UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

March 14, 2016

Mr. Bryan Hanson
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 - EVALUATION OF CHANGES, TESTS, AND EXPERIMENTS AND PERMANENT MODIFICATIONS TEAM INSPECTION REPORT 05000277/2016007AND 05000278/2016007

Dear Mr. Hanson:

On February 12, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The enclosed inspection report documents the inspection results, which were discussed on February 12, 2016, with Mr. Michael Massaro, Peach Bottom 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. In conducting the inspection, the team reviewed selected procedures, calculations and records, observed activities, and interviewed station personnel.

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

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 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 (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS).

ADAMS is accessible from the NRC's Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Mandy K. Halter, Chief
Engineering Branch 2
Division of Reactor Safety

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

Enclosure:
Inspection Report 05000277/2016007 and 05000278/2016007
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos.:	50-277 and 50-278
License Nos.:	DPR-44 and DPR-56
Report Nos.:	05000277/2016007 and 05000278/2016007
Licensee:	Exelon Generation Company, LLC
Facility:	Peach Bottom Atomic Power Station, Units 2 and 3
Location:	Delta, Pennsylvania
Inspection Period:	January 25, 2016 through February 12, 2016
Inspectors:	J. Ayala, Reactor Inspector, Division of Reactor Safety (DRS) Team Leader K. Mangan, Senior Reactor Inspector, DRS J. Schoppy, Senior Reactor Inspector, DRS
Approved By:	Mandy K. Halter, Chief Engineering Branch 2 Division of Reactor Safety

Enclosure

SUMMARY

IR 05000277/2016007 and 05000278/2016007; 01/25/16 - 02/12/16; Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3; Engineering Specialist Plant Modifications Inspection.

This report covers a two week inspection of the evaluations of changes, tests, or experiments and permanent plant modifications. The inspection was conducted by three region based engineering inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5, dated February 2014.

No findings were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R17 Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications (IP 71111.17)

.1 Evaluations of Changes, Tests, or Experiments (27 samples)

a. Inspection Scope

The team reviewed nine safety evaluations to evaluate whether the changes to the facility or procedures, as described in the Updated Final Safety Analysis Report (UFSAR), had been reviewed and documented in accordance Title 10 of the *Code of Federal Regulations* (10 CFR) 50.59 requirements. In addition, the team evaluated whether Exelon had been required to obtain U.S. Nuclear Regulatory Commission (NRC) approval prior to implementing the changes. The team interviewed plant staff and reviewed supporting information including calculations, analyses, design change documentation, procedures, the UFSAR, Technical Specifications (TS), and plant drawings to assess the adequacy of the safety evaluations. The team compared the safety evaluations and supporting documents to the guidance and methods provided in Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Evaluations," Revision 1, as endorsed by NRC Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," to determine the adequacy of the safety evaluations.

The team also reviewed a sample of eighteen 10 CFR 50.59 screenings and applicability determinations for which Exelon had concluded that no safety evaluation was required. These reviews were performed to assess whether Exelon's threshold for performing safety evaluations was consistent with 10 CFR 50.59. The sample included design changes, calculations, procedure changes, and setpoint changes. The screenings and applicability determinations were selected based on the safety significance, risk significance, and complexity of the change to the facility.

In addition, the team compared Exelon's administrative procedures used to control the screening, preparation, review, and approval of safety evaluations to the guidance in NEI 96-07 to determine whether those procedures adequately implemented the requirements of 10 CFR 50.59. The reviewed safety evaluations, screenings, and applicability determinations are listed in the attachment.

b. Findings

No findings were identified.

