conduits (SF-60), Rev. 0
- PS-263, Penetration Seal Locations Cont. Barriers-Rm. No. 263, U3 ELEV 135'-0", Rev. 1
- PS-265, Penetration Seal Locations Cont. Barriers-Rm. No. 265, U3 ELEV 135'-0", Rev. 1
- 737-D-VC-22, Shts. 1-5, Thermo-Lag Upgrade Barrier 122-01, Rev. 0
- 737-D-VC-23, Shts. 1-7, Thermo-Lag Upgrade Barriers 122-02 & 122-03, Rev. 0

Piping and Instrumentation Diagrams

M-315, Sht. 1, Emergency Service Water and High Pressure Service Water Systems, Rev. 75
 M-315, Sht. 2, Emergency Service Water and High Pressure Service Water Systems, Rev. 57
 M-315, Sht. 3, Emergency Service Water and High Pressure Service Water Systems, Rev. 53
 M-315, Sht. 4, Emergency Service Water and High Pressure Service Water Systems, Rev. 54
 M-315, Sht. 5, Emergency Service Water and High Pressure Service Water Systems, Rev. 59
 M-318, Sht. 1, Fire Protection System PI&D, Rev. 64
 M-318, Sht. 2, Fire Protection System PI&D, Rev. 88
 M-318, Sht. 3, Fire Protection System PI&D, Rev. 68
 M-318, Sht. 4, Fire Protection System PI&D, CO2 System, Rev. 69
 M-318, Sht. 5, Fire Protection System PI&D, Rev. 7
 M-318, Sht. 6, Fire Protection System PI&D, Rev. 5
 M-318, Sht. 7, Fire Protection System PI&D, Rev. 12
 M-318, Sht. 8, Fire Protection System PI&D, Rev. 17
 M-318, Sht. 9, Fire Protection System PI&D, Rev. 29
 M-318, Sht. 10, Fire Protection System PI&D, Rev. 14
 M-333, Sht. 1, Instrument Nitrogen, Rev. 57
 M-333, Sht. 2, Instrument Nitrogen, Rev. 58
 M-351, Sht. 1, Nuclear Boiler, Rev. 77
 M-351, Sht. 2, Nuclear Boiler, Rev. 69
 M-351, Sht. 3, Nuclear Boiler, Rev. 74
 M-351, Sht. 4, Nuclear Boiler, Rev. 69
 M-352, Nuclear Boiler Vessel Instrumentation, Rev. 60
 M-356, Control Rod Drive Hydraulic System Part A, Rev. 74
 M-357, Control Rod Drive Hydraulic System Part B, Rev. 37
 M-359, Sht. 1, Reactor Core Isolation Cooling System, Rev. 50
 M-359, Sht. 2, Reactor Core Isolation Cooling System, Rev. 48
 M-360, Sht. 1, R.C.I.C. Pump Turbine Details, Rev. 56
 M-360, Sht. 2, R.C.I.C. Pump Turbine Details, Rev. 54
 M-361, Sht. 1, Residual Heat Removal System, Rev. 81
 M-361, Sht. 2, Residual Heat Removal System, Rev. 67
 M-361, Sht. 3, Residual Heat Removal System, Rev. 70
 M-361, Sht. 4, Residual Heat Removal System, Rev. 70
 M-362, Core Spray Cooling System, Rev. 3
 M-365, High Pressure Coolant Injection System, Rev. 63
 M-366, HPCI Pump/Turbine Details, Rev. 57
 M-372, Containment Atmosphere Dilution System, Rev. 63

Fire Protection Evaluations of Modifications and Design Changes

ECR PB 98-02073-001, Thermo-Lag Upgrade Raceway Encapsulation-FBS, Rev. 1
 ECR PB 10-00449-011, MSO 5K (NRC IN 92-18) MCC Bucket Rework, Rev. 11

Quality Assurance Audits and Self-Assessments

NOSA-PEA-10-10, Fire Protection Audit Report, 8/25/10
 1141820 #3, PBAPS Triennial Fire Protection Preparatory Self Assessment, 4/16/12

