UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

September 17, 2009

Mr. Charles G. Pardee
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer, Exelon Nuclear
4300 Winfield Rd.
Warrenville, IL 60555

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 –
NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000277/2009008 AND 05000278/2009008

Dear Mr. Pardee:

On August 7, 2009, the United States Nuclear Regulatory Commission (NRC) completed an inspection at your Peach Bottom Atomic Power Station, Units 2 and 3. The enclosed report documents the inspection results discussed on August 7, 2009, with Mr. G. Stathes and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems and compliance with the Commission's rules and regulations and the conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

The inspectors concluded that Exelon was generally effective in identifying, evaluating, and resolving problems. Exelon personnel identified problems and entered them into the corrective action program at a low threshold. Exelon prioritized and evaluated issues commensurate with the safety significance of the problems and corrective actions were generally implemented in a timely manner.

Based on the results of this inspection one finding of very low safety significance (Green) was identified. The finding was associated with inadequate corrective action implementation and involved a violation of NRC requirements. The NRC is treating this finding as a non-cited violation (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy because of the very low safety significance of the violation and because it was entered into your corrective action program. If you contest this non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region 1; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident

Inspector at Peach Bottom Atomic Power Station. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Resident Inspector at Peach Bottom Atomic Power Station. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

In accordance with Title 10 of the Code of Federal Regulations, 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 document system (ADAMS). ADAMS is accessible from the NRC Web Site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Raymond J. Powell, Chief
Technical Support & Assessment Branch
Division of Reactor Projects

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

Enclosure: Inspection Report 05000277/2009008 and 05000278/2009008
w/Attachment: Supplemental Information

cc w/encl:
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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-277, 50-278
License No.:	DPR-44, DPR-56
Report No.:	05000277/2009008 and 05000278/2009008
Licensee:	Exelon Generation Company, LLC (Exelon)
Facility:	Peach Bottom Atomic Power Station, Units 2 and 3
Location:	Delta, PA
Dates:	July 20, 2009 through August 7, 2009
Team Leader:	Leonard Cline, Senior Project Engineer, DRP
Inspectors:	Michael Brown, Resident Inspector, DRP Nicole Sieller, Limerick Resident Inspector, DRP Mandy Halter, Reactor Inspector, DRS Edgardo Torres, Project Engineer, DRP
Approved by:	Raymond J. Powell, Chief Technical Support & Assessment Branch Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000277/2008009 and 05000278/2008009; 07/20/2009 - 08/07/2009; Peach Bottom Atomic Power Station, Units 2 and 3; Identification and Resolution of Problems, One finding was identified in the area of corrective action program effectiveness.

This NRC team inspection was performed by two resident inspectors and three regional inspectors. One finding of very low safety significance (Green) was identified by the NRC during this inspection and was classified as a non-cited violation (NCV). The significance of most findings is indicated by their color (Green, White, Yellow, Red) using NRC Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The cross-cutting aspect was determined using IMC 0305, "Operating Reactor Assessment Program." Findings for which the SDP does not apply may be Green or assigned a severity level after NRC management review. 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.

Identification and Resolution of Problems

The inspectors concluded that Exelon was generally effective in identifying, evaluating and resolving problems. Specifically, Exelon personnel identified problems, entered them into the corrective action program at a low threshold, and prioritized issues commensurate with the safety significance. For most cases, Exelon appropriately screened issues for operability and reportability and performed causal analyses that appropriately considered extent of condition, generic issues, and previous occurrences. Corrective actions taken to address the problems identified in Exelon's corrective action process were typically implemented in a timely manner. However, for one issue reviewed by the inspectors, inadequate implementation of corrective actions resulted in one NRC-identified finding.

The inspectors also concluded that, in general, Exelon adequately identified, reviewed, and applied relevant industry operating experience to Peach Bottom Atomic Power Station (PBAPS) operations. In addition, based on those items selected for review by the inspectors, Exelon's audits and self-assessments were thorough and probing.

Based on the interviews the inspectors conducted over the course of the inspection, observations of plant activities, and reviews of individual corrective action program and employee concerns program issues, the inspectors did not identify any concerns that site personnel were not willing to raise safety issues nor did they identify conditions that could have had a negative impact on the site's safety conscious work environment.

Cornerstone: Mitigating Systems

Green. The inspectors identified a non-cited violation (NCV) of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for failure to identify and correct a condition adverse to quality. Specifically, in March 2009, Exelon did not take adequate corrective action to address a procedure deficiency and to ensure that grease inappropriately applied to Cutler Hammer direct current (DC) contactor pivot pins, in an unknown number of DC breakers in the high pressure coolant injection (HPCI) and reactor core isolation cooling (RCIC) systems at Unit 2 and 3, would be identified and removed in a timely manner. Because the grease could harden over time and cause inadequate DC breaker performance, the inspectors determined that this

condition, if left uncorrected, could prevent certain Units 2 and 3 HPCI and RCIC system valves from performing their safety-related function. Exelon entered this issue into their corrective action program as issue report (IR) 950438 and IR 950439
.
The finding affected the Mitigating Systems cornerstone and was determined to be more than minor because the condition, if left uncorrected, could have become a more significant safety concern. By not requiring, by procedure, the removal of all grease from the affected Cutler Hammer DC contactor pivot pins, Exelon did not ensure that all of the potentially affected DC motor-operated valves in the Unit 2 and Unit 3 HPCI and RCIC systems would be available to perform their design functions if called upon. The inspectors evaluated this finding using Phase I of Manual Chapter 0609 and determined the finding to be of very low safety significance (Green) because it was not a design or qualification deficiency confirmed not to result in loss of operability or functionality, did not represent a loss of system or train safety function, and was not potentially risk significant due to external events. This finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because Exelon failed to take appropriate corrective actions to address a safety issue in a timely manner, commensurate with the safety-significance and complexity [P.1(d)]. Specifically, Exelon did not take appropriate corrective actions to ensure that grease inappropriately applied to Cutler Hammer DC contactor pivot pins would be, by procedure, identified and removed in a timely manner. (Section 4OA2.1.c)

Other Findings

None.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (71152B)

.1 Assessment of the Corrective Action Program (CAP) Effectiveness

a. Inspection Scope

The inspectors reviewed the procedures that describe Exelon's CAP at Peach Bottom Atomic Power Station (PBAPS). Exelon identified problems for evaluation and resolution by initiating and processing issue reports (IRs) using the Passport web-based computer application. Problems were screened for operability and reportability, categorized based on significance (1 to 5) and assigned a level for the cause evaluation (A to D) based on significance and the level of uncertainty for the cause. When work was necessary to correct a problem, the work request (PIMS) system was used to generate action requests (ARs) or work orders. As such, at PBAPS, the work management and engineering change processes were part of the CAP and were utilized to correct identified conditions when deemed appropriate.