.2 Permanent Plant Modifications (9 samples)

.2.1 Unit 3 High Pressure Service Water Pump Motor Oil Coolers Replacement

a. Inspection Scope

The team reviewed modification ECP-14-00317 that replaced the Unit 3 high pressure service water pump (HPSW) motor oil coolers. Based on Peach Bottom Unit 2 HPSW system operating experience, engineering recommended a proactive replacement of the HPSW pump motor oil cooler cooling coils. Engineering determined that corrosion had caused a cooling coil leak on the 2B HPSW pump motor in October 2013 and developed the modification to replace the pre-existing copper cooling coils with upgraded stainless equivalent cooling coils. At the time of the inspection, Exelon had implemented the modification on three of the four Unit 3 HPSW pumps and planned to install the upgraded motor oil cooler in the 3D HPSW pump motor in the Fall 2016.

The team reviewed the modification to verify that the design bases, licensing bases, and performance capability of the HPSW system had not been adversely impacted by the modification. The team interviewed engineering staff and reviewed technical evaluations associated with the modification to determine if the HPSW pump motors would function in accordance with the design assumptions. The team reviewed the associated maintenance work orders to determine if Exelon appropriately implemented the modification. The team performed several walkdowns of the accessible portions of the HPSW pump motor cooling water supply and return piping and components to independently assess Exelon's configuration control, the operating environment, and the material condition of the associated structures, systems, and components (SSCs). On January 26, 2016, the team observed portions of a prolonged run on the 3B HPSW pump to independently assess pump performance, cooling system integrity, and cooling coil flow. The team reviewed the associated post maintenance test (PMT) results, recent oil sample analyses, system health reports, and recent surveillance test results to verify that the HPSW pumps functioned as designed following the modification. The team also reviewed corrective action issue reports (IRs) to determine if there were reliability or performance issues that may have resulted from the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

.2.2 Emergency Service Water Pipe Replacement

a. Inspection Scope

The team reviewed modification ECP-11-00335 that replaced a portion of the 6" emergency service water (ESW) supply piping to the E4 emergency diesel generator (EDG). Exelon replaced the ESW piping to address corrosion and wall thinning concerns. The modification also approved the use of slip-on flanges to aid in the piping replacement.

The team reviewed the modification to verify that the design bases, licensing bases, and structural integrity of the ESW piping and supports had not been degraded by the modification. The team interviewed design engineers, and reviewed evaluations, pipe stress calculations, surveillance and non-destructive examination (NDE) results, and associated maintenance work orders to verify that Exelon appropriately implemented the ESW piping replacement and maintained the ESW piping in accordance with design assumptions. The team also performed several walkdowns of the accessible portions of the ESW system to ensure that the system configuration was in accordance with design instructions and that ESW piping integrity was maintained. The team also reviewed corrective action IRs and the ESW system health report to determine if there were reliability or performance issues that may have resulted from the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

.2.3 Unit 3 High Pressure Service Water Cross Tie Modification

a. Inspection Scope

The team reviewed modification DCP-13-00133 that implemented physical changes to the Unit 3 HPSW cross tie motor-operated valve (MOV MO-3-32-3344) and associated discharge piping. This included replacing the MOV with a normally closed butterfly valve equipped with a motor operator sized to permit stroking of the MOV, when starting a second HPSW pump to deliver HPSW cooling water flow through a second RHR HX, to meet the extended power uprate (EPU) heat removal requirements.

The team reviewed the modification to verify that the design bases and licensing bases and performance capability of the HPSW system had not been degraded by the modification. The team interviewed design engineers, and reviewed calculations, evaluations, PMT results, and associated maintenance work orders to verify that Exelon implemented the modification as designed. The team also performed several walkdowns of the cross tie MOV and associated HPSW discharge piping in the Unit 3 HPSW pump room to ensure that the system configuration was in accordance with design instructions, the HPSW system integrity was maintained, and that important to safety SSCs in the vicinity were not adversely impacted. The team also reviewed corrective action IRs and system health reports to determine if there were reliability or performance issues that may have resulted from the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

.2.4 Core Spray Torus Pump Suction Isolation Valve MO-2-14-070 Torque Switch Bypass

a. Inspection Scope

The team reviewed ECR-13-00235 that electrically bypassed the torque switch in motor operated valve (MOV) operator MO-2-14-070. Valve MO-2-14-070 is the Core Spray (CS) torus water filter pump suction isolation valve. The valve is normally closed and performs an active safety function to automatically close, if in the open position, upon initiation of a loss of coolant accident (LOCA) to provide primary containment isolation by isolating the torus water clean-up from suppression pool inventory. The closure prevents inadvertent draining of the suppression pool inventory. Exelon implemented the modification to ensure the valve goes closed and eliminate the possibility of the valve stroke stopping in an intermediate position.