System Health Reports

Peach Bottom Electrical – DC Systems, Completed 4th Quarter 2011
Peach Bottom Electrical – DC Systems, Completed 1st Quarter 2012
Peach Bottom Electrical – 4KV Systems, Completed 4th Quarter 2011
Peach Bottom Electrical – 4KV Systems, Completed 1st Quarter 2012
Peach Bottom Electrical – 480V Systems, Completed 4th Quarter 2011
Peach Bottom Electrical – 480V Systems, Completed 1st Quarter 2012
Peach Bottom Fire Protection, Completed 4th Quarter 2011
Peach Bottom Fire Protection, Completed 1st Quarter 2012
Peach Bottom Fire Protection/Fire Safe Shutdown Program, Completed 4th Quarter 2011
Peach Bottom Fire Protection/Fire Safe Shutdown Program, Completed 1st Quarter 2012
Peach Bottom Fire Suppression, Completed 4th Quarter 2011
Peach Bottom Fire Suppression, Completed 1st Quarter 2012

Procedures

CC-AA-206, Fuse Control, Rev. 6
FF-01, Fire Brigade, Rev. 18
IC-11-02007, Preventive Maintenance for Model-200 Emergency Lighting Units, Rev. 7
M-054-005, Magne-Blast Circuit Breaker Routine Preventive Maintenance, Rev. 14
M-056-001, 480V MCC Breaker Assembly and Cubicle Terminal Maintenance, Rev. 30
MA-MA-716-010-1008, Work Order Work Performance, Rev. 5
MA-MA-716-010-1010, Post-Job Review, Documentation Review, Action Request/Work Order/Work Order Activities Package Closure, Rev. 9
OP-AA-201-003, Fire Drill Performance, Rev. 12
OP-AA-201-004, Fire Prevention for Hot Work, Rev. 9
OP-AA-201-005, Fire Brigade Qualification, Rev. 8
OP-AA-201-006, Control of Temporary Heat Sources, Rev. 5
OP-AA-201-009, Control of Transient Combustible Material, Rev. 11
OP-MA-201-007, Fire Protection System Impairment Control, Rev. 6
RT-M-037-319-2, Fire Damper Function Test, Rev. 3
RT-O-037-324-2, Monthly Inspection of Outside Operator Area Fire Extinguishers, Rev. 11
RT-O-037-710-2, Complete Safe Shutdown Emergency Light Battery Pack Inspection, Rev. 8
RT-O-52D-650-2, Diesel Fuel Oil Receipt Requirements, Rev. 18
ST-C-37D-371-2, Diesel Driven Fire Pump Fuel Oil Sample Analysis, Rev. 5
ST-C-095-884-2, Sample Diesel Fuel Prior to Delivery to On-Site Storage Tanks, Rev. 20
ST-M-037-314-2, Visual Inspection of Encapsulated Electrical Raceways, Rev. 5
ST-M-037-399-2, Fire Damper Inspection, Rev. 9
ST-O-054-950-2, Offsite and Onsite Electrical Power Breaker Alignment and Power Availability Check, Rev. 18

Procedures (Operations)

AO 10.12-2, Unit 2 Alternate Shutdown Cooling, Rev. 2
AO 10.12-3, Unit 3 Alternate Shutdown Cooling, Rev. 2
ON-115, Loss of Normal Main Control Room Ventilation – Bases, Rev. 16
ON-115, Loss of Normal Main Control Room Ventilation – Procedure, Rev. 19

