September 12, 2005

Mr. Christopher M. Crane
President and CNO
Exelon Nuclear
Exelon Generation Company, LLC
200 Exelon Way KSA 3-E
Kennett Square, PA 19348

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION
NRC INSPECTION REPORT 05000277/2005006 AND 05000278/2005006

Dear Mr. Crane:

On July 29, 2005, the US Nuclear Regulatory Commission (NRC) completed a team inspection at your Peach Bottom Atomic Power Station, Units 2 and 3. The enclosed inspection report documents the inspection findings, which were discussed at an exit meeting on July 29, 2005, with Mr. Joseph Grimes, Peach Bottom Plant Manager, 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.

On the basis of the sample selected for review, there were no findings of significance identified during this inspection. The team concluded that problems were properly identified, evaluated and resolved within the problem identification and resolution programs (PI&R). However, during the inspection, several examples of minor problems were identified, including causal evaluations for human performance issues that were not sufficiently thorough to identify the base root cause.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document

Room or from the Publically 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/ James Trapp signing for

Mohamed M. Shanbaky, Chief
Projects Branch 4
Division of Reactor Projects

Docket No. 50-277, 278
License No. DPR-44, 56

Enclosure: Inspection Report Nos. 05000277/2005006 & 05000278/2005006
w/Attachment: Supplemental Information

cc w/encl:
Site Vice President, Peach Bottom Atomic Power Station
Plant Manager, Peach Bottom Atomic Power Station
Regulatory Assurance Manager - Peach Bottom
Associate General Counsel, Exelon Generation Company
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REGION I

Docket Nos:	50-277, 278
License Nos:	DPR-44, 56
Report Nos:	05000277/2005006 & 05000278/2005006
Licensee:	Exelon Generation Company, LLC Correspondence Control Desk P.O. Box 160 Kennett Square, PA 19348
Facility:	Peach Bottom Atomic Power Station (PBAPS) - Units 2 and 3
Location:	1848 Lay Road Delta, Pennsylvania
Dates:	July 11 - 29, 2005
Team Leader:	B. S. Norris, Senior Project Engineer, Division of Reactor Projects
Inspectors:	A. L. Burritt, Senior Project Engineer, Division of Reactor Projects R. E. Cureton, Reactor Engineer, Division of Reactor Projects D. C. Johnson, Reactor Engineer, Division of Reactor Projects
Observer:	J. R. Bream, Summer Co-Op, Division of Reactor Projects
Approved by:	Mohamed M. Shanbaky, Chief Projects Branch 4 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000277/2005-006, 05000278/2005-006; 07/11/2005 - 07/29/2005; Peach Bottom Atomic Power Station; Biennial Baseline Inspection of the Identification and Resolution of Problems

The inspection was conducted by four regional inspectors. No findings of significance were identified.

Identification and Resolution of Problems

The team determined that the corrective action program at Peach Bottom was adequate. The team determined that Exelon was effective at identifying problems and entering them in the corrective action program (CAP). Once entered into the system, the items were generally screened and prioritized in a timely manner using established criteria. Items entered into the CAP were properly evaluated commensurate with their safety significance. The causal evaluations for equipment issues and events reasonably identified the causes of the problem and developed appropriate corrective actions. However, for some of the issues affecting human performance, the evaluations were not of sufficient depth to identify the base root cause; therefore, the corrective actions did not prevent further human performance errors of a similar nature. In two cases, operability determinations did not consider all the applicable information to support the final conclusion that the equipment was operable. Corrective actions were typically implemented in a timely manner, but the team found that in one case, corrective actions were not adequate to correct the problem, and did not prevent recurrence. Many of the problems the team reviewed were long standing and had been previously identified by internal and external organizations.

a. NRC Identified and Self-Revealing Findings

None.

b. Licensee-Identified Violations

None.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

1. Effectiveness of Problem Identification

a. Inspection Scope

The inspection team reviewed the procedures describing the corrective action program (CAP) at Exelon's Peach Bottom Atomic Power Station (PBAPS). Exelon identifies problems by initiating Issue Reports for conditions adverse to quality, plant equipment deficiencies, industrial or radiological safety concerns, or other significant issues. The Issue Reports are subsequently screened for operability, categorized by priority (1 to 5) and significance (A through D), and assigned for evaluation and resolution; after the Issue Reports are screened, they become Action Requests. The Issue Reports and Action Requests are referred to as Condition Reports (CRs).