The team reviewed the modification to verify that the design bases, licensing bases and performance capability of the CS system had not been degraded by the modification. The team interviewed design engineers, and reviewed evaluations, MOV calculations, surveillance results, and associated maintenance work orders to verify that Exelon appropriately implemented the modification in accordance with design assumptions. The team also performed several walkdowns of the accessible portions of CS system to independently assess Exelon's configuration control and the material condition of the CS system. The team also reviewed corrective action IRs to determine if there were reliability or performance issues that may have resulted from the modification. The 10 CFR 50.59 screening determination associated with this modification was also reviewed as described in Section 1R17.1 of this report. The documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

.2.5 PB 13-00433, Core Spray In-Vessel Pipe Replacement

a. Inspection Scope

The team reviewed modification ECR-13-00433 which replaced piping, supports, and mechanical joint connections inside the reactor vessel for the core spray system. The modification was performed to address degradation identified in welded sections of the piping due to intergranular stress corrosion cracking (IGSCC). The replacement piping and sleeve assemblies were constructed with material that is resistant to IGSCC.

The team reviewed the modification to determine if the design, licensing bases, and performance capability of the core spray system had been degraded by the modification. The team reviewed calculations, licensee design documents, and associated maintenance work orders to determine if the changes were appropriately implemented. The team also reviewed corrective action IRs to determine if there were reliability or performance issues that may have resulted from the modification.

Finally, the team interviewed design engineers to determine if the changes met design and licensing requirements. The 10 CFR 50.59 screening determination associated with this modification was reviewed as described in Section 1R17.1 of this report. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

.2.6 PB 13-00132, EPU HPSW Mod – AC Mechanical

a. Inspection Scope

The team reviewed modification ECR 13-00132 which installed manual isolation valves on a new section of HPSW piping. This modification, along with several other modifications, was performed to allow for the connection of separate trains of high pressure service water (HPSW), if needed during an event, and thereby improve the flexibility of the HPSW and residual heat removal (RHR) systems to reduce overall risk to the plant. These valves were installed to provide capability to isolate the motor operated cross connect valve for maintenance.

The team reviewed the modification to determine if the design basis, licensing basis, or performance capability of the HPSW or RHR system had been degraded by the modifications. The team interviewed design engineers and reviewed the replacement valve design to determine if the changes were consistent with the design and licensing requirements. Additionally, the team reviewed post maintenance test (PMT) results, and associated maintenance work orders to determine if the changes were appropriately implemented and tested, in accordance with American Society of Mechanical Engineers (ASME) Code requirements. The team also performed a walkdown of the valves to assess the overall material conditions of the valves, associated piping, and supports following the modification work. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

2.7 PB 13-00060, Change RCIC TDH for 3% SV/SRV Tolerance Project

a. Inspection Scope

The team reviewed modification ECR 13-00060 which was performed to evaluate the impact of expanding the allowed safety relief valve operating set point tolerance range from (+/-) 1 percent to (+/-) 3 percent on the operation of the reactor core isolation cooling (RCIC) system. The modification developed a flow model for the RCIC system and evaluated if design flow rates would be available at maximum reactor pressure and minimum system supply pressure. This analysis verified that if the valve did not open until reactor pressure was 103% of the safety relief valve set pressure, adequate flow, as described in the design basis of the RCIC system, would be achieved.

