UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

February 4, 2014

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 - NRC INTEGRATED INSPECTION REPORT 05000277/2013005 AND 05000278/2013005

Dear Mr. Pacilio:

On December 31, 2013, the U. S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The enclosed inspection report documents the inspection results, which were discussed on January 8, 2014, 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. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings were identified. However, one licensee-identified violation, which was determined to be of very low safety significance, is listed in this report. However, because of the very low safety significance, and because it is entered into your corrective action program (CAP), the NRC is treating the finding as a non-cited violation (NCV), consistent with Section 2.3.2 of the NRC Enforcement Policy. If you contest the NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the PBAPS.

As a result of the Safety Culture Common Language Initiative, the terminology and coding of cross-cutting aspects were revised beginning in calendar year (CY) 2014. New cross-cutting aspects identified in CY 2014 will be coded under the latest revision to Inspection Manual Chapter (IMC) 0310. Cross-cutting aspects identified in the last six months of 2013 using the previous terminology will be converted to the latest revision in accordance with the cross-reference in IMC 0310. The revised cross-cutting aspects will be evaluated for cross-cutting

themes and potential substantive cross-cutting issues in accordance with IMC 0305 starting with the CY 2014 mid-cycle assessment review.

In accordance with Title 10 of *Code of Federal Regulations* (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 component of the NRC's document system Agencywide Documents Access Management System (ADAMS). ADAMS is accessible from the NRC website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Fred L. Bower III, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket Nos.: 50-277, 50-278
License Nos.: DPR-44, DPR-56

Enclosure: Inspection Report 05000277/2013005 and 05000278/2013005
w/Attachment: Supplementary Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos.:	50-277, 50-278
License Nos.:	DPR-44, DPR-56
Report No.:	05000277/2013005 and 05000278/2013005
Licensee:	Exelon Generation Company, LLC
Facility:	Peach Bottom Atomic Power Station, Units 2 and 3
Location:	Delta, Pennsylvania
Dates:	October 1, 2013 through December 31, 2013
Inspectors:	S. Hansell, Senior Resident Inspector B. Smith, Resident Inspector J. D'Antonio, Senior Operations Engineer J. Furia, Senior Health Physicist J. Grieves, Senior Resident Inspector, Susquehanna J. Laughlin, Emergency Preparedness Inspector, NSIR/ECB
Approved by:	Fred L. Bower III, Chief Reactor Projects Branch 4 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000277/2013005, 05000278/2013005; 10/01/2013 – 12/31/2013; Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3; Integrated Inspection Report.

This report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. No findings were identified. 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.

Cornerstones: Initiating Events, Mitigating Systems, Emergency Preparedness, and Barrier Integrity

None.

Other Findings

One violation of very low safety significance that was identified by Exelon was reviewed by the inspectors. Corrective actions taken or planned by Exelon have been entered into Exelon's corrective action program (CAP). This violation and the corrective action tracking number is listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 2 began the inspection period at 100 percent power. On November 8, 2013, operators reduced power to approximately 63 percent to perform main turbine control valve testing, control rod scram timing testing, and a control rod pattern adjustment. The unit was returned to 100 percent rated thermal power on November 9, 2013. The unit remained at 100 percent power through the end of the inspection period.

Unit 3 began the inspection period shutdown for the 19th refueling outage (RFO) (P3R19). On October 17, 2013, the reactor mode switch was placed in start-up and the main generator was synchronized to the electrical grid on October 24, 2013. On October 28, 2013, the unit was returned to 100 percent power. Unit 3 remained at 100 percent power until the end of the inspection period, except for brief periods to support planned testing and control rod pattern adjustments.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Emergency Preparedness, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 – 1 sample)

Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

The inspectors performed a review of PBAPS's readiness for the cold weather preparations on November 12, 2013. The review focused on the emergency diesel generators (EDGs) and the river water intake structure travelling screens and associated support equipment. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), technical specifications (TSs), control room logs, and the CAP to determine what temperatures or other seasonal weather could challenge these systems, and to ensure PBAPS personnel had adequately prepared for these challenges. The inspectors reviewed station procedures, including PBAPS's seasonal weather preparation procedure, and applicable operating procedures. The inspectors performed walkdowns of the selected systems to ensure station personnel identified issues that could challenge the operability of the systems during cold weather conditions. Documents reviewed for each section of this inspection report are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04 - 5 samples)

Partial System Walkdowns

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- Unit 3 high-pressure coolant injection (HPCI) after overspeed test on October 16, 2013
- Unit 3 high pressure service water (HPSW) after RFO on October 29, 2013
- Unit 3 main turbine bearing walkdown during startup on October 30, 2013
- Unit 2 HPCI and reactor core isolation cooling (RCIC) during yellow risk on December 10, 2013
- Unit 2 and Unit 3 emergency service water (ESW) after crosstie restored on December 18, 2013

The inspectors selected these systems based on their risk-significance relative to the Reactor Safety cornerstones at the time they were inspected. The inspectors reviewed applicable operating procedures, system diagrams, the UFSAR, TSs, work orders (WOs), condition reports (CRs), and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted system performance of their intended safety functions. The inspectors also performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and were operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. The inspectors also reviewed whether PBAPS staff had properly identified equipment issues and entered them into the CAP for resolution with the appropriate significance characterization.

b. Findings

No findings were identified.

1R05 Fire Protection

Resident Inspector Quarterly Walkdowns (71111.05Q – 5 samples)

a. Inspection Scope

The inspectors conducted tours of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that PBAPS controlled combustible materials and ignition sources were controlled in accordance with administrative procedures. The inspectors verified that fire protection and suppression equipment was available for use as specified in the area pre-fire plan, and passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for out of

service (OOS), degraded or inoperable fire protection equipment, as applicable, in accordance with procedures.

- Unit 3 refuel floor on October 13, 2013
- Unit 2 HPCI during yellow risk on December 12, 2013
- Unit 2 RCIC during yellow risk on December 12, 2013
- Unit 2 and Unit 3 ESW room on December 19, 2013
- Unit 3 HPSW room on December 23, 2013

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 – 3 samples)

.1 Internal Flooding Review (2 samples)

a. Inspection Scope

The inspectors reviewed the UFSAR, the site flooding analysis, and plant procedures to assess susceptibilities involving internal flooding. The inspectors also reviewed the CAP to determine if PBAPS identified and corrected flooding problems and whether operator actions for coping with flooding were adequate. The inspectors focused on the diesel rooms (DG), elevation 36' on November 15, 2013, and the Unit 3 HPSW loop after system cross-tie modification on December 19, 2013, to verify the adequacy of equipment seals located below the flood line, floor and water penetration seals, watertight door seals, common drain lines and sumps, sump pumps, level alarms, control circuits, and temporary or removable flood barriers.

b. Findings

No findings were identified.