The team reviewed CRs selected across the seven cornerstones of safety in the NRC's Reactor Oversight Program to determine if problems were being properly identified, characterized, and entered into the CAP for evaluation and resolution. The team selected items from the maintenance, operations, engineering, emergency planning, security, radiological control, and oversight programs to ensure that Exelon was appropriately considering problems identified in each functional area. The team used this information to select a risk-informed sample of CRs that had been issued since the last NRC PI&R inspection, which was completed in June 2003.

In addition to CRs, the team selected items from other processes at Peach Bottom to verify that they appropriately considered problems identified in these areas for entry into the corrective action program. Specifically, the team reviewed a sample of work orders, engineering change requests, operator log entries, control room deficiency and work-around lists, operability determinations, engineering system health reports, completed surveillance tests, and current temporary configuration change packages. The documents were reviewed to ensure that underlying problems associated with each issue were appropriately considered for resolution via the corrective action process. In addition, the team interviewed plant staff and management to determine their understanding of and involvement with the CAP. The CRs and other documents reviewed, and a list of key personnel contacted, are listed in the Attachment to this report.

The team reviewed a sample of Exelon's Nuclear Oversight audits and quarterly reports, the departmental self-assessments, and the most recent audit of the CAP. This review was performed to determine if problems identified through these evaluations were entered into the CAP, and whether the corrective actions were properly completed to resolve the deficiencies. The effectiveness of the audits and self-assessments was evaluated by comparing audit and self-assessment results against self-revealing and NRC-identified findings, and current observations during the inspection.

The team considered insights from risk analyses to focus the sample selection and system walkdowns on risk-significant components; the team determined that the five highest risk-significance systems were residual heat removal, emergency diesel generators, high pressure service water, high pressure coolant injection, and reactor core isolation cooling systems. For the selected risk-significant systems, the team reviewed the applicable system health reports, and a sample of work requests, engineering documents, plant log entries, and results from surveillance tests and maintenance tasks. For these selected systems, the team also interviewed cognizant station personnel and completed system walkdowns to assess material condition and system performance.

b. Observations and Findings

No findings of significance were identified.

The team concluded that Exelon was generally effective at problem identification at the Peach Bottom station. The station staff generally had appropriate knowledge of the CAP, and identified problems and entered them into the program at an appropriate threshold. There were approximately 10,000 CRs initiated per year. Station staff promptly initiated CRs, as appropriate, in response to deficiencies or issues raised by the inspection team. Several of the fourteen departmental Functional Area Self Assessments (FASAs) that the team reviewed were not self-critical and identified only minor issues. The majority of the significant issues identified in the CR's that the team reviewed were as a result of an event or an equipment failure. The team noted few significant issues that were the result of a proactive effort, such as trending or system walkdowns.

The team did identify a minor deficiency that Exelon did not recognize. During a 2003 inspection, the NRC identified that Senior Reactor Operators Limited to Fuel Handling (LSROs) were being reactivated without the direct supervision of an active license holder, as required by 10CFR55.53(f)(2), and a non-cited violation (NCV) was issued. As part of this inspection, the team reviewed Exelon's corrective actions for the NCV, as documented in CR A1295039, and found them acceptable. However, during the review of the CR, the team identified a new concern; specifically, that the practice was to have multiple LSROs reactivate their licenses simultaneously with one active SRO. Code of Federal Regulations 10CFR55.53(f)(2) states that the Part 55 licensee must complete the under instruction period "... in the position to which the individual will be assigned." Specifically, that there is a one-to-one relationship between the active and inactive license holders. For the last two refueling outages at Peach Bottom, the reactivation of the LSROs was not completed on a one-to-one basis. The failure to comply with 10CFR55.53(f)(2) constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC's enforcement policy.