To assess the effectiveness of the CAP at PBAPS, the inspectors reviewed performance in three primary areas: problem identification, prioritization and evaluation, and corrective action (CA) implementation. The inspectors compared performance in these three areas to the requirements and standards contained in 10 CFR 50 Appendix B Criterion XVI, "Corrective Action," and Exelon procedure, LS-AA-125, "Corrective Action Program Procedure." The scope of the inspectors' review for each of these areas at PBAPS is described below. The IRs and other documents reviewed for the inspection are listed in the Attachment.

Effectiveness of Problem Identification

The inspectors reviewed a sample of plan of the day (POD) meeting packages and meeting minutes for a sample of plant operations review committee (PORC), nuclear safety review board (NSRB), and maintenance rule expert panel meetings. The inspectors also attended a number of POD, management review committee (MRC), and station ownership committee (SOC) meetings. The inspectors verified that identified issues discussed at these meetings were entered into the CAP for evaluation and CA, as appropriate.

The inspectors reviewed the condition of the emergency diesel generators (EDGs), the emergency service water (ESW) system, the high pressure coolant injection (HPCI) system, and the primary containment isolation (PCI) system. The inspectors reviewed system health reports, a sample of completed preventative and corrective maintenance work orders, and completed surveillance test procedures. The inspectors also completed a field walkdown of the accessible portions of the EDG and ESW systems. The inspectors verified that conditions adverse to quality identified through this review were entered into the CAP, as appropriate.

The inspectors reviewed a random sample of security, operations, chemistry, radiation

protection, and outage control center logs. The inspectors verified that problems identified in these logs were entered into the CAP as appropriate.

The inspectors reviewed the March 25, 2008, PBAPS Pre-Exercise Emergency Response Organization Drill Report issued on April 24, 2008, and the 2008 Peach Bottom Station-Only Drill and Exercise Performance Drill Series Findings and Observations Report issued on July 24, 2008. The inspectors verified that drill performance deficiencies identified in these reports were entered into the CAP as appropriate.

The inspectors reviewed the results of Exelon periodic trend analyses conducted in accordance with LS-AA-125-1005, "Coding and Analysis Manual," and LS-AA-126-1007, "Performance Improvement Toolbox." The inspectors verified that identified trends discussed in selected quarterly reviews of station focus areas were entered into the CAP for further evaluation and CA as appropriate. The inspectors also verified the applicability of trend codes entered for a sample of CAP IRs.

The inspectors also verified that issues identified through internal self-assessments and audits and the operating experience (OE) program were entered into the CAP for evaluation and CA, as appropriate.

Effectiveness of Prioritization and Evaluation of Issues

The inspectors reviewed the evaluation and prioritization for a sample of IRs issued since the last NRC problem identification and resolution inspection that was performed in May 2007. The inspectors considered risk insights from the station's risk analysis and ensured that the selected IRs were appropriately distributed across the seven cornerstones of safety and the emergency preparedness, engineering, maintenance, operations, physical security, and radiation safety functional areas. Inspectors' samples in this area were focused on but not limited to the offsite power system, the EDGs, the primary containment and PCI systems, and the high pressure service water (HPSW) and ESW systems.

To assess Exelon's effectiveness in the prioritization of issues, the inspectors observed three daily IR screening meetings conducted by the SOC during the onsite weeks and reviewed the packages for a random sample of MRC meetings conducted since the last inspection. During the daily IR screening meetings, the SOC reviewed new IRs for prioritization and assignment. Subsequently, the MRC reviewed the IRs and made priority adjustments as necessary.

The issues and IRs reviewed encompassed the full range of evaluations, including root cause analyses (RCA), apparent cause evaluations (ACEs), and common cause analyses (CCAs). IRs that were assigned lower levels of significance that did not include formal cause evaluations were also reviewed by the inspectors to ensure they were appropriately classified. The inspectors' review included the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of resolution. The inspectors assessed whether the evaluations identified likely causes for the issues and whether Exelon developed appropriate CAs to address the identified causes. Further, the inspectors reviewed equipment operability determinations, reportability assessments, and extent-of-condition reviews for selected

problems to verify these processes adequately addressed equipment operability, reporting of issues to the NRC, and the extent of problems. During the onsite weeks, the inspectors also observed MRC meetings during which Exelon managers reviewed completed RCAs, as well as selected ACEs and CA assignments.

Effectiveness of CAs

The inspectors verified completion of CAs for a sample of IRs issued since the last NRC problem identification and resolution inspection that was performed in May 2007. The inspectors considered risk insights from the station's risk analysis and ensured that the selected IRs were appropriately distributed across the seven cornerstones of safety and the emergency preparedness, engineering, maintenance, operations, physical security, and radiation safety functional areas. Inspectors' samples in this area were focused on but not limited to the offsite power system, the EDGs, the primary containment and PCI systems, and the HPSW and ESW systems. CAs were verified to have been completed through documentation and, in some cases, field walkdowns. The inspectors also reviewed a sample of CAs for IRs greater than two years old. The inspectors selected these items based on risk significance, verified appropriate interim actions were in place, and that the basis for not completing the specified CAs was appropriately documented and well supported.

The inspectors reviewed IRs for adverse trends and repetitive problems to determine whether CAs were effective in addressing the broader issues. The inspectors reviewed Exelon's timeliness in implementing CAs and effectiveness in precluding recurrence for significant conditions adverse to quality. The inspectors also reviewed a sample of IRs associated with selected non-cited violations (NCVs), findings, and licensee event reports, to verify that Exelon personnel properly evaluated and resolved these issues. In addition, the CA review was expanded to five years to evaluate Exelon's actions related to torus shell corrosion control, raw water system corrosion control, and age-related valve performance issues.

b. Assessment

Effectiveness of Problem Identification

Based on the samples selected, the inspectors determined that Exelon identified problems and entered them into the CAP at a low threshold. Exelon personnel at PBAPS initiated approximately 29,000 IRs between May 2007 and June 2009. During the inspection the inspectors reviewed approximately 200 IRs written during that same period. Based on this review and the review of the items discussed in the scope above, the inspectors determined that in most cases, Exelon appropriately documented identified problems in IRs that resulted in an evaluation and/or CA assignment or completion.

The inspectors also verified that Exelon trended equipment and programmatic issues in order to identify emerging issues at a low level. The trending process at PBAPS for the period reviewed was controlled by Exelon procedure's LS-AA-125-1005, "Coding and Analysis Manual," Revision 6 and LS-AA-126-1007, "Performance Improvement Toolbox," Revision 0. The inspectors concluded that, in accordance with Exelon procedures, Exelon personnel identified emerging trends at a low level and used the

CAP to conduct evaluations and implement CAs when appropriate. The inspectors, based on the samples selected, also did not identify trends or repetitive issues that Exelon had not self-identified through its trending process.