OP-PB-101-111, Peach Bottom Operations Department, Rev. 13
OP-PB-101-111, Peach Bottom Operations Department, Rev. 14
SE-10, Plant Shutdown from the Alternative Shutdown Panels – Bases, Rev. 20
SE-10 Attachment 1 – Operation of MO-2-10-154B From the MCC (U/2 Only), Rev. 4
SE-10 Attachment 2 – Operation of MO-3-10-154B From the MCC (U/3 Only), Rev. 5
SE-10 Attachment 3 – Operation of MO-2-10-089D From the MCC (U/2 Only), Rev. 6
SE-10 Attachment 4 - Operation of MO-3-10-089B From the MCC (U/3 Only), Rev. 7
SE-10 Attachment 5 – Alternate RPV Injection Using CRD, Rev. 2
SE-10 Attachment 6 – 4kv Alternate Shutdown Panel Setup and Transfer of 125 Battery
Charger 2BD003 to Alternate Power Source, Rev. 6
SE-10 Attachment 7 – RCIC Operation at the Remote Shutdown Panel, Rev. 1
SE-10 Attachment 8 – NRC Notifications from the Remote Shutdown Panel, Rev. 1
SE-10 Attachment 9 – HPCI Operation from the Remote Shutdown Panel, Rev. 1
SE-10 Attachment 10 – Depressurization Cooldown Log, Rev. 0
SE-10 Attachment 11 – Alternate Shutdown Cooling Cooldown Log, Rev. 0
SE-10 Attachment 12 - Bypass of SV-8130A (U/2 Only), Rev. 2
SE-10 Attachment 13 - Bypass of SV-9130A (U/3 Only), Rev. 2
SE-10 Attachment 14 – Reactor Protection System De-energization (U/2 Only), Rev. 0
SE-10 Attachment 15 - Reactor Protection System De-energization (U/3 Only), Rev. 0
SE-10 Attachment 16 – HPSW Pump Room Temperature Local Monitoring, Rev. 1
SE-10, Sht. 1, Alternative Shutdown, Rev. 18
SE-10, Sht. 2, Alternative Shutdown, Rev. 16
SO 10.1.D-2, Unit 2 Residual Heat Removal System Torus Cooling, Rev. 19
ST-O-054-950-2, Offsite and Onsite Electrical Power Breaker Alignment and Power Availability
Check Rev. 18
T-100, Reactor Scram, Rev. 10
T-101, RPV Control, Rev. 19
T-102, Primary Containment Control, Sheet 1, Rev. 20
T-102, Primary Containment Control, Sheet 2, Rev. 15
T-102, Primary Containment Control, Sheet 3, Rev. 13
T-111, Level Restoration, Rev. 15
T-112, Emergency Blowdown, Rev. 17
T-302-2, Area 02 Fire Guide, Rev. 8
T-302-3, Area 02 Fire Guide, Rev. 5
T-306S-2, T-306S-2 Area 06S Fire Guide, Rev. 5
T-325-2(3), Area 25 Fire Guides, Revs. 1(1)
T-350-2, Area 50 Fire Guide, Rev. 6
T-350-3, Area 50 Fire Guide, Rev. 7
T-358-2, Area 58 Fire Guide, Rev. 5
T-358-3, Area 58 Fire Guide, Rev. 7

Large Fires and Explosions Mitigation Strategies Documents

OP-AA-201-010-1001, B.5.b Mitigating Strategies Equipment Expectations, Rev. 0
SE-23, Response to Security Threats
TSG 4.1, PBAPS Operational Contingency Guidelines, Rev. 20
TSG 4.2, Extreme Damage Mitigation Guideline for Loss of Large Areas of the Plant, Rev. 3
Work Order Number R1094814

Work Order Number R1154596
Work Order Number R1191956
Work Order Number R1192040
Work Order Number R1200341

Operator Safe Shutdown Training

PNEOLRTP2012, Nuclear Equipment Operator Training Program for 2012-2014, Rev. 0
PNLO-053P, Job Performance Measure – T-302-3 Fire Safe Shutdown, Rev. 2
PNLO-054P, Job Performance Measure – T-306N-2 Fire Safe Shutdown, Rev. 3
PNLO-2215, Lesson Plan – Effects of Fire on Safe Shutdown Equipment, Rev. 4
PNLO-88P, Job Performance Measure – T-301-2 Attachment 1, Operation of AO-2511, Rev. 0
PSEG-0214L, Simulator Exercise Guide – ON-114: Actual Fire Reported on Power Block, D/G BLDG, Emergency Pump, Inner Screen or Emergency Cooling Tower Struct., Rev. 11
PSEG-0221R, Simulator Exercise Guide – ON-114: Fire Near Ref. Leg Backfill System, Rev. 1
PSEG-0409R, Simulator Exercise Guide – Fire in Cable Spreading Room, Rev. 9
PSEG-0413R, Simulator Exercise Guide – Fire, Rev. 8
PSEG-0425L, Simulator Exercise Guide – T-300: Fire in the Reactor Building, Rev. 2
PSEG-0510L, Simulator Exercise Guide – SE-10 Plant Shutdown from the Alternative Shutdown Panel, Rev. 7