The team reviewed the analysis to evaluate whether the design inputs and outputs were technically reasonable. Additionally, the team reviewed calculation results to determine whether the design bases, licensing bases, and performance capability of RCIC system had been degraded by the modification. Specifically, the team evaluated whether the increased reactor pressure adversely affected flowrates when the RCIC pump suction was aligned to the torus. Finally, the team interviewed design engineers to determine the bases for assumptions in the calculations. The 10 CFR 50.59 process applicability determination associated with this EC was also reviewed as described in Section 1R17.1 of this report. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

2.8 Add Safety Related Closed Function to RCIC Turbine Trip Valves

a. Inspection Scope

The team reviewed modification ECR-13-00094 which added a safety related close function to the normally open Reactor Core Isolation Cooling (RCIC) turbine trip throttle valve. The modification was performed to address the potential for a water hammer event identified through external operating experience (OE). The OE described the potential for water hammer during performance of vacuum breaker maintenance while maintaining RCIC operable. The trip throttle valve, which is a spring-to close-valve, must close with a faster stroke time than the vacuum breaker isolation valve in order to minimize the potential for water hammer. The modification was performed to ensure that the trip throttle valve closes before the vacuum breaker isolation valve.

The team reviewed the modification to determine if the design, licensing bases, and performance capability of the RCIC system had been degraded by the modification. The team interviewed design engineers, and reviewed evaluations, surveillance results, and associated maintenance work orders to verify that Exelon appropriately, implemented the modification in accordance with design assumptions. The team also performed several walkdowns of the accessible portions of RCIC system to independently assess Exelon's configuration control and the material condition of the RCIC system. The team also reviewed corrective action IRs and to determine if there were reliability or performance issues that may have resulted from the modification. The 10 CFR 50.59 screening determination associated with this modification was also reviewed as described in Section 1R17.1 of this report. The documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

2.9 FLEX Modification – Units 2 and 3 Diesel Fuel Oil Supply

a. Inspection Scope

The team reviewed modification ECR-13-0279 which installed piping, valves, and quick-connect coupling onto the auxiliary boiler diesel fuel oil system to support diesel-driven FLEX equipment during FLEX coping strategies. The modification was performed as a result of NRC Order EA-12-049, "Order Modifying License with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events."

The team reviewed the modification to determine if the design, licensing bases, and performance capability of the EDG system had been degraded by the modification. The team reviewed the evaluation and associated maintenance work orders to verify that Exelon appropriately implemented the modification in accordance with design assumptions. The team also reviewed corrective action IRs and to determine if there were reliability or performance issues that may have resulted from the modification. The 10 CFR 50.59 screening determination associated with this modification was also reviewed as described in Section 1R17.1 of this report. The documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems (IP 71152)

a. Inspection Scope

The team reviewed a sample of problems that Exelon had previously identified and entered into the corrective action program. The team reviewed these issues to verify an appropriate threshold for identifying issues and to evaluate the effectiveness of corrective actions. In addition, the team reviewed corrective action IRs written on issues identified during the inspection to verify adequate problem identification and incorporation of the problem into the corrective action system. The specific corrective action documents that were sampled and reviewed by the team are listed in the attachment.

b. Findings

No findings were identified.

4OA5 Other Activities

In addition to the samples documented in this report, three additional samples were completed within the scope of this inspection procedure and documented in Section1R17 of Inspection Report 05000277/2015002 and 05000278/2015002 (ML15215A527), dated August 3, 2015. One safety evaluation, PB-2013-002-E, "EPU App R/SBO Mod – CST Standpipe," one modification ECR-12-00155, "Unit 2 EPU HPSW Mod – Electrical Scope," Revision 4, and ECR-13-00135, "Unit 2 EPU HPSW Mod – Mechanical Scope," and one screening PB-2014-021-S, "Unit 2 – HPSW Cross-Tie Modification," are documented in the referenced report.

4OA6 Meetings, including Exit

The team presented the inspection results to Mr. Mike Massaro, Site Vice President, and other members of Exelon's staff at an exit meeting on February 12, 2016. The team returned the proprietary information reviewed during the inspection to the licensee and verified that this report does not contain proprietary information.