Effectiveness of Prioritization and Evaluation of Issues

The inspectors determined, based on the samples selected that Exelon, in general, appropriately prioritized and evaluated issues commensurate with the safety significance of the identified problem. IRs were screened for operability and reportability, categorized by significance, and assigned to a department for evaluation and resolution. The various IR screening and management review groups considered human performance issues, radiological safety concerns, repetitiveness, adverse trends, and potential impact on the safety conscious work environment (SCWE) during the conduct of reviews.

Items reviewed by the inspectors during the inspection were categorized for evaluation and resolution commensurate with the significance of the issues. Guidance provided by Exelon procedure LS-AA-120, "Issue Identification and Screening Process," for categorization appeared sufficient to ensure consistent implementation based on the sample of IRs reviewed by the inspectors. In general, issues were appropriately screened and prioritized commensurate with their safety significance.

The inspectors reviewed four root cause analyses, eight apparent cause analyses, three common cause evaluations, and approximately 16 work group evaluations. For the evaluations reviewed, the inspectors noted that Exelon's evaluations were generally thorough and appropriately considered extent of condition, generic issues, and previous occurrences.

Exelon procedure LS-AA-120, "Issue Identification and Screening Process," stated that the operating shift must evaluate whether or not the reported deficiency affected the operability of the system and document the basis for the determination. In addition, in cases where additional information was necessary to support the basis for operability, an action must be assigned to complete the more formal evaluation. For each of the IR cause analyses reviewed, the inspectors reviewed the completed operability evaluations and determined that, in general, the evaluations were appropriately performed. However, in one case the inspectors identified an issue regarding the adequacy of the documented operability evaluation.

Specifically, IR 871970 was written to document that the 2C core spray room cooler did not meet its fouling factor acceptance criteria during testing conducted in December 2008. The inspectors reviewed the evaluation performed by Exelon to assess the impact of the higher-than-expected fouling factor on the ability of the cooler to perform its safety function. The factors that impacted the ability of the cooler to perform its safety function included ESW flow rate, river water temperature, and the heat exchanger fouling factor. Exelon's evaluation of cooler operability used the minimum assumed ESW flow rate, the design river temperature, and the fouling factor calculated during the most recent thermal performance test. Based on this evaluation, Exelon lowered the maximum allowable river temperature required for cooler operability.

The inspectors determined that using the fouling factor calculated at the time of testing was a non-conservative assumption. Specifically, between the last unit cooler test (in

December 2007) and the current test (in December 2008), the fouling factor had increased by approximately six percent. The inspectors determined that Exelon should have used these results to project the additional cooler fouling that could occur between the December 2008 test and the next scheduled test (in December 2009), and then calculate maximum allowable river temperature from this projected fouling factor.

By not accounting for the additional fouling that could occur before the next scheduled cleaning or thermal performance test, Exelon did not ensure that appropriate CAs could be taken to correct a condition adverse to quality (CAQ) and maintain the cooler operable. The inspectors determined that this was a performance deficiency. The issue was determined to be minor, and therefore not subject to enforcement action in accordance with the NRC's Enforcement Policy. Specifically, because there was significant margin between actual measured ESW flow to the cooler and the minimum design ESW flow to the cooler, such that using a more conservatively calculated fouling factor would not have required action to be taken to ensure cooler operability. Exelon documented this concern in IR 949567.

Effectiveness of CAs

The inspectors concluded that CAs for identified deficiencies were generally implemented in a timely and adequate manner. The inspectors also concluded that Exelon performed in-depth effectiveness reviews for significant issues to verify that implemented CAs were effective. However, the inspectors' review of the IR disposition documentation and verification of corrective CA implementation through a review of work orders and discussions with personnel involved identified one issue and one finding of very low safety significance regarding CA implementation. The issue is described below and the finding is described in section 4OA2.1c.

IR 588335 was written by Exelon to evaluate their untimely response to IR 584506 that documented the presence of corrosion products on a weld in ESW piping. Exelon eventually determined that these corrosion products were the result of a through-wall leak, completed an evaluation in accordance with ASME code case N-513 that determined the leak did not affect the operability of the pipe or ESW system, and then repaired the leak. However, the timeliness of this CA was questioned by management and a quick human performance investigation (QHPI) was initiated under IR 588335. The QHPI determined that when the SOC reviewed IR 584506, they directed the operations department to inspect the affected pipe's condition during the next ESW pump and valve flow surveillance test to confirm the initial operability call that there was not a through-wall leak. The QHPI determined that the operations department tracked this action as part of shift turnover, but, due to various human performance errors including inadequate pre-job briefs, shift turnover communication, and work scheduling, did not complete the necessary observation as originally directed. This delayed the identification of the through-wall leak on the pipe.

The inspectors determined that Exelon immediately completed CAs to address the inadequate pre-job briefs and shift turnover communication and initiated a CA assignment (coded as a CA – an action taken or planned that restores a CAQ to an acceptable condition) to address the work scheduling issues. The specific assignment description stated, "Develop a method for assuring that SOC follow-up items that are evolution/milestone dependent are more robustly tracked to completion." The

completion notes documented in the IR stated that there were already many ways available for SOC to close items, and that these methods should be used at the discretion of the SOC. The assignment was closed by the evaluator without developing any additional methods. The inspectors determined that this did not meet the intent of the CA, that in accordance with LS-AA-125, "Corrective Action Program (CAP) Procedure," step 4.8.1, required the responsible department heads approval, and that for this instance no approval was given.

The inspectors determined that the failure of the evaluator to obtain the proper approvals was a performance deficiency associated with the Mitigating System cornerstone. The deficiency was not more than minor because the inspectors determined that it was not a precursor to a significant event; if left uncorrected it would not lead to a more significant safety concern; and it did not adversely affect the Mitigating Systems cornerstone objective of ensuring the availability, reliability and capability of systems that response to initiating events to prevent undesirable consequences. Specifically, Exelon determined that had the appropriate approval been sought for the change of intent for the CA, it would have been approved. In addition, as stated above the station took immediate corrective action to address the inadequate pre-job briefs and shift turnover communication associated with this issue. Exelon documented this concern in IR 949578.

c. Findings

Introduction: The inspectors identified a Green NCV of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for Exelon's failure to identify and correct a CAQ. Specifically, in March 2009, Exelon did not take adequate corrective action to address a procedure deficiency and to ensure that grease inappropriately applied to Cutler Hammer direct current (DC) contactor pivot pins, in an unknown number of DC breakers in the high pressure coolant injection (HPCI) and reactor core isolation cooling (RCIC) systems at Unit 2 and 3, would be identified and removed in a timely manner. Because the grease could harden over time and cause inadequate DC breaker performance, the inspectors determined that this condition, if left uncorrected, could prevent certain Unit 2 and 3 HPCI and RCIC system valves from performing their safety-related function.