2. Prioritization and Evaluation of Issues

a. Inspection Scope

The inspection team reviewed the CRs listed in the attachment to the inspection report to assess whether Exelon adequately evaluated and prioritized the identified problems. The team selected the CRs to cover the seven cornerstones of safety identified in the NRC's Reactor Oversight Program. The team also considered risk insights from the Peach Bottom Probabilistic Risk Analysis to focus the CR sample. The CRs reviewed encompassed the full range of Exelon evaluations, including root cause analysis, apparent cause evaluations, and common cause analysis. The review included the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of the resolutions. For significant conditions adverse to quality, the team reviewed Exelon's assessment of the extent-of-condition and the determination of corrective actions to preclude recurrence. The team observed the Station Oversight Committee (SOC) and Management Review Committee (MRC) meetings, in which Exelon managers reviewed incoming CRs and evaluated preliminary corrective action assignments, analyses, and plans.

The team reviewed Exelon's evaluation of industry operating experience information for applicability to their facility, this review was expanded to five years. The team also reviewed equipment operability determinations, reportability assessments, and extent-of-condition reviews for selected problems. The team assessed the backlog of corrective actions to determine, individually or collectively, if any represented an increased risk due to delays in implementation. The team further reviewed equipment performance results and assessments documented in completed surveillance procedures, operator log entries, and trend data to determine whether the equipment performance evaluations were technically adequate to identify degrading or non-conforming equipment.

b. Observations and Findings

No findings of significance were identified.

The team concluded that Exelon generally screened the CRs appropriately and properly classified them for significance. The items in the engineering and maintenance backlogs had been evaluated for risk, individually and collectively. The team noted that significant conditions adverse to quality received a formal root cause analysis (RCA) and an extent-of-condition review. Less significant conditions typically received an apparent cause evaluation (ACE). A common cause analysis (CCA) was performed to identify common failure modes for selected issues. The majority, approximately 96 percent, of the CRs written were for less significant issues. Additionally, the team determined that the SOC and MRC were effective in reviewing and prioritizing CRs. However, the team noted that the SOC sometimes held a CR for clarification of the issue or additional information before it was passed to the MRC; some of the CRs were delayed by as much as 14 days.

The quality of the RCAs, ACEs, and CCAs was inconsistent. The causal analysis for equipment issues and events were generally good; however, the investigations for the human performance issues reviewed were not as thorough or in-depth. For example: a CR was written for a control rod that was not withdrawn in the proper sequence. The root cause was determined to be "... personnel were not being accountable." The RCA was not thorough in that it did not address the potential underlying causes such as procedure adherence, trainee oversight and supervision, and operator self-checking. Since the RCA was not in-depth enough, the corrective actions to preclude recurrence were very general and failed to re-enforce the human performance fundamentals.

The quality of certain extent-of-condition reviews were also inconsistent. An example of a narrowly focused extent-of-condition review was for the use of an abrasive cleaning pad to refurbish the brushes on the non-safety related turbine generator exciter. The root cause determined that the copy of the vendor manual did not contain the information that the vendor recommended that abrasive pads not be used. This information was contained in a separate proprietary document. The extent-of-condition was narrowly focused in that the review of vendor manuals was limited to non-safety related generators instead of an extent-of-condition review that included a sampling of all of the non-safety related vendor manuals. The vendor manual group is proactive in getting updates for manuals only for safety-related equipment. The inspectors were told that the reason for the limited scope was because the exciter is not safety-related. However, Exelon did not consider that the loss of the turbine generator would also cause an initiating event.

The lack of thorough documentation in some of the CRs reviewed made it difficult to understand the issue and resolution. In particular, the level of detail was insufficient in some of the causal analysis to support the conclusions and subsequent corrective actions. In those cases, the inspectors required additional information (verbally and/or additional documentation) from the individual(s) that performed the analysis before they understood the analysis. The inspectors noted that some of the recent RCAs did appear more complete.

In addition, the inspectors identified two examples in which Exelon did not provide sufficient bases to support the operability determinations for degraded or non-conforming conditions.

- The first example involved three safety relief valves (SRVs) that appeared to have lifted below the Technical Specification (TS) required pressure band during the Unit 2 turbine trip and reactor scram transient on July 10, 2005. Exelon identified the premature lifting of the SRVs during their post-trip review. Exelon subsequently determined that the reactor pressure data did not accurately reflect the actual pressure transient, and that the SRVs functioned within the TS required pressure tolerance. The inspectors found that Exelon's assessment did not consider all available information, specifically: (1) the wide range pressure indication during the transient, recorded on a strip chart; (2) the as-found test history of previous apparent premature SRV lifts during similar transients; and (3) the delayed closure of the "E" SRV with two subsequent short duration opening cycles, as shown on the sequence

of events printout. After review of the above additional information, the inspectors determined that Exelon's conclusion concerning SRV operability was reasonable. Exelon initiated CR 357841 to address the problems with the thoroughness of this operability review.