.2 Annual Review of Cables Located in Underground Bunkers/Manholes (1 sample)

The inspectors conducted an inspection of underground bunkers/manholes subject to flooding that contain cables whose failure could disable risk-significant areas, including manhole 67, 101, and 107, to verify that the cables were not submerged in water, that cables and/or splices appeared intact, and to observe the condition of cable support structures. When applicable, the inspectors verified proper sump pump operation and verified level alarm circuits were set in accordance with station procedures and calculations to ensure that the cables will not be submerged. The inspectors also ensured that drainage was provided and functioning properly in areas where dewatering devices were not installed.

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07 – 1 sample)

a. Inspection Scope

The inspectors reviewed the E-3 emergency diesel generator (EDG) heat exchanger (HX) on December 13, 2013, to determine its readiness and availability to perform its safety functions. The inspectors reviewed the design basis for the component and verified Exelon's commitments to NRC Generic Letter 89-13. The inspectors reviewed the results of the previous inspections of the EDG HXs. The inspectors discussed the results of the most recent inspection with engineering staff and reviewed pictures of the as-found and as-left conditions. The inspectors verified that PBAPS initiated appropriate corrective actions for identified deficiencies. The inspector also verified that the number of tubes plugged within the HX did not exceed the maximum amount allowed.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11 –5 samples)

.1 Quarterly Review of Licensed Operator Requalification Testing and Training (2 samples)

a. Inspection Scope

The inspectors observed licensed operator requalification simulator training on November 18, 2013, and December 2, 2013, which included simulated plant events related to a loss of turbine building closed cooling water, loss of instrument air, a loss of offsite electrical power combined with the failure of the E-2 and E-3 EDGs to automatically start, the failure of the RCIC system to inject water into the reactor vessel, and the failure of the HPCI system to automatically start and inject water into the reactor vessel. The inspectors evaluated operator performance during the simulated event and verified completion of risk significant operator actions, including the use of abnormal and emergency operating procedures. The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the control room supervisor. The inspectors verified the accuracy and timeliness of the emergency classification made by the shift manager and the TS action statements entered by the shift technical advisor. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems.

b. Findings

No findings were identified.

.2 Quarterly Review of Licensed Operator Performance in the Main Control Room (MCR) (2 samples)

a. Inspection Scope

The inspectors observed licensed operator performance in the Unit 2 MCR during the main turbine high vibration on October 1, 2013, and the Unit 3 shutdown cooling re-alignment on October 14, 2013. The inspectors observed maintenance and test performance to verify that procedure use, crew communications, and coordination of activities between work groups met established expectations and standards. Additionally, the inspectors observed reactivity manipulations to verify that they were performed in a safe and controlled manner, and included the appropriate level of peer verification and supervisory oversight.

b. Findings

No findings were identified.

.3 Licensed Operator Requalification Program (71111.11A – 1 sample)

a. Inspection Scope

On December 9, 2013, one NRC region-based inspector conducted an in-office review of results of the licensee-administered requalification examination results for Senior Reactor Operator Limited to Fuel Handling. The inspection assessed whether pass rates were consistent with the guidance of NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)." The inspectors verified that:

- Overall pass rate among individuals for all portions of the exam was greater than or equal to 80 percent. (Overall pass rate was 100 percent)

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12 – 4 samples)

a. Inspection Scope

The inspectors reviewed the samples listed below to assess the effectiveness of maintenance activities on structures, systems, and components (SSCs) performance and reliability. The inspectors reviewed system health reports, CAP documents, maintenance WOs, and maintenance rule (MR) basis documents to ensure that PBAPS was identifying and properly evaluating performance problems within the scope of the MR. For each sample selected, the inspectors verified that the SSC was properly scoped into the MR in accordance with 10 CFR 50.65 and that the (a)(2) performance criteria established by the PBAPS staff were reasonable. As applicable, for SSCs classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these SSCs to (a)(2) status. Additionally, the inspectors ensured that PBAPS staff was identifying and addressing common cause failures that occurred within and across MR system boundaries.

- Units 2 and 3 review of 10 CFR 50.65 (a)(3) periodic assessment of the MR program on November 6, 2013

- Emergency lighting on November 15-18, 2013
- MCR radiation monitors on November 20-27, 2013
- Unit 3 feedwater leading edge flow meter on December 12, 2013

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - 5 samples)

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and emergent work activities listed below to verify that PBAPS performed the appropriate risk assessments prior to removing equipment for work. The inspectors selected these activities based on potential risk significance relative to the Reactor Safety cornerstones. As applicable for each activity, the inspectors verified that PBAPS personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When PBAPS performed emergent work, the inspectors verified that operations personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work and discussed the results of the assessment with the station's probabilistic risk analyst to verify plant conditions were consistent with the risk assessment. The inspectors also reviewed the TS requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- Unit 3 reactor vessel water level draindown on October 14, 2013
- Unit 3 main stack vent radiation monitor 'A' and 'B' channels OOS on October 29, 2013
- Electrical startup source line 343 OOS during the week of November 25, 2013
- Unit 3 yellow risk for half scram and station blackout (SBO) testing December 9, 2013
- Unit 2 HPCI/RCIC yellow risk with SBO OOS on December 13, 2013

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 - 5 samples)

a. Inspection Scope

The inspectors reviewed five operability determinations (ODs) for the following degraded or non-conforming conditions:

- Unit 3 torus recoating non-qualified portions on October 10, 2013
- Unit 3 'B' and 'D' residual heat removal (RHR) pump discharge valves on October 15, 2013
- Unit 3 'D' RHR minimum flow valve on October 16, 2013

- Unit 3 control rod drive 18-11 on October 25, 2013
- Unit 2 containment atmosphere dilution OOS on October 31, 2013

The inspectors selected these issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the ODs to assess whether TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TSs and UFSAR to PBAPS's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled by PBAPS. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 - 2 samples)

Temporary Modification

a. Inspection Scope

The inspectors reviewed the temporary modifications listed below to determine whether the modification affected the safety functions of systems that are important to safety. The inspectors reviewed 10 CFR 50.59 documentation and post-modification testing results, and conducted field walkdowns of the modifications to verify that the temporary modification did not degrade the design bases, licensing bases, and performance capability of the affected systems.

- Unit 3 Engineering Change Request (ECR) PB-00442-000, MO-3-01A-077 motor replaced on December 2, 2013
- Unit 3 ECR 09-00554-001, RCIC pressure switch change on December 19, 2013

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 - 7 samples)

a. Inspection Scope

The inspectors reviewed the post-maintenance tests (PMTs) for the maintenance activities listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed the test procedure to verify that the procedure adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure was consistent with the information in the applicable licensing basis and/or design basis documents, and that the procedure had been properly reviewed and approved. The

inspectors also witnessed the test or reviewed test data to verify that the test results adequately demonstrated restoration of the affected safety functions.