Description: On March 24, 2009, Exelon performed diagnostic testing of motor-operated valve (MOV) MO-2-23-017, the Unit 2 HPCI condensate storage tank (CST) suction valve. During the test, it was noted that the measured drop-out time for the open contactor inside the valve's DC breaker exceeded its established acceptance criteria. Because the open contactor was responsible for stopping valve movement in the open direction, the delayed contactor operation resulted in the valve disc driving too far into its open seat. Exelon performed an engineering evaluation to determine whether the over-travel condition had resulted in damage to the valve components or motor operator. Exelon determined that the torque generated by the over-travel condition was below design limits for the valve, and therefore the valve remained operable.
Exelon's initial investigations determined that the slow contactor operation was caused by grease that had been previously applied to the contactor pivot pin during preventative maintenance and then subsequently hardened with age. Further evaluation, including discussions with the vendor, revealed that grease should not have been applied to the contactor pivot pin, and any grease that was applied should be removed. If the contactor pivot pin required lubrication, Cutler Hammer publication 13719 stated that

these pins should be occasionally lubricated with oil. Exelon discovered that the preventative maintenance (PM) procedure did not provide guidance regarding lubrication of DC contactor pivot pins and that on occasion, technicians had applied grease to the pins if contactor response was sluggish.

To address the identified procedure deficiency, Exelon revised the PM procedure, M-057-008, "250 Volt DC Breaker Assembly Inspection and Maintenance." Specifically, Exelon added steps 5.1.5 through 5.1.7, which directed technicians to examine the pivot pin for "evidence of degraded lubricant," and "IF degraded lubricant is present, THEN" clean the pin and apply oil. The inspectors determined that this procedure revision did not adequately address the issue, because Exelon's cause analysis had determined that all grease must be removed from the DC contactor pivot pins. The PM procedure, as revised, allowed for technicians to assess the grease condition and remove it only if it was determined to be degraded. The inspectors concluded that the procedure should have required technicians to remove the grease regardless of its condition. Exelon entered this issue into the CAP as IR 950438.

The inspectors determined that the lack of adequate procedural guidance and the use of grease to lubricate the contactor pivot pins in DC breakers in the Unit 2 and Unit 3 HPCI and RCIC systems were CAQs. These conditions, if left uncorrected, could become a more significant safety concern in that the operability of safety-related MOVs, specifically the ability to shut or open, could have been affected in that previously applied grease may not be removed due to an inadequate preventive maintenance procedure change. Exelon determined that there were 48 breakers installed in the Unit 2 and Unit 3 HPCI and RCIC systems that were potentially susceptible to this condition. However, it was unknown how many contactor pivot pins actually had grease applied to them due to lack of documentation in the maintenance records.

In June 2009, Exelon inspected five of the remaining 48 potentially affected breakers and identified that no grease was applied to the contactors associated with those breakers. Exelon also reviewed the maintenance history for the Unit 2 HPCI CST suction valve and breaker, which had experienced the slow contactor operation on March 24, and determined that the last breaker PM was performed 11 years ago, and the last valve diagnostic test was performed six years ago. Because both of these activities provide indication of proper contactor operation, Exelon determined that the contactors most at risk for grease hardening would be those whose valves had not been diagnostic tested and whose breakers had not received PMs in the last six years. Exelon reviewed the maintenance history of the remaining 43 valves and determined that only one other valve met these criteria. As a result, Exelon moved up the breaker PM for this valve to early 2010 to inspect for the presence of grease. Because all of the remaining susceptible breakers had received a breaker PM or satisfactory MOV diagnostic test within the last six years, and the associated valves for each breaker were stroked periodically, the inspectors determined that there was no immediate safety concern associated with this issue. In addition, based on discussions with the inspectors, Exelon initiated IR 950439 to evaluate the future operability of the remaining breakers to ensure that an appropriate timeline for inspecting the breakers was established.

Analysis: Exelon's failure to establish adequate CAs to ensure grease was, by procedure, removed from Cutler Hammer DC contactor pivot pins was a performance

deficiency. The finding affected the Mitigating Systems cornerstone and was determined to be more than minor because the condition, if left uncorrected, could have become a more significant safety concern. Specifically, by not requiring the removal of all grease from the affected Cutler Hammer DC contactor pivot pins, Exelon did not ensure that all of the potentially affected DC MOVs in the Unit 2 and Unit 3 HPCI and RCIC systems would be available to perform their design functions if called upon. Although the Unit 2 HPCI CST suction valve, MO-2-23-017, was not damaged by the backseating condition that resulted from the delayed contactor operation, it could not be assured that the outcome would be the same for all of the valves whose breakers had the grease incorrectly applied. The inspectors evaluated this finding using Phase I of Manual Chapter 0609 and determined the finding to be of very low safety significance (Green) because it was not a design or qualification deficiency confirmed not to result in loss of operability or functionality, did not represent a loss of system or train safety function, and was not potentially risk significant due to external events.

This finding has a cross-cutting aspect in the area of problem identification and resolution, CAP, because Exelon failed to take appropriate CAs to address a safety issue in a timely manner, commensurate with the safety-significance and complexity [P.1(d)]. Specifically, Exelon did not take appropriate CAs to ensure that grease inappropriately applied to Cutler Hammer DC contactor pivot pins would be, by procedure, identified and removed in a timely manner.

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures shall be established to assure that conditions adverse to quality, are promptly identified and corrected. Contrary to the above, Exelon did not take adequate CA to ensure that a CAQ was promptly identified and corrected. Specifically, by not requiring, by procedure, the removal of all grease from the Cutler Hammer DC contactor pivot pins, Exelon did not ensure that the remaining DC MOVs in the Unit 2 and Unit 3 HPCI and RCIC systems would be available to perform their design functions if required. Because this finding was determined to be of very low safety significance (Green) and has been entered into Exelon's CAP (IR 950438 and IR 950439), it is being treated as a non-cited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. (NCV 05000277, 278/2009008-01, Failure to Take Timely and Adequate CAs for Grease Applied to DC Contactors.)

.2 Assessment of the Use of OE

a. Inspection Scope

The inspectors selected a sample of industry OE issues to confirm that Exelon evaluated the OE information for applicability to PBAPS and took appropriate actions when warranted. The inspectors reviewed OE documents to verify that Exelon appropriately considered the underlying problems associated with the issues for resolution via their CAP. A list of the documents reviewed is included in the Attachment.

b. Assessment

The inspectors determined, based on the sample of OE reviewed, that Exelon appropriately considered industry OE information for applicability, and used the information for corrective and preventive actions to identify and prevent similar issues.

The inspectors assessed that, in general, OE was appropriately applied and lessons learned were communicated and incorporated into plant operations.