- The second example involved the scram solenoid pilot valves for two control rod drive mechanisms. The exhaust diaphragms in the pilot valves had exceeded the recommended service life. The inspectors found that a written operability determination was not prepared until after one of the control rods exhibited an abnormal scram rate. The operability determination only addressed the control rod with the non-conforming time. The operability determination did not address the potential effects of the aged diaphragms. Specifically, the operability determination did not consider: (1) the manufacturing batch number information provided by the vendor; (2) related industry operating experience in which diaphragms beyond their recommended service life had hardened and cracked, and caused the failure of the associated control rod to scram; or (3) environmental factors which could significantly affect the diaphragm degradation rate. Based on a review of the additional information and recent plant scram data, the inspectors determined that the conclusion in the operability determination was reasonable. Exelon initiated CR 357831 to address the level of detail problems with the operability determination.

3. Effectiveness of Corrective Actions

a. Inspection Scope

The team reviewed the corrective actions associated with selected CRs to determine whether the actions addressed the identified causes of the problems. The team reviewed CRs for repetitive problems to determine whether previous corrective actions were effective. The team also reviewed Exelon's timeliness in implementing corrective actions and their effectiveness in precluding recurrence of significant conditions adverse to quality. The team reviewed the CRs associated with selected non-cited violations and findings to determine whether Exelon properly evaluated and resolved these issues.

b. Observations and Findings

No findings of significance were identified.

The team concluded that Exelon generally determined corrective actions that were appropriate, effective, and completed in a timely manner. Nonetheless, the team identified an instance where Exelon failed to take adequate corrective actions for a Unit 2 drywell pressure switch (PS-2-05-016) that has repeatedly been found out-of-calibration since October 2000. The function of the pressure switch is to provide an alarm in the control room alerting the operators of changing drywell pressure conditions. The alarm (20C205L F-2, "Drywell Hi-Lo Press") response procedure directs the operators to implement the appropriate response procedure for increasing or decreasing drywell pressure. In July 2003, Unit 2 received the drywell pressure alarm at a pressure lower than the expected setpoint of 0.25 psig. The alarm was considered to

be functioning in a conservative direction and no action was taken. The alarm subsequently re-occurred seven more times; each time, nitrogen was added to the drywell to raise pressure and clear the alarm. On September 21, 2003, CR 176754 was written to document the repetitive problem, an Equipment Apparent Cause Evaluation was performed. During the team's review of the CR, the inspectors learned that the switch had been calibrated on February 3, 2003, five months before the first alarm, and that the calibration frequency was every two years. The CR noted that the switch was found out-of-tolerance during the last two calibrations. The inspectors reviewed the calibration records of the pressure switch for the last eight years. In August 1998, the switch was within tolerance; in October 2000, February 2003, and September 2003, the pressure switch was found out-of-tolerance during each calibration. During the February 2003 calibration, that the technicians attributed the drift to instrument aging; no corrective actions were taken. The inspectors observed the calibration of the pressure switch on July 27, 2005; both the low and high alarms were found out-of-calibration, CR 357222 was written.

The pressure switch is in the Peach Bottom Maintenance Rule (10CFR50.65) program and classified as risk significant. Exelon procedure ER-AA-520, "Instrument Performance Trending," was developed to monitor the results of calibrations of plant instrumentation to identify poor performance, as evidenced by the failure to meet setting tolerances for repeated calibrations. The procedure states that all instruments in the Maintenance Rule are included in the trend program. The results of the drywell pressure switch calibrations were not reviewed or trended by the responsible system engineer. The procedure lists possible corrective actions, including revision of the acceptance criteria, increased calibration frequency, and replacement of the instrument. Since pressure switch PS-2-05-016 was associated with an alarm function did not provide any protection or control functions, and all automatic systems remained fully operable, the inspectors determined that the repetitive out-of-calibration condition of the drywell pressure switch had no actual safety impact. The issue was determined to constitute a finding of minor significance that is not subject to enforcement action.