Fire Fighting Strategies (i.e., Pre-Fire Plans)

PF-5J, U2 RX BLDG., General Area-ELEV 165'-0", Rev. 4
PF-5K, U2 RX BLDG., General Area-ELEV 195'-0", Rev. 5
PF-5P, U2 RX BLDG. 135' EL South, Rev. 4
PF-13P, U3 RX BLDG; South CRD Equipment & East Corridor ELEV 135'-0", Rev. 5
PF-19, U2 RX BLDG., South Isolation Valve Room-ELEV 135'-0", Rev. 3
PF-20, U2 RX BLDG, TIP Room/Neutron Monitoring-ELEV 135'-0", Rev. 3
PF-30, U3 RX BLDG; TIP Room/Neutron Monitoring-ELEV 135'-0", Rev. 4
PF-31, U3 RX BLDG; South Isolation Valve Room-ELEV 135'-0", Rev. 4
PF-47A, U2 RX BLDG., RWCU Filter Demin. Valve rooms-ELEV 180'-0", Rev. 2
PF-51, U2 RX BLDG., Refuel Floor Vent Equipment-ELEV 195'-0"/214'-0", Rev. 2
PF-57, U2 RX BLDG., Refuel Floor-ELEV 234'-0", Rev. 5
PF-117, U3 Turbine Building, Emergency Battery SWGR Rooms-ELEV 135'-0", Rev. 8
PF-132, Diesel Generator Building, General Area-Elevation 127'-0", Rev. 7
PF-132A, Diesel Generator Building, General Area (Upper Level), Rev. 3

Fire Brigade Training

Fire Brigade Drill Spreadsheet, 5/15/12
Fire Brigade Qualification List, 4/17/12
Fire Brigade Training Slides for 1st Quarter 2012
List of Fire Brigade Lesson Topic training and dates' training was provided, 2010-2011
List of Fire Drill Scenarios, 2010-2012
N-LP-PIMS-GRT-SPD, Scott Air-PACK 4.5, SCBA Requalification, Rev. 1
Training Slides for Ventilation

Fire Brigade Drills, and Critiques

2010-04, Lube Oil Tank Room, U2 Turbine Building 116' Elevation, 12/15/09
2011-24, U3 H2 Farm Fire, 11/5/11
2012-01, Unit 2 Main Generator Bushing H2 Fire, 1/27/12
2012-02, Unit 3 Main Generator Bushing H2 Fire, 2/22/12
2012-03, 2G4 Load Center (52-0142 Breaker) Turbine Area MCC 2G4 Cubicle Fire,
Fire Zone-79A, 3/7/12
2012-05, 4PS4 (0334) Breaker Fire (MCC 4PS4 W-B Feeder Breaker), Fire Zone-79A, 2/7/12

Transient Combustible Permits and Evaluations

2012-06, Turbine Building, 50% Hydrogen/50% Nitrogen CU. FT. Bottle for Calibration of
H2IS-5374, end date 6/1/02
2012-07, U2 Reactor Building, Bubble Wrap used for Protecting the Fuel Rack Inserts
(11 Pieces of 14' X 8"), end date 3/21/12
2012-08, R/W Building, 14 Cardboard Drums Containing Bead Resin, end date 4/27/12
2012-09, U3 Reactor Building, Several Lengths of Water Hoses (Approx. 200 ft.) that will run
through the TFCZ, end date 4/6/12
2012-10, U3 Reactor Building, 22 Camera Storage Boxes, end date 5/12/12

Hot Work and Ignition Source Permits

A1807403 00 01, Computer Room UPS HVAC Unit, 2/20/12
C0235024 01 01, Install Piping Per ECR 10-00028, 4/2/12
C0237854 03 01, U2 RB 135' Elevation Railroad Bay, 2/6/12
R1064728 01 01, ESW Pump Discharge Pipe, 3/13/12
R1209840 15 01, U2 RB 135' Elevation, 4/2/12