However, the inspectors identified one issue of concern related to OE where the evaluation of applicability of an OE item to PBAPS was not adequate. Specifically, the inspectors reviewed IRs 469346 and 593531, which documented Exelon's review of issues documented in NRC IN 2007-05, "Vertical Deep Draft Pump Shaft and Coupling Failures." It discussed OE related to vertical deep draft pump shaft and coupling failures due to intergranular stress corrosion cracking (IGSCC). Exelon's procedure LS-AA-115-1003, "Processing of Significance Level 3 OPEX Evaluations," directed that the quality review of the closeout documentation for the OE review should ensure that the documentation stands alone and is clear enough to identify that the review was completed satisfactorily.

The inspectors identified that Exelon's evaluation concluded that their ESW pumps were not susceptible to the concerns described in the OE because the Peach Bottom ESW pumps were standby pumps and therefore were not subject to the same levels of stress as the pumps described in the OE. The inspectors questioned the adequacy of this evaluation because some of the pumps discussed in the OE also were standby pumps. The inspectors determined that the documented evaluation was inadequate in that it was based on an unconfirmed assumption, and the inspectors' review of the OE determined that the assumption was invalid. This was a performance deficiency associated with the Mitigating Systems cornerstone. The issue was not more than minor because the inspectors determined, through discussions with Exelon, that historically Exelon has not identified evidence of IGSCC on the standby service water pumps. Exelon documented this issue of concern in IR 950683 and also planned to inspect the 3C HPSW pump for evidence of IGSCC when the pump is removed for replacement in November 2009 to confirm the adequacy of the OE evaluation and corrective actions.

c. Findings

No findings of significance were identified.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The inspectors reviewed a sample of audits, including the most recent audit of the CAP, departmental self-assessments, and assessments performed by independent organizations. These reviews were performed to determine if problems identified through these assessments were entered into the CAP, when appropriate, and whether CAs were initiated to address identified deficiencies. The effectiveness of the audits and assessments was evaluated by comparing audit and assessment results against self-revealing and NRC-identified observations made during the inspection. A list of documents reviewed is included in the Attachment to this report.

b. Assessment

The inspectors concluded that self-assessments, audits, and other internal Exelon assessments were generally critical, probing, thorough, and effective in identifying

issues. The inspectors observed that these audits and self-assessments were completed in a methodical manner by personnel knowledgeable in the subject. The audits and self-assessments were completed to a sufficient depth to identify issues that were entered into the CAP for evaluation. In general, CAs associated with the identified issues were implemented commensurate with their safety significance.

c. Findings

No findings of significance were identified.

4. Assessment of SCWE

a. Inspection Scope

The inspectors reviewed the SCWE at PBAPS through conduct of the following activities.

- During interviews with staff personnel, the inspectors questioned individuals regarding: willingness to raise safety concerns, knowledge of the avenues available for raising safety concerns, the effectiveness of actions taken by management to foster a SCWE at the site, and knowledge of other individuals who had experienced a negative reaction for raising a safety concern. The inspectors interviewed approximately 40 personnel in a cross section of organizations.

- The inspectors reviewed implementation of the site employee concerns program (ECP). The inspectors compared the number and type of issues documented in the PBAPS ECP between May of 2007 to June of 2009 to the number and type of issues documented as PBAPS NRC allegations for that same period. The inspectors reviewed the site procedure for conducting ECP investigations and reviewed a sample of ECP files to assess the program's effectiveness at addressing potential safety issues.

- The inspectors reviewed the results of the site nuclear safety culture survey performed in November 2008 and the CAs identified by the assessment that Exelon performed when it reviewed the survey results. This was the only safety culture assessment performed after the SCWE inspection that was done in March 2008. That inspection was performed in accordance with the Deviation Memorandum (ML073320344) that was issued to authorize additional inspection of Exelon's actions to resolve work environment issues related to inattentive security officers that were identified at PBAPS in September 2007. The results for the inspection were documented in IR 05000277/2008405 and 05000278/2008405 (ML081490058).

b. Assessment

Based on interviews and reviews of the CAP and the ECP, the inspectors determined that in general site personnel were willing to identify and raise safety issues. All persons interviewed demonstrated an adequate knowledge of the avenues available for raising safety concerns including CAP and ECP. In addition, comparisons of PBAPS ECP files to NRC allegation information did not identify any impediments to the free flow of information at PBAPS.

c. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On August 7, 2009, the inspectors presented the inspection results to Mr. G. Stathes, Plant Manager, and other members of the PBAPS staff. The inspectors confirmed that proprietary information was reviewed by inspectors during the course of the inspection, that any proprietary information that was reviewed was returned to Exelon, and that the content of this report includes no proprietary information.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

W. Maguire, Site Vice President
G. Stathes, Plant Manager
J. Armstrong, Manager, Regulatory Assurance
E. Flick, Director, Engineering
P. Navin, Director, Work Management
L. Lucas, Manager, Chemistry
R. Franssen, Director, Operations
R. Holmes, Manager, Radiation Protection
D. DeBoer, Director, Security
T. Wasong, Director, Training
K. Pederson, Corporate Employee Concerns Program
D. McClellan, Regulatory Assurance, Site CAPCO
S. Minnick, Manager, Nuclear Oversight
T. Basso, Director, Maintenance

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000277, 278/2009008-01	NCV	Failure to Take Adequate CAs for Grease Applied to DC Contactors (Section 4OA2.1.c.)

LIST OF DOCUMENTS REVIEWED

Section 4OA2: Identification and Resolution of Problems

Audits and Self-Assessments

Focused Area Self Assessment (FASA), Preparation for the 2008 NRC Component Design Basis Inspection, 1/11/2008
FASA, Preparation for NRC Problem Identification and Resolution (PI&R) Inspection, 5/14/2009
FASA, Emergency Diesel Generating Mitigating Systems Performance Index Margin, 2007 (AR 567761)
FASA, Operations Human Error Prevention, 2009 (AR 838473)
FASA, Emergency Diesel Generator 2008 Readiness Assessment (IR 686249)
FASA, Operating Experience Program, 6/12/2007 (IR 620699)
FASA, Maintenance Procedure Adherence, 8/29/2008 (IR 704403)
Independent Assessment of the Exelon Employee Concerns Program, Ron Hall National Inspections & Consultants, 9/25/2008

Check-in Self Assessment Report (CIA), PB Safety Culture November 2008 Survey Results, 4/2/2009
CIA, Control Room Watchstanding Practices, 2008, (IR 704626)
CIA, Operations Operability Determination Documentation, 6/26/2007 (IR 569297)
Executive Review of Exelon's Learning Programs for April 2009
NOSA-PEA-08-03, Emergency Preparedness Audit , 4/16/2008
NOSA-PEA-09-01, Corrective Action Program Audit Report, 4/8/2009 (AR 890318)
NOSA-PEA-08-04, Chemistry, Radwaste, Effluent, and Environmental Monitoring Audit Report, 5/14/2008 (IR 745600)