- ST-O-010-306-3, "Unit 3 RHR Pump, Valve and Flow Test," Revision 30, on October 13, 2013, after planned maintenance outage.
- RT-O-023-240-3, "Unit 3 HPCI Overspeed Trip Test Using Auxiliary Steam," Revision 1, on October 14, 2013, to verify operability during the Unit 3 startup.
- ST-R-003-490-3, "Zero Pressure Scram Times," Revision 4, on October 14, 2013, after the replacement of control rod drive mechanisms.
- RT-O-013-240-3, "Unit 3 RCIC Overspeed Trip Test Using Auxiliary Steam," Revision 1, on October 15, 2013, to verify operability during the Unit 3 startup.
- ST-O-094-400-3, "Unit 3 HPCI Steam Admission Valve," Revision 4, on October 16, 2013
- ST-O-014-306-3, "Unit 3 Core Spray (CS) Minimum Flow Valve," Revision 37, on December 11, 2013
- AO33.2, "ESW System Manual Startup and Operations," Revision 8, on December 19, 2013

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20 – 1 sample)

Peach Bottom Unit 3 Outage – Refueling (P3R19)

a. Inspection Scope

The inspectors reviewed the station's work schedule and outage risk plan for the Unit 3 maintenance and RFO (P3R19) which began on September 8, 2013, and was completed on October 24, 2013. The inspectors reviewed Exelon's development and implementation of outage plans and schedules to verify that risk, industry experience, previous site-specific problems, and defense-in-depth were considered. The Unit 3 CS piping design, removal of the degraded in-vessel CS pipe and support brackets, installation of the new Unit 3 CS pipe and support brackets; that included bolted flange connections in place of typical welded pipe sections were inspected. The replacement included two loops of the CS piping from the reactor vessel nozzles to the CS spargers. The inspectors also focused on the torus internal metal shell grit blasting and re-coating that were performed to mitigate the torus metal pitting condition. In addition to the torus closeout inspection, the inspectors performed a detailed drywell closeout walkdown to verify the removal of equipment and temporary support material. The inspectors also observed portions of the plant startup including the reactor startup, initial criticality, and power accension. Another major activity reviewed was the initial startup of the new main generator, associated alterex exciter and voltage regulator, and the main generator initial connection to the offsite electrical grid. In addition to observation of the plant heatup and power ascension, the following outage inspection activities were performed:

- Configuration management, including maintenance of defense-in-depth, commensurate with the outage plan for the key safety functions and compliance with the applicable TSs when taking equipment OOS

- Implementation of clearance activities and confirmation that tags were properly hung and that equipment was appropriately configured to safely support the associated work or testing
- Installation and configuration of reactor coolant pressure, level, and temperature instrumentation instruments to provide accurate indication and instrument error accounting
- Status and configuration of electrical systems and switchyard activities to ensure that TSs were met
- Monitoring of decay heat removal operations
- Impact of outage work on the sustained operation of the spent fuel pool cooling system
- Reactor water inventory controls, including flow paths, alternative means for water inventory additions, and controls to prevent unexpected inventory changes
- Maintenance of secondary containment as required by TSs
- Core verification - independently reviewed selected portions of core verification activities and reactor physics testing
- Torus closure - conducted a thorough walkdown of accessible torus areas above the suppression pool water line prior to reactor startup to verify that all debris, tools, and diving gear were removed
- Drywell closure - conducted a thorough inspection and walkdown of the primary containment prior to reactor startup to identify any remaining debris, tools, and equipment were removed prior to reactor startup
- Reactor startup preparations – reviewed the tracking of startup prerequisites and observed the Plant Operations Review Committee meeting on October 15, 2012, to ensure outstanding outage issues were resolved, and startup reviews were detailed
- Startup and ascension to full power operation – observed selected activities including: reactor criticality; portions of the plant heat-up, main generator synchronization to the grid, and portions of the power ascension to full power operation
- Licensee identification and resolution of problems - reviewed corrective action reports related to RFO and startup activities to verify that PBAPS was identifying issues at the appropriate level and taking adequate corrective action to resolve the issues

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 - 5 samples)

a. Inspection Scope (1 routine surveillance; 4 IST samples)

The inspectors observed performance of surveillance tests (STs) and/or reviewed test data of selected risk-significant SSCs to assess whether test results satisfied TSs, the UFSAR, and PBAPS procedure requirements. The inspectors verified that test acceptance criteria were clear, tests demonstrated operational readiness and were consistent with design documentation, test instrumentation had current calibrations and the range and accuracy for the application, tests were performed as written, and applicable test prerequisites were satisfied. Upon test completion, the inspectors

considered whether the test results supported that equipment was capable of performing the required safety functions. The inspectors reviewed the following STs:

- ST-O-009-200-3, "Unit 3 Secondary Containment Capability Test," Revision 19, on October 15, 2013
- ST-O-052-313-2, "E-3 DG Slow Start Full Load and IST Test," Revision 20 on October 30, 2013
- ST-O-010-306-3, "B RHR Loop Pump, Valve, Flow, and Unit Cooler Functional and Inservice Test," Revision 38, on November 19, 2013 (IST)
- ST-O-052-214-2, "E-4 DG Slow Start Full Load and IST Test," Revision 24, on November 26
- RT-O-032-300-2, "Unit 2 HPSW Pump, Valve and Flow Functional Test," Revision 12, on December 9, 2013

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04 – 1 sample)

a. Inspection Scope

The Nuclear Security and Incident Response (NSIR) headquarters staff performed an in-office review of the latest revisions of various Emergency Plan Implementing Procedures and the Emergency Plan located under ADAMS accession number ML13260A163 as listed in the Attachment.

The licensee determined that in accordance with 10 CFR 50.54(q), the changes made in the revisions resulted in no reduction in the effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50. The NRC review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection. The specific documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings were identified.

1EP6 EP Drill Evaluation (71114.06 - 1 sample)

Emergency Preparedness Drill Observation - Simulator Evaluation

a. Inspection Scope

The inspectors evaluated the shift manager\emergency director's emergency plan implementation during requalification simulator training on December 11, 2013. The inspectors observed emergency response operations in the simulator to determine

whether the event classification, notifications, and protective action recommendations were performed in accordance with approved procedures. The inspectors also attended the control room simulator drill critique to compare inspector observations with those identified by PBAPS staff in order to evaluate whether PBAPS staff was properly identifying emergency preparedness weaknesses and entering them into the CAP.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstone: Occupational/Public Radiation Safety (PS)

2RS8 Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation (71124.08 - 1 sample)

a. Inspection Scope

During the week of October 28 – November 1, 2013, the inspectors verified the effectiveness of PBAPS's programs for processing, handling, storage, and transportation of radioactive material. The inspectors used the requirements of 10 CFR Parts 20, 61, and 71, and 10 CFR Part 50 Appendix A -Criterion 63 - Monitoring Fuel and Waste Storage, and licensee procedures required by the TSs and Process Control Program (PCP) to determine regulatory compliance.