Completed Tests and Surveillances

RT-O-006-450-3, Feedwater Stop Valve MO-3-02-029A Alternative Control Test, Rev. 0,
performed 9/16/11
RT-O-010-304-3, RHR/HPSW System Valves Alternative Control Testing, Rev. 12, performed
11/13/11
RT-O-010-310-3, RHR System Functional from the Alternative Control Panels, Rev. 10,
performed 8/21/10
RT-O-010-750-3, MO-3-10-016D Power Supply Operational Check, Rev. 2, performed 9/3/11
RT-O-22C-910-3, Alternative Shutdown Communication Functional Test, Rev. 3, performed
5/3/10
RT-O-22C-910-2, Alternate Shutdown Comm. Functional Test, Rev. 4, performed 12/23/11
RT-O-023-750-3, HPCI Functional Test from Alternative Control Panels, Rev. 15, performed
3/21/12
RT-O-023-760-3, HPCI Valve and Component Test from Alternative Control Panel, Rev. 12,
performed 6/24/11
RT-O-023-770-3, Alternative Control Panel Power and Logic Relays Check, Rev. 6,
performed 3/21/12

- RT-O-037-710-2, Complete Safe Shutdown Emergency Lighting Battery Pack Inspection, Rev. 8, performed 2/20/12
- RT-O-052-760-2, E4 Diesel and A ESW Pump Alternative Shutdown Control Panel, Rev. 11, performed 3/29/10
- RT-O-100-505-2, Emergency Operating Procedure Tool Inventory, Rev. 32, performed 12/27/11
- RT-O-100-950-2, Alternative Shutdown Key Accountability Verification, Rev. 5, performed 6/14/11 and 12/13/11
- RT-O-101-901-2, Local Fire Department Training, Rev. 2, performed 4/3/12
- SI2F-14-40-A1C2, Calibration Check of Core Spray Flow Instruments FT2-14-40A and FI2-14-50A, Rev. 2, performed 4/28/08 and 6/21/10
- SI2L-2-112-XXC2, Calibration Check of Alternative Shutdown Panel Reactor Vessel Level Instruments LT/LS/LI2-2-3-112, Rev. 2, performed 9/15/08 and 9/13/10
- SI2T-7-2442-B1C2, Calibration Check of Suppression Pool Temperature Instrumentation TE/TT/TI-2442B, TI-2445, and TE/TT/TI-8457, Rev. 7, performed 2/12/09 and 2/15/11
- SI3L-2-112-XXC2, Calibration Check of Alternative Shutdown Panel Reactor Vessel Level Instruments LT/LS/LI3-2-3-112, Rev. 1, performed 9/14/09 and 9/12/11
- SI3T-7-3442-B1C2, Calibration Check of Suppression Pool Temp. Inst. TE/TT/TI-3442B, I-3445, and TE/TT/TI-9457, Rev. 4, performed 3/10/09, 3/15/11 and 5/26/11
- ST-I-037-223-3, U3 4KV Switchgear & Battery Room Smoke Detectors Functional Test, Rev. 7, performed 11/7/07
- ST-I-037-223-3, U3 4KV Switchgear & Battery Room Smoke Detectors Functional Test, Rev. 7, performed 3/4/10
- ST-I-037-243-2, E-3 Diesel Gen. Heat Detectors Functional Test, Rev. 15, performed 6/16/11
- ST-I-037-243-2, E-3 Diesel Gen. Heat Detectors Functional Test, Rev. 15, performed 10/20/11
- ST-I-037-275-2, Reactor Bldg. 135' General Smoke Detectors Functions Test, Rev. 3, performed 7/22/09
- ST-I-037-275-2, Reactor Bldg. 135' General Smoke Detectors Functions Test, Rev. 3, performed 3/24/11
- ST-I-37G-393-2, E-3 Diesel Gen. Cardox System Simulated Actuation & Air flow Test, Rev. 7, performed 12/1/09
- ST-I-37G-393-2, E-3 Diesel Gen. Cardox System Simulated Actuation & Air flow Test, Rev. 8, performed 12/26/10
- ST-M-037-310-3, Visual Walkaround Inspection of Fire Barriers, Rev. 7, performed 2/8/10
- ST-M-037-310-3, Visual Walkaround Inspection of Fire Barriers, Rev. 8, performed 2/10/12
- ST-M-037-311-3, Detailed Visual Inspection of Penetration Seals & Difficult to View Fire Barriers, Rev. 4, performed 07/17/03
- ST-M-037-314-2, Visual Inspection of Encapsulated Elect. Raceways, Rev. 5, performed 6/6/08
- ST-M-037-314-2, Visual Inspection of Encap. Elect. Raceways, Rev. 5, performed 3/31/10
- ST-O-037-375-2, In-Plant Fire Brigade Equip. Inventory & Inspection, Rev. 5, performed 2/20/12
- ST-M-037-399-2, Fire Damper Inspection, Rev. 9, performed 2/22/10
- ST-M-037-399-2, Fire Damper Inspection, Rev. 9, performed 11/10/11
- ST-O-37B-323-3, U3 Battery Room & 4KV Switchgear Rooms Sprinkler Systems Actuators, Rev. 5, performed 11/4/09
- ST-O-37B-323-3, U3 Battery Room & 4KV Switchgear Rooms Sprinkler Systems Actuators, Rev. 5, performed 11/25/11
- ST-O-37B-326-2, Reactor Bldg. Water Curtain Simulated Actuation Test, Rev. 3, performed 10/26/10