Issue Reports (IR) full review

IR 680399	IR 917739	IR 587062	IR 834736	IR 794363
IR 673505	IR 917742	IR 609714	IR 706108	IR 584506
IR 722737	IR 948351	IR 622372	IR 639199	
IR 913307	IR 874398	IR 624281	IR 680244	
IR 931277	IR 615437	IR 632468	IR 898030	
IR 931476	IR 820443	IR 635604	IR 721672	
IR 899665	IR 604364	IR 635608	IR 759925	
IR 911479	IR 729090	IR 654258	IR 726429	
IR 913410	IR 658607	IR 674622	IR 943889	
IR 732205	IR 704052	IR 681337	IR 823612	
IR 799684	IR 894291	IR 682858	IR 821124	
IR 711075	IR 732764	IR 692892	IR 759710	
IR 782186	IR 175881	IR 701430	IR 791470	
IR 750545	IR 254854	IR 740580	IR 708293	
IR 923324	IR 256909	IR 754903	IR 708284	
IR 492616	IR 281508	IR 757017	IR 794298	
IR 658047	IR 310857	IR 757617	IR 823592	
IR 692897	IR 367684	IR 764372	IR 881382	
IR 836406	IR 474783	IR 767501	IR 716295	
IR 752794	IR 500512	IR 782517	IR 737832	
IR 687330	IR 500514	IR 801937	IR 785997	
IR 798807	IR 500533	IR 818517	IR 636940	
IR 207837	IR 500534	IR 826015	IR 778210	
IR 571207	IR 500617	IR 861324	IR 895789	
IR 590032	IR 500669	IR 873016	IR 822594	
IR 590051	IR 500720	IR 889914	IR 840082	
IR 605123	IR 500728	IR 914019	IR 899886	
IR 605618	IR 500730	IR 633532	IR 896894	
IR 605624	IR 500747	IR 667926	IR 713836	
IR 609714	IR 500751	IR 658606	IR 798033	
IR 648809	IR 507732	IR 923324	IR 517099	
IR 680813	IR 527491	IR 217618	IR 582301	
IR 707459	IR 532405	IR 588335	IR 608000	
IR 762246	IR 533278	IR 871970	IR 675629	
IR 773960	IR 538108	IR 148966	IR 919813	
IR 803964	IR 539349	IR 899332	IR 659670	
IR 821815	IR 569974	IR 715260	IR 755968	
IR 828325	IR 572347	IR 589654	IR 798807	

NRC-Identified IRs for Inspection

IR 945288, Main steam isolation valve position limit switch surveillance testing
IR 945465, Operator responsibilities regarding in-service testing action levels
IR 949015, OCC log entry improvement for corrective action items
IR 949567, Inadequate operability evaluations for ECCS room cooler heat exchanger performance testing
IR 949578, Corrective action closure was less than adequate for IR 588335 action 4
IR 950438, Inadequate procedure change for condition adverse to quality
IR 950439, Evaluate the need for additional extent of condition inspections for DC MOV breaker contactors
IR 950466, IRs older than two years with no open assignments that require closure
IR 950469, Error in processing the deletion of an NRC commitment related to first aid drills
IR 950683, Inadequate evaluation of the applicability of deep draft service water pump operating experience to Peach Bottom
IR 951780, Potential inadequate corrective actions for failure to follow alarm response procedure for high level lube oil sump alarm

IRs partial review

IR 777756	IR 943502	IR 682042	IR 942454	IR 473526
IR 779071	IR 175881	IR 683747	IR 942458	IR 188409
IR 809505	IR 917602	IR 826015	IR 582805	IR 122191
IR 840761	IR 901213	IR 942439	IR 799571	IR 902273
IR 845174	IR 913307	IR 942446	IR 762432	IR 813642
IR 852173	IR 864304	IR 942447	IR 762013	IR 827889
IR 896381	IR 867732	IR 942448	IR 163240	IR 892191
IR 902728	IR 867719	IR 942451	IR 574158	
IR 915179	IR 881184	IR 942452	IR 453385	

Action Requests

A1311290	A1714585	A1564635	A1204444	A1465360
A1404542	A1666097	A1584148	A1529844	A1631136
A1420399	A1665751	A1681763	A1492499	A1607586
A1605535	A1626863	A1711229	A1592912	A1623631
A1607930	A1606987	A1623631	A1644702	A1598039
A1711229	A1500685	A1685463	A1546882	A1602845

Drawings

E-5-32 sheet 2, Electrical Schematic Standby EDG exciter/ regulator schematic, Rev 6
E-5-7 sheet 1 of 22, Electrical Schematic Standby EDG, Rev 50
E-5-7 sheet 2B, Electrical Schematic Standby EDG, Rev 3
Drawing M-283, ISO 2-33-101, Diesel Generator Building, Rev 7
Drawing M-283, ISO 2-33-102, Diesel Generator Building, Rev 1
Drawing M-283, ISO 2-33-103, Diesel Generator Building, Rev 0
Drawing M-283, ISO 2-33-104, Diesel Generator Building, Rev 3

Miscellaneous

Memorandum, Michael Prospero, Director – Nuclear Oversight Performance Assessment to William Grundmann, Manager Licensing Programs, Response to NOS Elevation Letter