The inspectors reviewed the solid radioactive waste system description in the Final Safety Analysis Report (FSAR), the PCP, and the recent radiological effluent release report for information on the types, amounts, and processing of radioactive waste disposed.

The inspectors reviewed the scope and the results of quality assurance (QA) audits performed for this area since the last program inspection, and evaluated the adequacy of PBAPS's corrective actions for issues identified during the QA audits.

Radioactive Material Storage

The inspectors evaluated areas where containers of radioactive waste were stored. The inspectors verified that the radioactive materials storage areas were controlled and posted as required.

The inspectors verified that PBAPS had established a process for monitoring the impact of long-term storage (e.g., buildup of any gases produced by waste decomposition, chemical reactions, container deformation, loss of container integrity, or re-release of free-flowing water) sufficient to identify potential unmonitored, unplanned releases, or nonconformance with waste disposal requirements. The inspectors verified that there were no signs of component swelling, leakage, or deformation.

Radioactive Waste System Walkdown

The inspectors walked down accessible portions of liquid and solid radioactive waste processing systems to verify and assess that the current system configuration and operation agree with the descriptions in the FSAR, offsite dose calculation manual, and PCP.

The inspectors identified radioactive waste processing equipment that was not operational and/or was abandoned in place, and verified that PBAPS had established administrative and/or physical controls to minimize personnel exposure.

The inspectors reviewed the adequacy of any changes made to the radioactive waste processing systems since the last inspection. The inspectors verified that changes from what was described in the FSAR were reviewed and documented.

The inspectors identified processes for transferring radioactive waste resin and/or sludge discharges into shipping/disposal containers. The inspectors verified that the waste stream mixing, sampling procedures, and methodology for waste concentration averaging were consistent with the PCP, and provided representative samples of the waste product for the purposes of waste classification.

For those systems that provide tank recirculation, the inspectors verified that the tank recirculation procedure provided sufficient mixing.

The inspectors verified that PBAPS's PCP correctly described the current methods and procedures for dewatering waste.

Waste Characterization and Classification

The inspectors identified radioactive waste streams, and verified that PBAPS's radiochemical sample analysis results were sufficient to support radioactive waste characterization. The inspectors verified that PBAPS's use of scaling factors and calculations to account for difficult-to-measure radionuclides was technically sound and based on current analyses.

The inspectors verified that changes to plant operational parameters were taken into account to (1) maintain the validity of the waste stream composition data between the annual or biennial sample analysis update, and (2) verified that waste shipments continued to meet applicable requirements.

The inspectors verified that PBAPS had established and maintained an adequate QA program to ensure compliance with applicable waste classification and characterization requirements.

Shipment Preparation

The inspectors reviewed the records of shipment packaging, surveying, labeling, marking, placarding, vehicle checks, emergency instructions, disposal manifest, shipping papers provided to the driver, and PBAPS verification of shipment readiness. The inspectors verified that the requirements of applicable transport cask certificate of

compliance had been met. The inspectors verified that the receiving licensee was authorized to receive the shipment packages.

The inspectors determined that the shippers were knowledgeable of the shipping regulations and that shipping personnel demonstrated adequate skills to accomplish the package preparation requirements for public transport. The inspectors verified that the PBAPS's training program provided training to personnel responsible for the conduct of radioactive waste processing and radioactive material shipment preparation activities.

Shipping Records

The inspectors identified non-excepted package shipment records and verified that the shipping documents included the proper shipper name; emergency response information and a 24-hour contact telephone number; accurate curie content and volume of material; and appropriate waste classification, transport index, and international shipping identification number. The inspectors verified that the shipment placarding was consistent with the information in the shipping documentation.

Identification and Resolution of Problems

The inspectors verified that problems associated with radioactive waste processing, handling, storage, and transportation, were being identified by PBAPS at an appropriate threshold, were characterized properly, and were addressed properly for resolution in Exelon's CAP. The inspectors verified the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involved radioactive waste processing, handling, storage, and transportation. PBAPS generated six condition reports to document material condition deficiencies identified during this inspection.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 – 14 samples)

.1 Safety System Functional Failures (MS05) (2 samples)

a. Inspection Scope

The inspectors sampled PBAPS's submittals for the safety system functional failures (SSFFs) performance indicator (PI) for both Unit 2 and Unit 3 for the period of October 1, 2012 through October 1, 2013. To determine the accuracy of the PI data reported during those periods, inspectors used definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment PI Guideline," Revision 6, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 10 CFR 50.73." The inspectors reviewed PBAPS's operator narrative logs, operability assessments, MR records, maintenance WOs, CRs, event reports and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index (10 samples)

a. Inspection Scope

The inspectors sampled PBAPS's submittals of the Mitigating Systems Performance Index (MSPI) for the period of October 1, 2012 through October 1, 2013:

- Unit 2 and Unit 3 Emergency Alternating Current Power System (MS06)
- Unit 2 and Unit 3 HPCI System (MS07)
- Unit 2 and Unit 3 RCIC System (MS08)
- Unit 2 and Unit 3 RHR System (MS09)
- Unit 2 and Unit 3 Support Cooling Water System (MS10)

To determine the accuracy of the PI data reported during this period, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment PI Guideline," Revision 6. The inspectors also reviewed PBAPS operator narrative logs, CRs, MSPI derivation reports, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

.3 Occupational Radiation Safety Cornerstone (1 sample)

a. Inspection Scope

The inspectors reviewed a listing of PBAPS's issue reports for issues related to the Occupational Radiation Safety PI, which measures non-conformances with high radiation areas greater than 1 Roentgen/hour (R/hr) and unplanned personnel exposures greater than 100 millirem (mrem) total effective dose equivalent (TEDE), 5 rem skin dose equivalent (SDE), 1.5 rem lens dose equivalent (LDE), or 100 mrem to the unborn child.

The inspectors determined if any of these PI events involved dose rates >25 R/hr at 30 centimeters or >500 R/hr at 1 meter. If so, the inspectors determined what barriers had failed and if there were any barriers left to prevent personnel access. For unintended exposures >100 mrem TEDE (or >5 rem SDE or >1.5 rem LDE), the inspectors determined if there were any overexposures or substantial potential for overexposure. PBAPS reported and the NRC issued a finding related to one PI event for the Unit 3 turbine building main turbine during this assessment period.

b. Findings

No findings were identified.