- ST-O-37B-326-2, Reactor Bldg. Water Curtain Simulated Actuation Test, Rev. 3, performed 11/1/11
- ST-O-37B-381-2, Underground Fire Main Flow Test, Rev. 7, performed 5/20/08
- ST-O-37B-381-2, Underground Fire Main Flow Test, Rev. 8, performed 11/5/11
- ST-O-37C-330-2, Motor Driven Fire Pump Flow Rate Test, Rev. 9, performed 1/30/08
- ST-O-37C-330-2, Motor Driven Fire Pump Flow Rate Test, Rev. 10, performed 8/7/09
- ST-O-37C-330-2, Motor Driven Fire Pump Flow Rate Test, Rev. 10, performed 4/26/11
- ST-O-37D-340-2, Diesel Driven Fire Pump Flow Rate Test, Rev. 13, performed 1/8/08
- ST-O-37D-340-2, Diesel Driven Fire Pump Flow Rate Test, Rev. 16, performed 11/25/09
- ST-O-37D-340-2, Diesel Driven Fire Pump Flow Rate Test, Rev. 17, performed 6/9/11
- ST-O-37C-360-2, Motor Driven Fire Pump Operability Test, Rev. 14, performed 2/2/12
- ST-O-37C-360-2, Motor Driven Fire Pump Operability Test, Rev. 14, performed 2/27/12
- ST-O-37D-370-2, Diesel Driven Fire Pump Operability Test, Rev. 29, performed 2/14/12
- ST-O-37D-370-2, Diesel Driven Fire Pump Operability Test, Rev. 30, performed 3/13/12

Corrective Action Program Documents (Issue Reports and Action Requests)

A0976609	A1107977	A1108963	A1188661	A1189363	A1189595
A1190781	A1190791	A1192350	A1194032	A1196123	A1198039
A1200806	A1367880	A1831504	0199602	0199643	0199773
00777948	00892345	00893919	00894520	00895523	00898861
00899687	00902248	00902274	01026200	01026334	01101342
01180103	01189120	01191845	01195921	01199620	01199739
01199761	01197952	01202173	01202621	01220008	01220430
01227953	01227958	01235317	01263253	01264348	01281518
01282880	01284311	01289882	01290922	01306171	01313145
01312394	01314068	01321396	01328878	01330225	01330256
01334792	01343526	01346097	01349070	01349054	01349076
01349213	01359468	01360139	01359016	01359099	01361907*
01362257*	01362556*	01366468	01366938*	01366946*	01366954*
01367134*	01367153*	01367233*	01367239*	01367242*	01367245*
01367638*	01367880*				

(* initiated during this inspection.)