NOVA-08-118, Elevation – Inadequate Governance, Oversight, and Implementation of the Operating Experience Program, dated 12/18/2008
Memorandum, NOVA-08-118, Dave Gudger, Manager Licensing Programs to Michael Prospero, Director – Nuclear Oversight Performance Assessment, Elevation – Inadequate Governance, Oversight, and Implementation of the Operating Experience Program, dated 12/4/2008
Memorandum, Garey Stathes, Peach Bottom Plant Manager to Peach Bottom Station Employees and Supplemental Personnel, Deliberate Misconduct, dated 5/22/2009
Supervisory Brief Information for Supervisors, SBS 6-11-09, Bill Maguire, Site Vice President, Willfull Misconduct Not Tolerated, 6/11/2009
Supervisory Brief Information for Supervisors, SBS 7-15-09, Bill Maguire, Site Vice President, Deliberate Misconduct Computer Based Training Module, 7/15/2009
Computer based training module, The Impact of Deliberate Misconduct
SSC 07 Primary Containment and PCIVs Maintenance Rule Scope and Performance Monitoring Basis Document
SSC 10-1 Residual Heat Removal LPCI Mode Maintenance Rule Scope and Performance Monitoring Basis Document
SSC 10-2 Residual Heat Removal Shutdown Cooling/ Torus Cooling Maintenance Rule Scope and Performance Monitoring Basis Document
NSRB Memorandum, Peach Bottom Nuclear Safety Review Board Meeting, dated 6/15/09
Peach Bottom Atomic Power Station PORC Meeting Minutes, dated 4/7/09
Maintenance Rule Expert Panel Meeting Minutes, dated 6/17/09
Unit 2 Primary Containment System Health Report, dated 1/1/09 – 3/31/09
Unit 3 Primary Containment System Health Report, dated 1/1/09 – 3/31/09
Unit 2 Primary Containment Isolation System Health Report, dated 1/1/09 – 3/31/09
Unit 3 Primary Containment Isolation System Health Report, dated 1/1/09 – 3/31/09
Unit 2 Primary RHR and RHR Sample System Health Report, dated 1/1/09 – 3/31/09
Unit 3 Primary RHR and RHR Sample System Health Report, dated 1/1/09 – 3/31/09
Peach Bottom Plan of the Day Meeting Agenda, dated 02/04/2008
Peach Bottom Plan of the Day Meeting Agenda, dated 08/04/2009
Peach Bottom Plan of the Day Meeting Agenda, dated 08/04/2009
Peach Bottom Plan of the Day Meeting Agenda, dated 06/18/2009
Peach Bottom Plan of the Day Meeting Agenda, dated 07/29/2009
Peach Bottom Plan of the Day Meeting Agenda, dated 01/29/2009
Peach Bottom Plan of the Day Meeting Agenda, dated 02/05/2009
Management Review Committee (MRC) Agenda, dated 06/17/2009
MRC Agenda, dated 3/19/2009
MRC Agenda, dated 7/21/2009
MRC Agenda, dated 02/11/2009
MRC Agenda, dated 08/04/2009
MRC Agenda, dated 08/05/2009
MRC Agenda, dated 08/06/2009
MRC Agenda, dated 3/16/2009
MRC Agenda, dated 7/30/2009
MRC Agenda, dated 7/29/2009
MRC Agenda, dated 5/14/2009
MRC Agenda, dated 6/16/2009
MRC Agenda, dated 7/27/2009
MRC Agenda, dated 2/6/2008
MRC Agenda, dated 2/7/2008
MRC Agenda Week of 7/27/09 to 7/31/09

Station Ownership Committee (SOC) Meeting Agenda, dated 07/23/2009
SOC Meeting Package, dated 08/04/2009
SOC Meeting Package, dated 08/05/2009
SOC Meeting Package, dated 08/06/2009
SOC Meeting Package dated 07/22/2009
SOC Meeting Package dated 7/21/09
Health Physics Control Point Log, dated 2/6/08-2/7/08
Outage Control Center Log, dated 2/6/08-2/8/08
Chemistry Logbook, dated 2/6/08-2/8/08
Operations Logs, dated 2/6/08-2/8/08
River Temperature Data from June through September for 2005-2008
River Temperature Data from June 2009 through July 2009
Pump Differential Pressure Performance Data for 3C HPSW Pump from August 1999 through July 2009
Maintenance Rule Expert Panel Meeting Minutes for 3/19/09
T04342, Commitment, PBLR Fire Protection Activities
Chemistry Logs 6/29/09 to 7/1/09
Ops Logs 2/10/07 to 2/11/07
Ops Logs 3/16/07 to 3/17/07
T03135, Commitment, Simulation of First Aid Drills
Engine Combustion Report - E3 EDG 4/24/09
AK/AKR 1/11-12/2000, Joint Meeting Minutes AK/AKR Mange-Blast Circuit, Breaker Users Group Meetings
Ops logs 1/06 to 1/09 looking at EDG periods of Inoperability
Ops logs 6/29/09 to 7/1/09
OCC Logs 10/19/08 to 10/21/08
RP Logs 6/29/09 to 7/1/09
ACMP Unit 2 'B' Recirc Pump Trip Breaker Temperatures Rev 0
WO R0847668
WO R1056916

Non-Cited Violations
NCV 05000277/2008003-01, Foreign Material Discovered in Fire Valve (IR 807013)
NCV 05000277/2007003-03, Failure to follow procedure damaged diesel fire pump (IR 604364)
NCV 05000277/2007003-02, Failure to follow procedure overloaded E-3 EDG (IR 633532)
NCV 05000277/2008005-01, Incorrect Procedure results in inoperable DC bus (IR 820443)
NCV 05000278/2007003-01, Inadequate Work Order Implementation causes fire (IR 658545)
NCV 05000277, 278/2008004-01, Inadequate EOC Review Results in Delay in Discovery of ESW Leaks (IR 845092)
Licensee Identified Violation (LIV) 05000277/2007002, LER 05000277/2006001, Main Steam Isolation Valves Exceeded Their Allowable Leakage Limits On September 22, 2006 (IR 534622)
LER 05000278/2009-003, Inoperable Containment Isolation Valve Results in Condition Prohibited by Technical Specifications, dated 3/26/09
LER 05000278/2009-001, Control Rods Inoperable During Mode 2 Operations as a result of Interferences
EN#44940, 05000278, Unplanned, invalid actuation of the Unit 3 Primary Containment Isolation System

Operating Experience
NRC Information Notice 2007-36, EDG Voltage Regulator Problems (IR 703489)

NRC Information Notice 2008-05 Fires involving EDG exhaust manifolds (IR 769756)
NRC Information Notice 2007-27, Recurring events - EDG inoperability (IR 661725)
NRC Information Notice 2007-05, Vertical Deep Draft Pump Shaft and Coupling Failures (IR 469346)
IR 736911, Gas instrusion in safety systems
IR 710058, EDG Demand and run failures
OPEX OE24956 Loss of Transformer cooling requires shutdown (IR 639082)
OPEX OE23563, EDG Response while connected to Grid (IR 585253)
IR 917229, Catastrophic Failure of Main Turbine (D.C. Cook)
OPEX OE22384, Susquehanna - MOV Stem Nut Wear (IR 495197)
NRC Information Notice 2007-28, Potential Common Cause Vulnerabilities in Essential Service Water Systems Due to Inadequate Chemistry Controls
Part 21 Notification for Applied Analysis Corporation, PipeFlo Software Version 10.0
OPEX SME Review for NRC Information Notice 2008-11, Service Water System Degradation at Brunswick Steam Electric Plant Unit 1
OPEX SME Review for NRC Information Notice 2007-28, Potential Common-Cause Vulnerabilities in Essential Service Water Systems due to Inadequate Chemistry Controls
OPEX SME Review for NRC Information Notice 2007-06, Potential Common-Cause Vulnerabilities in Essential Service Water Systems
OPEX SME Review for GE SIL 484 Supplement 7, Cracking of Lower Endshields on Vertical Motors
OPEX SME Review for NRC Information Notice 2006-26, Failure of Magnesium Rotors in Motor-Operated Valve Actuators
IR 560621, Degradation of Essential Service Water Piping