.4 Public Radiation Safety Cornerstone (1 sample)

a. Inspection Scope

The inspectors reviewed a listing of PBAPS's action reports for issues related to the public radiation safety PI, which measures radiological effluent release occurrences per site that exceed 1.5 mrem/quarter (qtr) whole body or 5 mrem/qtr organ dose for liquid effluents; or 5 millirads (mrads)/qtr gamma air dose, 10 mrads/qtr beta air dose; or 7.5 mrems/qtr organ doses from Iodine-131 (I-131), I-133, Hydrogen-3 (H-3) and particulates for gaseous effluents. The inspectors determined that no PI events for public radiation safety had occurred during the assessment period.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 - 1 sample)

.1 Routine Review of Problem Identification and Resolution Activities

a. Inspection Scope

As required by Inspection Procedure 71152, "Problem Identification and Resolution," the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that PBAPS entered issues into the CAP at an appropriate threshold, gave adequate attention to timely corrective actions, and identified and addressed adverse trends. In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the CAP and periodically attended condition report screening meetings.

b. Findings

No findings were identified.

4OA3 Follow-up of Events and Notices of Enforcement Discretion (71153 – 1 sample)

(Closed) Licensee Event Report (LER) 05000278/2013-001-00: Laboratory Analysis Identifies Safety Relief Valves (SRVs) and Safety Valve (SV) Set Point Deficiencies

On October 1, 2013, site engineering personnel determined that five SRVs/SV as-found opening setpoints were outside of the TS allowable ± 1% tolerance. The four SRVs and one SV that were outside of their TS allowable setpoint range were within their ASME Code allowable ± 3% tolerance. The cause of the SRVs/SV being outside of their allowable as-found setpoints was due to setpoint drift. The SRVs/SV were replaced with refurbished SRVs/SV for the 20th Unit 3 operating cycle. There were no actual safety consequences associated with this event. The enforcement aspects of this LER are discussed in Section 4OA7. This LER is closed.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

Quarterly Resident Exit Meeting Summary

On January 8, 2014, the resident inspectors presented the inspection results to Mr. Michael Massaro, Peach Bottom Site Vice President, and other PBAPS staff, who acknowledged the findings. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

4OA7 Licensee-Identified Violation

The following violation of very low safety significance (Green) was identified by PBAPS and is a violation of NRC requirements which meet the criteria of the NRC Enforcement Policy for being dispositioned as an NCV.

- TS 3.4.3 Limiting Condition for Operation requires that 11 of 13 SRVs\SVs shall be operable in reactor operating modes 1, 2, and 3. TS 3.4.3.1 surveillance requirement states that the SRVs\SVs opening lift setpoints are maintained within ± 1% tolerance of the design opening pressure. Contrary to the above, information received by site engineering from a laboratory performing SRV\SV as-found testing, determined that on October 1, 2013, the valve setpoint deficiencies existed with four SRVs and one SV that were in place during the Unit 3 19th operating cycle. The SRVs/SV were determined to have their as-found setpoints outside of the TS allowable ± 1% tolerance. The four SRVs and one SV outside of their TS allowable setpoint range were within the ASME Code allowable ± 3% tolerance. The cause of the SRVs/SV being outside of their allowable as-found setpoints was due to setpoint drift. The SRVs/SV were replaced with refurbished SRVs/SV for the 20th Unit 3 operating cycle. The amount of setpoint drift was within the as found Target Rock SRV values when compared to industry data. The SRVs/SV were replaced with refurbished valves that were tested and opened within the allowable ± 1% tolerance. The inspectors determined that the finding was of very low safety significance (Green) in accordance with Section “A" of Exhibit 2 in Appendix “A” of IMC 0609, "The SDP for Findings at Power,” because the SRV’s safety function was not affected. Although outside the lift setpoint tolerance, the as-found SRV/SV lift pressure values would not have challenged the reactor vessel design maximum pressure rating during the most limiting postulated accident event.

  The inspectors reviewed PBAPS’s planned corrective actions to address the SRV setpoint drift issue and a planned industry standard TS setpoint change submittal to a ± 3% tolerance appropriate. Because this finding is of very low safety significance, the as-found out of tolerance SRVs were replaced with SRVs that had the proper lift setpoint prior to the Unit 3 reactor plant startup, and the issue was entered into Exelon's CAP under Issue Report 1567200, this violation is being treated as a Green NCV consistent with the NRC’s Enforcement Policy.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Exelon Generation Company Personnel

M. Massaro, Site Vice President
P. Navin, Plant Manager
N. Alexakos, Emergency Preparedness Manager
J. Armstrong, Regulatory Assurance Manager
R. Bolding, Respiratory Physicist
B. Reiner, Training Director
B. Hennigan, Operations Training Manager
M. Herr, Operations Director
R. Holmes, Radiation Protection Manager
P. Simmons**,** Security Manager
T. Moore, Site Engineering Director
M. Weidman, Work Management Director
F. Leone, Chemistry Manager
D. Baracco, Radiological Engineering Manager
D. Striebig, Emergency Preparedness Coordinator

NRC Personnel
F. Bower III, Branch Chief
S. Hansell, Senior Resident Inspector
B. Smith, Resident Inspector
J. D'Antonio, Senior Operations Engineer
J. Furia, Senior Health Physicist
J. Grieves, Senior Resident Inspector, Susquehanna
J. Laughlin, Emergency Preparedness Inspector, NSIR/ECB

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Opened/Closed
None

Closed

05000278/2013-001-00	LER	Laboratory Analysis Identifies Safety Relief Valves (SRVs) and Safety Valve (SV) Set Point Deficiencies (Section 4OA3)

Opened
None

Discussed/Updated
None

LIST OF DOCUMENTS REVIEWED

* -- Indicates NRC-identified

Section 1R01: Adverse Weather Protection

Procedures
RT-O-040-630-2, Winterizing Procedure, Revision 13
RT-O-040-620-2, Outbuilding HVAC and Outer Screen Inspection for Winter Operation, Revision 16
MA-PB-1003, Winter Readiness and Storm Response Guidelines for the Peach Bottom Facility, Revision 8
WC-AA-107, Seasonal Readiness, Revision 12

CRs
1579950, Unit Heater Fan Thermostat Corroded

Miscellaneous
Peach Bottom Certification Letter for Winter Readiness, dated November 12, 2013

Section 1R04: Equipment Alignment

Procedures
SO 32.8.A-3, HPSW System Routine Inspection, Revision 6
COL 32.1.A-2, HPSW System, Revision 11
COL 32.1.A-3, HPSW System, Revision 13
COL 37B.1.B-D, Fire Water System Diesel Driven Fire Pump Startup, Revision 4
RT-O-023-240-3, HPCI Overspeed Trip Test Using Auxiliary Steam, Revision 2