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Exelon Personnel
M. Massaro, Site Vice President
P. Navin, Plant Manager
T. Dombach, Electrical Design Engineer
D. Dullum, Regulatory Assurance Engineer
D. Knepper, Senior Design Engineer
J. Mann, Design Engineer
J. Armstrong, Regulatory Assurance Manager
J. Phipps, Supervisor, Mechanical Maintenance Team 5

NRC Personnel
J. Heinly, Senior Resident Inspector
B. Smith, Resident Inspector

ITEMS OPENED, CLOSED AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

10 CFR 50.59 Evaluations
PB 2013-010E, ISFSI Floor Load Analysis and Modifications 50.59 Evaluation, dated 12/10/13
PB-2013-002-E, EPU App R/SBO Mod – CST Standpipe, Revision 0
PB-2013-006E, Control Room Habitability Program Changes due to Construction of an Offsite Power Plant, Revision 0
PB-2014-002E, Reactor Feedpump Turbine Replacement – Electric/ Instrumentation, Revision 0
PB-2014-004-E, Allowance of Synthetic Roundslings for NUREG 0612 Heavy Load Lifts 50.59 Evaluation, dated 7/18/14
PB-2014-005E, Surveillance Interval Change of the 4KV Undervoltage Relays and LOCA LOOP Functional Test, Revision 0
PB 2014-006E, EPU Implementation ECR for Unit 2, dated 10/10/14
PB-2015-002E, Peach Bottom Atomic Power Station Unit 3 Recirculation MG Replacement-Outage Phase, Revision 0
PB-2015-004E, Test Interval Change to TR 3.5.4 for Containment Spray – Containment High Pressure (Function 5), Revision 0
PB-2015-007-E, Local Leak Rate Testing Scope Reduction for Residual Heat Removal and Core Spray, Revision 0
One safety evaluation sample documented in Section 1R17 of Inspection Report 05000277/2015002 and 05000278/2015002

10 CFR 50.59 Screened-out Evaluations

PB-2012-068-S, Unit 3 High Pressure Service Water (HPSW) Cross Tie Modification (Mechanical Scope), dated 7/15/15
PB-2013-001-S, Install NETCO Rack Inserts into the U/2 & U/3 Spent Fuel Racks, dated 1/7/13
PB-2013-002-S, Installation of CTSB Design in Valve MO-2-13-030 Control Logic, Revision 0
PB-2013-011-S, P2R20 EPU MOD-NUMAC Power Range Neutron Monitory System Upgrade, Revision 0
PB-2013-018-S, ECR PB 11-00253 “Addition of Main Steam Safety Valve – Unit 2”, Revision 0
PB-2013-029-S, RHR/CS Room Coolers, RCIC Turbine Lube Oil Cooler, EDG Heat Exchangers Tube Plugging Limit Change, dated 7/11/13
PB-2013-034-S, RHR Cross-Tie Modification (Unit 2 A/C and Unit 2 B/D Loops) – Mechanical / Structural / I&C, dated 1/23/14
PB-2013-037-S, ECR for ETAP Calculation Major Revision, Revision 0
PB-2013-073-S, HPCI Turbine Inlet Drain HI Level/Instrument Failed Alarm Disable, dated 11/7/13
PB-2013-075-S, MO-2-10-13B, Recommended Margin Improvement Mod, Revision 0
PB-2014-013-S, PB 2 Cycle 21 Core Reload, Revision 0
PB-2014-020-S, P3R20 EPU Modification, Technical Specification Setpoint Change, Revision 0
PB-2014-021-S, Unit 2 – HPSW Cross-Tie Modification, Revision 0#
PB-2014-026-S, Appendix R HPCI Torus High Level and RCIC CST Low Level Override for Unit 3, Revision 0
PB-2014-036-S, Hydraulic Analysis for RCIC Pump, Revision 0
PB-2014-037-S, FLEX Modification – Unit 2 and 3 Diesel Fuel Oil Supply, Revision 0
PB-2014-090-S, Disabling the Input from RV-071E to the Common Bellows Leaking MCR Annunciator, dated 12/22/14
PB-2015-022-S, Unit 3 CRD Suction Alignment to Unit 2 CST, Revision 0
PB-2015-043-S, Implementation of PE-0017 Revision 17, Revision 0

One screening sample documented in Section 1R17 of Inspection Report 05000277/2015002 and 05000278/2015002.