Procedures

LS-AA-120, Issue Identification and Screening Process, Revision 9
LS-AA-125, Corrective Action Program Procedure, Revision 12
LS-AA-125-1003, Apparent Cause Evaluation Manual, Revision 8
LS-AA-125-1004, Effectiveness Review Manual, Revision 4
LS-AA-125-1005, Coding and Analysis Manual, Revision 6
EI-AA-101-1002, Employee Concerns Program Trending and Reporting Tools, Revision 5
EI-AA-101-1001, Employee Concerns Program Process, Revision 8
EI-AA-101, Employee Concerns Program, Revision 8
LS-AA-1012, Safety Culture Monitoring, Revision 0
OP-AA-108-115, Operability Determinations, Revision 8
Fundamentals Management System User Instructions, Revision 4
OP-MA-109-101-1001, Clearance and Tagging HIT Team Performance Management Process, Revision 4
AD-PB-101-2002, Preparation of Surveillance/Routine Test Procedures, Revision 0
WC-PB-101-1002, On Line Scheduling Process, Rev 0
OP-AA-108-115-1002, Supplemental Consideration For On-shift Immediate operability determinations (CM-1), Rev 0
OP-AA-108-115-1001, Operability Evaluation Passport Engineering Change Desktop Guide, Rev 0
M-054-005, Magne-Blast Circuit Breaker Routine PM, Rev 12
ST-O-37D-340-2, Diesel Driven Fire Pump Flow Rate Test, Rev 16
ST-O-052-203-2, Data Sheet 10 - 2 hour diesel log, Rev 19
SO 52A.8.C, Diesel Generator Running Inspection, Rev 31
ER-AA-330-009, ASME Section XI Repair/Replacement Program, Rev 4

LS-AA-110, Commitment Management, Rev 6
OP-AA-103-102, Watch Standing Practices, Rev 8
ASME Code Case N-513-1

Completed Surveillances

ST-O-052-413-2, E3 Diesel Generator Fast Start and Full Load Test, completed 2/14/2007
RT-O-052-251-2, E1 Diesel Generator Inspection Post Maintenance Functional Test, completed 8/3/2007
ST-O-052-121-2, E1 Diesel Generator RHR Pump Reject Test, completed 8/30/2007
ST-O-054-751-E2, E12 4KV bus Undervoltage Relays and LOCA LOOP Functional Test, completed 9/25/2008
ST-O-054-751-E2, E12 4KV bus Undervoltage Relays and LOCA LOOP Functional Test, completed 9/25/2008
ST-O-054-751-E2, E12 4KV bus Undervoltage Relays and LOCA LOOP Functional Test, completed 9/26/2008
ST-O-054-751-E2, E12 4KV bus Undervoltage Relays and LOCA LOOP Functional Test, completed 10/9/2008
ST-O-054-751-E2, E12 4KV bus Undervoltage Relays and LOCA LOOP Functional Test, completed 9/25/2009
ST-O-054-751-E2, E12 4KV bus Undervoltage Relays and LOCA LOOP Functional Test, completed 9/26/2009
ST-O-054-751-E2, E12 4KV bus Undervoltage Relays and LOCA LOOP Functional Test, completed 10/9/2009
ST-N-080-900-2, Visual Examination of Drywell and Torus Surfaces, Revision 2, completed 9/27/08
ST-N-080-900-3, Visual Examination of Drywell and Torus Surfaces, Revision 1, completed 10/9/05
ST-O-010-611-2, RHR Loop A Piping Pressure Test Inspection, Revision 2, completed 11/18/07
ST-O-010-611-3, RHR Loop A Piping Pressure Test Inspection, Revision 2, completed 4/9/07
ST-O-010-616-2, RHR Loop B Piping Pressure Test Inspection, Revision 1, completed 11/26/07
ST-O-010-616-3, RHR Loop B Piping Pressure Test Inspection, Revision 1, completed 4/30/08
ST-O-07G-475-2, Main Steam Isolation Valve Closure Timing at Shutdown, Revision 1, 9/14/04
ST-O-07G-475-2, Main Steam Isolation Valve Closure Timing at Shutdown, Revision 1, 9/18/06
ST-O-07G-475-2, Main Steam Isolation Valve Closure Timing at Shutdown, Revision 1, 9/15/08
ST-O-07G-475-3, Main Steam Isolation Valve Closure Timing at Shutdown, Revision 1, 9/20/05
ST-O-07G-475-3, Main Steam Isolation Valve Closure Timing at Shutdown, Revision 2, 9/24/07
ST-O-07G-470-2, Main Steam Isolation Valve Closure Timing, Revision13, 10/8/08
ST-O-032-301-2, HPCI Pump, Valve, Flow and Unit Cooler Functional and In-service Test, Rev 51, completed 3/29/09
ST-O-032-301-2, HPSW Pump, Valve and Flow Functional and Inservice Test, Rev 24, completed 3/30/09
SI2L-23-74-XXCQ, Calibration Check of (HPCI) Condensate Storage Tank Level Instruments LS 2-23-74 and LS 2-23-75, Rev 10, completed 6/10/09
RT-O-023-750-2, HPCI Functional Test from Alternative Control Panels, Rev 16, completed 3/11/08
RT-O-032-310-3, High Pressure Service Water Oil Cooler Heat Transfer Capability Test, Rev 10, completed 7/17/08
RT-O-033-600-2, Flow Test of ESW to ECCS Coolers and Diesel Generator Coolers, Rev 17, completed 7/5/09

ST-O-033-400-3, ESW Valve CHK-3-33-514 Inservice Test, Rev 9, completed 10/03/07
RT-M-033-675-2, Unit 2 Pump Intake Structure Inspection and Cleaning, completed 9/28/08

LIST OF ACRONYMS

ACE	apparent cause evaluation
ADAMS	Agency-wide Documents Access and Management System
AR	action request
CA	corrective action
CAP	corrective action program
CAQ	condition adverse to quality
CCA	common cause analyses
CFR	Code of Federal Regulations
CST	condensate storage tank
DC	direct current
ECP	employee concerns program
EDG	emergency diesel generator
ESW	emergency service water
FASA	focused area self assessment
HPCI	high pressure coolant injection
HPSW	high pressure service water
IGSCC	intergranular stress corrosion cracking
IMC	Inspection Manual Chapter
IR	issue report
MOV	motor-operated valve
MRC	management review committee
NCV	non-cited violation
NRC	Nuclear Regulatory Commission
NSRB	nuclear safety review board
OE	operating experience
PARS	publicly available records system
PBAPS	Peach Bottom Atomic Power Station
PCI	primary containment isolation
PIMS	work request system
PM	preventative maintenance
POD	plan of the day
PORC	plant operations review committee
QHPI	quick human performance investigation
RCA	root cause analysis
RCIC	reactor core isolation cooling
RHR	residual heat removal
SCWE	safety conscious work environment
SDP	significance determination process
SOC	station ownership committee
UFSAR	Updated Final Safety Analysis Report