Drawings
P&I Diagram 6280-M-361, Sheet 4, RHR System, Revision 71
M-315, ESW and HPSW, Revision 2
M-361, RHR System, Revision 2

CRs
1574044, High Turbine Bearing Metal Temperature during Main Turbine Roll
1574046, High Turbine Bearing Metal Temperature during Main Turbine Roll
1575985, Unit 3 Main Turbine High Vibrations on Initial Loading
1580838, Packing Leak on Motor Driven Fire Pump Valve

Miscellaneous
Plot 5032, HPSW System, Revision 002

Section 1R05: Fire Protection

Procedures
PF-144, Circulating Water Pump Structure – General Area, Revision 005
PF-145, Inner Screen Area, Revision 000
PF-132, Diesel Generator Building General Area – Elevation 127-0, Revision 008

Miscellaneous
Unit 2 and Unit 3 ESW
Unit 3 HPSW

Section 1R06: Flood Protection Measures

IR / ARs
01599988
01600121
01600259

CRs
00505423, Emergency Diesel Building Flooding – Check Valve and IPE Issues

Miscellaneous
PBAPS Probabilistic Risk Assessment Internal Flood Evaluation Summary Notebook, PB-PRA-012, Revision 1
Peach Bottom PRA Internal Flood Evaluation Appendix A – Walkdown Summary
NUREG-0800, Standard Review Plan 9.3.3 Equipment and Floor Drainage System, Revision 3, dated March 2007
Letter dated November 22, 2013, from Jeffrey Chizever to Brian Smith regarding Check Valves in EDG Building Drains

Section 1R07: Heat Sink Performance

Procedures
ER-AA-340, GL 89-13 Program Implementing Procedure
ER-AA-5400-1001, Raw Water Corrosion Program Guide, Revision 6

Miscellaneous
Heat Exchanger (HX) Inspection Report, OBE 376 (E3) Jacket Coolant Cooler
HX Inspection Report, OBE 377 (E3) Lube Oil Cooler
HX Inspection Report, OBE 379 (E3) Air Coolant Cooler

Section 1R11: Licensed Operator Requalification Program

Procedures
T-101, RL RPV Control, Revision 18
T-102, Primary Containment Control, Revision 20
T-103, Secondary Containment Control, Revision 17
ON-118, Loss of Turbine Building Closed Cooling Water System, Revision 8
ON-119, Loss of Instrument Air, Revision 19
EP-MA-114-100-F-01, State and Local Event Notification, Revision N

CRs
1565762, Unit 2 Main Turbine Generator Vibration Bearing #9 High

Miscellaneous
PSEG-1111R, Revision 003, Evaluation Scenario
Peach Bottom Unified Control Room Log dated 10/01/2013 to 11/15/2013

Section 1R12: Maintenance Effectiveness

Procedures
ER-AA-310, Implementation of the MR, Revision 9
ER-AA-310-1004, MR - Performance Monitoring, Revision 11
ER-AA-310-1007, MR - Periodic (a)(3) Assessment

CRs *NRC-identified
1280025
1466135
1293928
1426934
1577150, Unit 3 LEFM Going In and OOS
1577392, 3 'C' FW LEFM to Venturi Ratio is High Out of Spec
1582376*
1585656, Unit 3 Total FW Flow Compt PT, C550, is Magenta
1585734, Emergency Lighting RT-O-037-710-2 was Completed Unsat
1585514, Safe Shutdown Emergency Lighting from 20D372 Did Not Light
1585519, Safe Shutdown Emergency Lighting 20D368 Did Not Light
1585522, Safe Shutdown Emergency Lighting 30D320 Did Not Light
1585527, Safe Shutdown Emergency Lighting 30D321 Did Not Light
1585531, Safe Shutdown Emergency Lighting 30D322 Did Not Light
1585535, Safe Shutdown Emergency Lighting 30D328 Did Not Light
1587116, Degraded Performance of the Control Room Radiation Monitors

Miscellaneous
10 CFR 50.65 (a)(3) Periodic Assessment of the MR Program for Period from April 2011 through March 2013
NUMARC 93-01, Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, Revision 2
NRC Regulatory Guide 1.160, Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, Revision 2
System Health Report, System 12 Reactor Water Cleanup, November 2013

3.20 Leading Edge Flow Meter System, PBAPS Unit 3, Revision 1, TRM 3.20, Three Leading Edge Flow Meters Shall Be Operable

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures
OU-AA-103, Shutdown Safety Management Program, Revision 12
OU-PB-104, PBAPS Shutdown Safety Management Program, Revision 7
OU-PB-104-1001, PBAPS Shutdown Risk Management for Outages, Revision 6
OP-AA-108-117, Protected Equipment Program, Revision 3
OP-PB-108-101-1002, Control of Protected Equipment Tracking Sheets, Revision 7

CRs
1596451, PRA not Evaluated for Emergent Risk Condition

Miscellaneous
P3R19 Shutdown Safety Review (24 Hour Look Ahead), dated October 14, 2013
PAM Instrumentation 3.6, Post-Accident Monitoring (PAM) Instrumentation
Main Stack Wide Range Gas Radiation Monitor, 1,2,3 TR 3.6.1
Primary Containment Isolation Instrumentation 3.3.6.1, Main Stack Monitor Radiation – High
Unit 2 Technical Requirements Manual, 3.18 Conowingo Line, The Conowingo Line Shall Be Available, Revision 3
Schedule View Report, Model: PB3-PRD-X-002

Section 1R15: Operability Evaluations

Procedures
ST-O-007-960-3, PAM PCIV Control Room Position Indication Channel Checklist
ST-O-023-200-3, Bulk Torus Water Temperatures (Spot AVG) and Level Monitoring, Revision 17

CRs
1567612, Unit 3 Torus Surface Preparation Non-Compliance
1571327, 3 'D' Min Flow Valve Did Not Open When Expected
1576458, Unit 3 HCU 18-11 – "Unit 3" CR 18-11 Hydraulic Control Unit
1577858, ST-R-003-460-3 Black Box Signed Off Unsat
1578064, OPEX Susquehanna LPCI Testable Check Valves OE
1581381, AO-3-10-046A Lost MCR Indication
1587116, Degraded Performance of the Control Room Radiation Monitors

Miscellaneous
Unit 3 Primary Containment Unqualified Coatings Log, Design Analysis PM-1039, Revision 2
Bases, PBAPS Unit 2, PAM Instrumentation B 3.3.3.1, Revision 57
NRC Safety Evaluation Report, Conformance to Regulatory Guide 1.97, dated 1/15/88

Section 1R18: Plant Modifications

Procedures
ST-O-010-306-3, 'B' RHR Loop Pump, Valve, and Flow, and Unit Cooler Functional and Inservice Test, Revision 38