Modifications

DCP-13-00133, EPU HPSW Mod – MOV Installation, Revision 2
ECP 11-00335, Replace E4 ESW 6” Supply Piping in EDG Window EOC, Revision 0
ECR-12-00155, Unit 2 EPU HPSW Mod – Electrical Scope, Revision 4#
ECR-13-00060, Change RCIC TDH for 3% SV/SRV Tolerance Project, Revision 0
ECR-13-00132, EPU HPSW Mod – AC Mechanical, Revision 2
ECR-13-00135, Unit 2 EPU HPSW Mod – Mechanical Scope, Revision 2#
ECR-13-00352, Peach Bottom Unit 2 Cycle 21 Core Reload Design, Revision 1
ECR-13-00433, Core Spray In-Vessel Pipe Replacement, Revision 0
ECR-13-00094, Add Safety Related Closed Function to RCIC Turbine Trip Valves, Revision 0
ECR-13-00235, MO-2-14-070-OP Recommended Margin Improvement Mod, Revision 0
ECP-14-00317, Replacement of HPSW Pump Motor Oil Coolers, Revision 1

One modification sample documented in Section 1R17 of Inspection Report 05000277/2015002 and 05000278/2015002

Assessments

02446530, Peach Bottom 2015 Inspection of Mods and 50.59 Reviews Focused Area Self-Assessment, dated 9/16/15

Calculations & Analysis

32-1, Piping Stress Analysis for HPSW Pumps Discharge in Pump Structure Building, Revision 1
32-1H, Design of HPSW Supports in Pump Structure for Stress Calc 32-1, Revision 6
33-33, Piping Stress Analysis for ESW Loops A and B in Cardox Room and Emergency Diesel Generator (EDG) Rooms, Revision 4
33-33C, Evaluation of Pipe Supports for Emergency Service Water (ESW) Supply to Emergency Diesel Generator (EDG) Air Coolers – (Supports 33HB-S3 to S6, S16 to S27B, S29, and S30), Revision 1B
A-585-VC-7, Design/Seismic Report Maximum Torque Calculations & Weak Link Analysis for 14-IN. CL 300 Tricentric Valves, Revision 0
PEAM-EPU-29, T0400 Containment System Response, Revision 2
PM-0436, Determination of Minimum Acceptable Wall Thickness to Support the Applied Mechanical Loads for Systems 30, 32, 33, 34, 44 & 48 Piping, Revision 6D
PM-0620, Determine Upstream and Downstream Line Pressures for MOVs within the Scope of GL 89-10 and Summarize the Maximum Design Basis Differential Pressure, Revision 19
PM-0824, Develop an Equation to Extrapolate, from Actual Data, the Maximum Anticipated Bearing Oil Temperature on the HPSW Pump Motors, Revision 2
PM-1042, Determination of Diesel Operability with Cross-Flow, Revision 4
PM-1079, High Pressure Service Water System – Orifice Sizing, Revision 1
PM-1110, Structural Evaluation of NETCO SFP Storage Rack Inserts, Revision 0
PM-1148, Tube Plugging Limit Calculation – RHR and CS Room Coolers, Revision 0
PM-1149, Tube Plugging Limit Calculation – RCIC Turbine Lube Oil Cooler, Revision 0
PS-0965, Evaluation of Structural Adequacy of RB Floors at Pool Cask Area, Cask Laydown Area and Cask Unloading Area, Revision 2A
PS-1080, Peach Bottom Free Standing Cask in SFP Seismic Response and Potential Impact Load Evaluation, Revision 0
PS-1093, ISFSI Cask Displacement on Refuel Floor on Low Friction Plates, Revision 0