Work Orders

C0131171	C0183228	C0233481	C0236548	C0240968	C0241398
R0496480	R0860215	R0868027	R0898273	R0929031	R1041916
R1045470	R1058797	R1062389	R1069901	R1070122	R1098647
R1101029	R1111003	R1124240	R1126290	R1143254	R1191024
R1208329					

Vendor Manuals

- B200/201 Exide Electronics, Emergency Light Unit, 6/76
- Sentry Battery Corporation, High Density PM Type Sealed Lead-Acid Battery, 5/29/02

Industry Standards

NEI 00-01, Guidance for Post-Fire Safe Shutdown Circuit Analysis, Rev. 2

Miscellaneous Documents

CARDOX, Field Test Report Number 4, E3 & E4 Diesel CO₂ Initial Discharge Test, 11/2/71
 Control Room Shift Attendance Briefing Sheet, 5/15/12
 Exelon Letter of Agreement between PBAPS & Delta-Cardiff Volunteer Fire Company, 1/3/12
 IN 92-18, Potential for Loss of Remote Shutdown Capability During a Control Room Fire
 INDMS Safe and Alternative Shutdown Cable Location Report, Dated 4/12/12
 INDMS Safe and Alternative Shutdown Equipment Location Report Sorted by Fire Area and Room Number, Dated 4/13/12
 INDMS Safe and Alternative Shutdown Equipment Location Report Sorted by INDMS Component Designation, Dated 4/13/12
 INDMS Safe and Alternative Shutdown Methods Logics Report, Dated 4/12/12
 INDMS Safe and Alternative Shutdown System Logics Report, Dated 4/12/12
 LER 05000278/2012004-00, HPCI Cable Routing Error Results in Degraded Post-Fire Safe Shutdown (FSSD) Analysis
 MSO eSOMS Operator Round Tour Sheets, 5/3/12
 NE-00296, Specification for Post-Fire Safe Shutdown Program Requirements, Rev. 1
 NEI 00-01, Guidance for Post Fire Safe Shutdown, Rev. 2
 Penetration Seal Detail for TB3-135-265-2012, last updated 7/16/03
 Penetration Seal Detail for TB3-135-265-2012A, last updated 7/16/03
 Penetration Seal Detail for TB3-135-265-2012B, last updated 9/25/94
 Penetration Seal Detail for TB3-135-265-2012C, last updated 9/25/94
 Penetration Seal Detail for TB3-135-265-2012D, last updated 7/16/03
 Penetration Seal Detail for TB3-135-265-2012E, last updated 9/25/94
 PBAPS Multiple Spurious Operations Outage Modification Schedule for Unit 2 & Unit 3
 PBAPS Multiple Spurious Operations Online Modification Schedule for Unit 2 & Unit 3
 ST-C-37D-2, Analysis of Diesel Driven Fire Pump Storage Tank, 12/7/11
 Tactical Public Safety, Preventative Maintenance Testing for Exelon Radio Communications Systems, Rev. 1

LIST OF ACRONYMS

AC	Alternating Current
ADAMS	Agencywide Documents Access and Management System
APCSB	[NRC] Auxiliary and Power Conversion Systems Branch
AV	Apparent Violation
BTP	Branch Technical Position
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CRD	Control Rod Drive
CO ₂	Carbon Dioxide
DC	Direct Current
ECR	Engineering Change Request

EDG	Emergency Diesel Generator
Elev.	Elevation
FA	Fire Area
FHA	Fire Hazards Analysis
FPP	Fire Protection Program
FSSD	Post-Fire Safe Shutdown
FZ	Fire Zone
GL	Generic Letter
HPCI	High Pressure Isolation Cooling
IN	[NRC] Information Notice
IP	[NRC] Inspection Procedure
IPE	Individual Plant Examination
IPEEE	Individual Plant Examination of External Events
IR	Issue Report
IR	[NRC] Inspection Report
kV	kilovolt
LER	Licensee Event Report
MCC	Motor Control Center
MOV	Motor Operated Valve
MSO	Multiple Spurious Operation
NEI	Nuclear Energy Institute
NFPA	National Fire Protection Association
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
NRR	[NRC] Nuclear Reactor Regulation
PARS	Publicly Available Records System
PBAPS	Peach Bottom Atomic Power Station
P&ID	Piping and Instrumentation Drawing
RCIC	Reactor Core Isolation Cooling
RFO	Refueling Outage
RG	[NRC] Regulatory Guide
RHR	Residual Heat Removal
SDP	[NRC] Significance Determination Process
SE	[NRC] Safety Evaluation
SER	[NRC] Safety Evaluation Report
SFP	Spent Fuel Pool
SRV	Safety Relief Valve
SWGR	Switchgear
UFSAR	Updated Final Safety Analysis Report
V	Volt