WOs / ARs
A1660799

Miscellaneous
ECR Number: PB 13-00442-000 – MO-3-01A-077, Motor Replacement ECR for P3R19
ECR Number: PB 09-00554-001, 115-70567, Unit 3 RCIC PP Suction Header Pressure Switch

Section 1R19: Post-Maintenance Testing

Procedures
AO 33.2, ESW System Manual Startup and Operations, Revision 8
ST-R-003-490-3, Zero Pressure Scram Times, Revision 4
ST-O-013-200-3, RCIC Flow Rate at ≤ 175 PSIG, Alternative control Panel Test, and Remote Shutdown Panel Test, Revision 16
ST-O-010-306-3, Unit 3 RHR Pump, Valve and Flow Test, Revision 30
RT-O-023-240-3, Unit 3 HPCI Overspeed Trip Test Using AUX Steam, Revision 1,
RT-O-013-240-3, RCIC Overspeed Trip Test using AUX Steam, Revision 1
ST-O-094-400-3, Stroke Time Testing of Valves for Pre-Maintenance or PMT, Revision 4
ST-O-014-306-3, CS LOOP 'B' Pump, Valve, Flow, and Cooler Functional and Inservice Test, Revision 37

CRs
1571428, 3 'D' RHR Full Flow Unsat High
1571429, ECR 11-00496 PMT – 3 'B' RHR
1571432, ECR 11-00496 PMT 3 'D' RHR
1571592, Pressure Indicated High per RT-O-23A-450-3
1597190, 'B' ESW Booster Pump Packing Leaks

WOs
R1114358-08

Miscellaneous
Unified Control Room Log, dated December 19, 2013, Night shift, Performed AO 3.22 ESW System Manual Startup and Operations in Support of CLR 13001886 Restoration. 'A' ESW pump ran from 02:15 until 0326 (CET0)

Section 1R20: Refueling Outage

Procedures
ST-O-080-500-3, Recording and Monitoring Reactor Vessel Temperatures and Pressure, Revision 16
OP-AA-108-108, Unit Restart Review, Revision 14
ER-PB-321-1000, Pump and Valve Inservice Testing Program Fourth Ten Year Interval, Revision 1

Miscellaneous
PORC Agenda, October 14, 2013, 10:30 am
PBAPS Clearance No: 01002970, PB 2 Emergency Cooling Water Pump
P3R19 Paragon Shutdown Safety Overview
Peach Bottom Unified Control Room Log dated 10/01/2013 to 11/15/2013

Section 1R22: Surveillance Testing

Procedures
ST-O-009-200-3, Secondary Containment Capability Test, Revision 19
ST-O-010-306-3, 'B' RHR Loop Pump, Valve, Flow, and Unit Cooler Functional and Inservice Test, Revision 38
ST-O-052-214-2, E-4 Diesel Generator Slow Start Full Load and IST Test, Revision 24
RT-O-032-300-2, HPSW Pump, Valve and Flow Functional Test, Revision 12
AO-3-40b-30460-OP

CRs
1522445, Increase Trend in Unit 2 RCS Unidentified Leakage
1536937, Unit 2 Forced Outage Leak Search
1539484, FT-3979 Failed During SI3R-63E-3979-B1C3
1539647, Implementation of EP-AA-121 – Improvement
1540134, EP White Paper for Vent Stack EAL Thresholds Needs Improved
1563134, Simultaneous Start of all 4 EDG's Once per 10 Years
1578421, E-3 Generator Bearing High Temperature Alarm
1594731, 2BP042-DR: High Moisture Content in Outboard Motor Bearing Oil

IRs
1524138
1575264

WOs
C0248111, Acceptance Testing, 'B' & 'D' RHR LOOPS/ECR 11-00496

Miscellaneous
Chemistry Department D/W Floor Drain Unidentified Leakage in Unit 2 Containment Investigation Plan – Status as of 06/20/2013
Licensed Operator Training Lesson Plan PLOT-5063, Process Radiation Monitoring System
NRC IMC 0609, Appendix B: Emergency Preparedness SDP
NRC IMC 2515, Appendix D – Plant Status

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Procedures
Radiological Emergency Plan Annex, Revision 28

Section 1EP6: Drill Evaluation

Procedures
EP-AA-1007, Exelon Nuclear Radiological Emergency Plan Annex for PBAPS, Revision 27
T-103, Secondary Containment Control, Revision 17
EP-MA-114-100-F-01, State and Local Event Notification, Revision N

CRs
1533891, DEP Failure During Station PI Drill
1534964, PB 2013 July 9 Drill, TSC, E.1.4 DC Failure
1534968, PB 2013 July 9 Drill, TSC, H.1.9 DC Failure

Miscellaneous
Exelon Nuclear PBAPS Station EP Drill Controller/Evaluator Notebook, 07/09/2013
NEI 99-01, Methodology for Development of Emergency Action Levels, Revisions 5 and 6

Section 2RS8:

Procedures:
RP-AA-605, Revision 5, 10 CFR 61 Program
RP-AA-100, Revision 8, Process Control Program for Radioactive Wastes
RT-W-20D-965-2, Revision 6, Low Level Radwaste Storage Facility Waste Container and Storage Cell Inspections

Training Modules:
NRWSHP1000, Revision 3, DOT/79-19 Training for Support of Radioactive & Asbestos Shipment
HAZSEC-A1, Revision 0, DOT Security Awareness and Transportation Security Plan
Audit Report NOSA-PEA-12-04, Chemistry, Radwaste, Effluent and Environmental Monitoring

Action Reports:
01230297; 01230541; 01241554; 01264447; 01307680; 01311496; 01310803; 01347458; 01357234; 01370257; 1139430

Miscellaneous
Peach Bottom 10 CFR Part 61 Program Scaling Factor Determination Report 32, Revision 0, June 2012
Peach Bottom 10 CFR Part 61 Program Waste Stream Review and Scaling Factor Determination Report 33, July 2013
Peach Bottom 10 CFR Part 61 Program Scaling Factor Determination Report 32 Torus Grit Addendum, November 2012
Peach Bottom 10 CFR Part 61 Program Waste Stream Review and Scaling Factor Determination Report 33 Torus Grit Addendum, October 2013
Radioactive Material Shipments: 13-016; 13-035; 13-039; 13-040; 13-051

Section 4OA1: Performance Indicator Verification

Procedures
ER-AA-600-1047, Mitigating Performance Index Basis Document, Revision 7
ER-AA-2008, MSPI Failure Determination Evaluation, Revision 2
ER-AA-2020, INPO Consolidated Events System, Revision 7
LS-AA-2001, Collecting and Reporting of NRC PI Data, Revision 14
LS-AA-2080, Monthly Data Elements for NRC SSFFs, Revision 4
LS-AA-2200, MSPI Data Acquisition and Reporting, Revision 5