Corrective Action Issue Reports

00647808	01561476	01669516	02561982	02624080
01297948	01561560	01672022	02617213	02624124*
01330242	01561752	01673523	02617856	02624310*
01502676	01594731	02394823	02618210*	00477724
01510515	01611658	02403035	02618250*	00478007
01538819	01642297	02450488	02618278*	02625303*
01548575	01642299	02470575	02618892	02624970*
01554318	01642301	02559488	01134292	
01556052	01642307	02559493	00872125	

* Generated as result of this inspection

Design & Licensing Bases

NRC Regulatory Guide 1.76, Design-Basis Tornado and Tornado Missiles for Nuclear Power Plants, Revision 1

Philadelphia Electric Company Letter to USNRC, Peach Bottom Atomic Power Station, Units 2 and 3, Limerick Generating Station, Units 1 and 2, Response to NRC Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment," dated 1/29/90

Philadelphia Electric Company Letter to USNRC, Peach Bottom Atomic Power Station, Units 2 and 3, Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment," Implementation of Actions dated 6/1/92

P-S-02, Emergency Service Water System Design Baseline Document, Revision 12

P-S-03, High Pressure Coolant Injection System Design Baseline Document, Revision 23

P-S-04, High Pressure Service Water System Design Baseline Document, Revision 12

P-S-31, Automatic Depressurization System Design Baseline Document, Revision 4

P-T-01, Structural Design Baseline Document, Revision 9

T04333, PBLR NRC Generic Letter 89-13 Activities, dated 7/29/13

Drawings

6280-M-309, Sht. 1 and 2, Condensate and Refueling Water Storage and Transfer Systems, Revisions 65 and 61

6280-M-311, Sht. 7, Condensate Filter/Demineralizer System, Revision 55

6280-M-315, Emergency Service Water and High Pressure Service Water Systems, Revision 55

6280-M-356, Sht. 2, Control Rod Drive Hydraulic System Part A, Revision 76

6280-M-359, Reactor Core Isolation Cooling System, Revision 50

6280-M-361, Sht. 1, Residual Heat Removal System, Revision 85

6280-M-362, Sht. 1, Core Spray Cooling System, Revision 64

GB-32-MI-201-1, 32GB-14" from HP Service Water Pumps to 32GB-18" ISI Isometric, Revision 1

HB-33-MI-201-6, Emergency Service Water for Diesel Generator ISI Isometric, Revision 1

ISO-3-32-14, Unit 3 Piping Isometric Service Water, Revision 0

PD-25, Typical Penetration Seal Detail Link Seals, Revision 0

PS-818, Penetration Seal Locations Controlled Barriers – Room No. 818 Diesel Generator Building, Revision 0

Evaluations

A0151006-02, Re-Adjust Frequency of PM, dated 2/24/04

A17455897-05, Fuel Line Removal Technical Evaluation, dated 2/6/13

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C0245791	C0256242	R1231312	R1246508	R1280125
C0245793	R0039916	R1237556	R1270696	R1289209
C0245794	R0040330	R1240128	R1270749	R1314572
C0253976	R0040671	R1241453	R1271472	

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
CFR	Code of Federal Regulations
CS	Core Spray
DCP	Design Change Package
DRS	Division of Reactor Safety
ECR	Engineering Change Request
EDG	Emergency Diesel Generator
EPU	Extended Power Uprate
ESW	Emergency Service Water
Exelon	Exelon Nuclear
HPCI	High Pressure Coolant Injection
HPSW	High Pressure Service Water
HX	Heat Exchanger
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Issue Report
LOCA	Loss-of-Coolant-Accident
LOOP	Loss-of-Offsite-Power
MOV	Motor-Operated Valve
NDE	Non-Destructive Examination
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OE	Operating Experience
PARS	Publicly Available Records
PMT	Post Maintenance Test
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
SRV	Safety Relief Valves
SSC	Structure, System, and Component
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report