CRs
1560024, CDE not Updated to Reflect Historical MSPI Doc Rev
1573798, Q3/2013, NRC-ROP MSPI HPIS IND Potential Declining Trend
1587040, 3 'D' RHR Pump High Flow rate after Pump Start
1587402, Configuration Documentation Issue for 3 'D' RHR Drag Valve

IRs

1377106	1535219	1884692
1918636	1681082	1599409
1916030	1444838	

MSPI Deviation Reports and System Manager Notebooks:
October 2012 through September 2013, Unit 2 and Unit 3 RHR/HPSW
October 2012 through September 2013, Unit 2 and Unit 3 ESW
October 2012 through September 2013, Unit 2 and Unit 3 EDGs
October 2012 through September 2013, Unit 2 and Unit 3 HPCI
October 2012 through September 2013, Unit 2 and Unit 3 RCIC

Miscellaneous
NEI 99-02, Regulatory Assessment Indicator Guideline, Revision 6
PBAPS MSPI Basis Document, Revision 7

Section 4OA2: Identification and Resolution of Problems

IRs / ARs
Current: 00594838, 01442128, 01531108, 01530190, 01546874, and 01546440
Follow-up from August 2012 Inspection: 01327477, 01266837, 01301088, 01264398, 01264909,01281888, 01281553, and 01323495
A1881124, A1877822, 1902959

WOs
R0270715, CRD System Instrument Air Filter Element Periodic Maintenance

Program and System Health Reports:
PBAPS CRD System Health Report for 3rd Quarter 2013
PBAPS EDGs System Health Report for 2nd Quarter 2013
PBAPS Buried Pipe (BP) Program Health Report for 2nd Quarter 2013

Procedures
OP-AA-108-115, OD, pages 6-8, Revision 11
ER-AA-2030, Conduct of Plant Engineering Manual, Revision 14
LS-AA-104-1000, Exelon 50.59 Resource Manual, Revision 7
LS-AA-125, CAP Procedure, Revision 17
LS-AA-125-1005, Coding and Analysis Manual, Revision 8
ER-AA-5400-1003, Buried Pipe and Raw Water Corrosion Program (BPRWCP) PIs, Revision 4
ER-AA-5400-1001, Raw Water Corrosion Program Guide, Revision 5
CC-AA-10, Configuration Control Process Description, Revision 6
CC-AA-102, Design Input and Configuration Change Impact Screening, Revision 26
CC-AA-103, Configuration Change Control for Permanent Physical Plant Changes, Revision 24

Miscellaneous
Passport, AR Data Base, Search Results for "Leak" in the Last Year, August 2012 to 2013
PIM, Work Tracking Data Base, Search Results for "Leak" in the Last Year, August 2012 to 2013
Root Cause Report on ESW System Leaks, Action Tracking Item Number CR#798807, dated 9/9/2008, for IR 798807
ECR Number PB 10-00279, Unit 3 CS In-Vessel Piping Replacement, Revision 001

Drawing 886D499, As built vessel nozzle details including the CS Nozzle, Revision 3
Operator Workaround Board Meeting Minutes – 2/24/2012, 5/9/2012, 9/6/2012, 3/7/2013, 6/4/2013

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

Procedures
OP-PB-108-111-1001, Preparation for Severe Weather, Revision 8
OP-AA-108-111-1001, Severe Weather and Natural Disaster Guidelines, Revision 9
SY-AA-101-146, Severe Weather Preparation and Response, Revision 0

CRs
1432999, Loss of 28 of 97 EPZ Sirens (≥ 25% Threshold)
*1434345, Wind Speed Instrument Use
1431972, Mechanically Restrain Cooling Tower Fans In Accordance with OP-PB-108-111-1001
1451414, RT-M-045-990-2 Could Not Be Performed for D03 (sand bags outside E3 EDG maintenance door)
1418320, MSRV/MSSV Failed P2R19 As-Found Lift Tolerance

Miscellaneous
PORC Agenda, dated December 10, 2013, TS Violation – P3R19 MSRV/MSSV As- Found Lift Results
SE-4 Bases, Flood – Bases, Revision 22
SE-4 Procedure, Flood – Procedure, Revision 32
AO 28.2, Response to High/Low River Level, Revision 2
SE-3 Procedure, Loss of Conowingo Pond – Procedure, Revision 21
eSoms, Peach Bottom Unified Control Room Log on October 30
Unit 2 and Unit 3 TS SRV Surveillance Requirements SR 3.4.3.1
Apparent Cause Evaluation 1120516-04, Historical SRV As-Found Lift Setpoint Drift
NRC PI&R Inspection Report 05000277/2011010 and 05000278/2011010
PBAPS MR Scope and Performance Monitoring, System 01A-Main Steam: Main Steam SVs and Main Steam Relief Valves
PORC Meeting, ACE – Multiple MSRV/MSSV Failed P2R19 As-Found Lift Tolerance October 1, 2013

Section 4OA7: Licensee-Identified Violations

IRs
1567200

WOs / ARs
A1878916, Failure Analysis of the RETS TCV RPS Pressure Switches

Miscellaneous
LER 3-13-001; PBAPS Unit 3 SRVs and SVs Lift Setpoint Deficiencies
UFSAR Section 7.12.5.5.2, Revision 21
USNRC Inspection Report 2011-010, PI&R Biennial Team Inspection
PBAPS Unit 3 TS Bases 3.4.3, SRVs and SVs
TS SRV Surveillance Requirements SR 3.4.3.1
PORC Meeting December 12, 2013, P3R19 MSRV\MSSV As-Found Lift Setpoint Results

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
ASME	American Society of Mechanical Engineers
CAP	corrective action program
CFR	Code of Federal Regulations
CRs	condition reports
CS	core spray
DG	diesel generator
ECR	engineering change request
EDG	emergency diesel generator
ESW	emergency service water
FSAR	final safety analysis report
HPCI	high pressure coolant injection
HPSW	high pressure service water
HX	heat exchanger
IMC	inspection manual chapter
LDE	lens dose equivalent
LER	licensee event report
MCR	main control room
MR	maintenance rule
MSPI	mitigating system performance index
NCV	non-cited violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
NSIR	Nuclear Security and Incident Response
OD	operability determination
OOS	out-of-service
PBAPS	Peach Bottom Atomic Power Station
PCP	process control program
PI	performance indicator
PMT	post-maintenance testing
QA	quality assurance
RCIC	reactor core isolation cooling
RFO	refueling outage
RHR	residual heat removal
SBO	station blackout
SDE	skin dose equivalent
SDP	significance determination process
SRV	safety relief valve
SSFF	safety system function failure
SSC	structures, systems, and components
STs	surveillance tests
SV	safety valve
TEDE	total effective dose equivalent
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WOs	work orders