4. Assessment of Safety Conscious Work Environment

a. Inspection Scope

During the interviews with station personnel, the team assessed the safety conscious work environment (SCWE) at the Peach Bottom station. Specifically, the team assessed whether people were hesitant to raise safety concerns to their management and/or the NRC. The team also reviewed Exelon's Employee Concerns Program (ECP) to determine if employees were aware of the program and had used it to raise concerns. The team also reviewed a sample of the ECP files to ensure that issues were entered into the corrective action program.

b. Observations and Findings

No findings of significance were identified.

The team determined that the plant staff were aware of the importance of having a strong SCWE and expressed a willingness to raise safety issues. The staff interviewed stated they had never experienced retaliation for safety issues raised, and had an adequate knowledge of the CAP and ECP. Based on these limited interviews, the team concluded that there was no evidence of an unacceptable SCWE.

4OA6 Meetings, including Exit

On July 29, 2005, the team presented the inspection results to Mr. Joseph Grimes, Peach Bottom Plant Manager, and other members of the Peach Bottom staff, who acknowledged the findings. The inspectors confirmed that no proprietary information reviewed during inspection was retained.

ATTACHMENT: Supplemental Information

In addition to the documentation that the inspectors reviewed (listed in the Attachment), copies of information requests given to the licensee and email correspondence between the NRC and licensee personnel are in ADAMS, under accession numbers ML052210419 and ML052210429, respectively.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel:

S. Beck, Corrective Action Program Manager
J. Berg, HPSW System Engineer
R. Braun, Site Vice President
S. Breeding, Manager, Operations Support - Limerick
J. Brozonis, Site ECP Representative
J. Cockroft, Maintenance Rule Coordinator
S. Craig, Acting Security Manager
P. Davison, Director, Engineering
G. Easterday, CAPCo, Work Management
D. Foss, Regulator Assurance Engineer
D. Garcia, CAPCo, Engineering
C. Heimbach, CAPCo, Security
D. Henry, Manager, Engineering Business Support
G. Jardel, Manager, Emergency Preparedness
J. Kovalchick, Operations Support manager
C. Lautenbach, Electrical Maintenance Supervisor
J. Lyter, EOP Program Manager
M. Magness, CAPCo, Chemistry
J. Mallon, Manager, Regulatory Assurance
J. McDaniel, Acting Reactor Engineer Manager
J. McLaughlin, EDG System Engineer
W. Nelle, Regulatory Assurance Engineer
C. Perino, Manager, Nuclear Oversight
J. Popielarski, Manager, Operations Training
C. Rich, Manager, Operations Training - Limerick
G. Rombold, Performance Assessor
G. Stathes, Maintenance Director
T. Van Wyen, CAPCo, Operations
J. Volz, CAPCo, Radiation Protection
J. Wagner, Manager, Maintenance Programs
C. Wiedersum, Manager, Operations Support

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None

Attachment

LIST OF DOCUMENTS REVIEWED

Procedures:

CC-AA-102, Design Input and Configuration Change Impact Screening, Revision 9
CC-AA-103, Configuration Change Control, Revision 8
CC-AA-104, Document Change Request, Revision 7
CC-AA-204 Control of Vendor Equipment Manuals, Revision 7
CC-AA-309, Control of Design Analyses, Revision 8
CC-AA-309-101, Engineering Technical Evaluations, Revision 7
EI-AA-101, Employee Concerns Program, Revision 4
EI-AA-101-1001, Employee Concerns Program Process, Revision 2
ER-AA-310-100, Maintenance Rule - Scoping, Revision 1
ER-AA-310-1002, Maintenance Rule - SSC Risk Significance Determination, Revision 2
ER-AA-310-1003, Maintenance Rule - Performance Criteria Selection, Revision 2
ER-AA-310-1004, Maintenance Rule - Performance Monitoring, Revision 3
ER-AA-310-1005, Maintenance Rule - Dispositioning Between (a)(1) and (a)(2), Revision 2
ER-AA-310-1006, Maintenance Rule - Expert Panel Roles and Responsibilities, Revision 2
ER-AA-310-1007, Maintenance Rule -Periodic (a)(3) Assessment , Revision 3
ER-AA-310-1008, Exelon Maintenance Rule Process, Revision 0
ER-AA-520, Instrument Performance Trending, Revision 3
ER-AA-600-1044, Maintenance Rule - Support, Revision 2
ER-AA-2030, Conduct of Plant Engineering Manual, Revision 3
ER-PB-310-1010, Maintenance Rule Implementation, Revision 2
HU-AA-1212, Technical Task Risk/Rigor Assessment, Pre-Job Brief, Independent Third Party Review, Post-Job Brief, Revision 0
IC-C-11-00701, Calibration of ITT Barton Differential Pressure Indicating Switches, Revision 7
LS-AA-115, Operating Experience Procedure, Revision 6
LS-AA-120, Issue Identification and Screening Process, Revision 3
LS-AA-125, Corrective Action Program (CAP) Procedure, Revision 8
LS-AA-125-1001, Root Cause Analysis Manual, Revision 4
LS-AA-125-1002, Common Cause Analysis Manual, Revision 3
LS-AA-125-1003, Apparent Cause Evaluation Manual, Revision 5
LS-AA-125-1004, Effectiveness Review Manual, Revision 2
LS-AA-125-1005, Coding and Analysis Manual, Revision 5
LS-AA-127, Passport Action Tracking Management Procedure, Revision 6
LS-PB-125-1007, Department CAPCo Expectations, Revision 7
MA-AA-716-003, Tool Pouch / Minor Maintenance, Revision 0
MA-AA-716-011, Work Execution and Close Out, Revision 4
NO-AA-200-002, Nuclear Oversight Regulatory Audit Procedure, Revision 5
OP-AA-105-102, NRC Active License Maintenance, Revision 4
OP-AA-106-101, Significant Event Reporting, Revision 5
OP-AA-106-101-1001,Event Response Guidelines, Revision 7
OP-AA-106-1006, Operational and Technical Decision Making Process, Revision 2
OP-AA-108-105, Equipment Deficiency Identification and Documentation, Revision 2
RP-PB-441-1001, Respirator Field Use and Air Testing, Revision 3
ST-O-032-301-3, HPSW Pump and Valve Flow Functional and In-Service Test, Revision 20

TQ-AA-131, Senior Reactor Operator - Limited Requalification Training, Revision 4
WC-AA-101, On-line Work Control Process, Revision 10
WC-AA-104, Review and Screening for Production Risk, Revision 7
WC-AA-106, Screening and Processing, Revision 2

Nuclear Oversight Audits & Quarterly Reports:

Audits
NOSA-PB-03-05, NOS Engineering Design Control Audit Report, (August 2003)
NOSA-PB-03-06, Health Physics/Radiation Protection Audit Report, (May 2003)
NOSA-PEA-03-08, NOS REMP, ODCM, Non-Radiological Effluent Monitoring, NPDES Audit Report, (October 2003)
NOSA-PEA-04-01, Maintenance Functional Area Audit Report (February 2004)
NOSA-PEA-04-03, Emergency Preparedness, 50.54(t), Meteorology Audit (April 2004)
NOSA-PEA-04-04, Chemistry Radwaste and Process Control Program, (April 2004)
NOSA-PEA-04-05, NOS Engineering Programs Area Audit Report, (August 2004)
NOSA-PEA-04-07, Surveillance and Test Program Audit (October 2004)
NOSA-PEA-04-08, Procedures, Document Control and Quality Assurance Records Audit PBAPS (August 2004)
NOSA-PEA-04-09, Fire Protection Program Audit PBAPS (October 2004)
NOSA-PEA-05-01, Peach Bottom Corrective Action Program Audit (April 2005)
NOSA-PEA-05-02, Materials Management/Procurement Audit Report, (February 2005)
NOSA-PEA-05-04, Emergency Preparedness, 50.54(t), Meteorology Audit (April 2005)
NOSA-PEA-05-06, Health Physics Functional Area, (July 2005)

Quarterly Reports
NOSA-PB-03-2Q, Nuclear Oversight Quarterly Report PBAPS (2nd Quarter 2003)
NOSA-PB-03-3Q, Nuclear Oversight Quarterly Report PBAPS (3rd Quarter 2003)
NOSA-PB-03-4Q, Nuclear Oversight Quarterly Report PBAPS (4th Quarter 2003)
NOSA-PB-04-1Q, Nuclear Oversight Quarterly Report PBAPS (1st Quarter 2004)
NOSA-PB-04-2Q, Nuclear Oversight Quarterly Report PBAPS (2nd Quarter 2004)
NOSA-PB-04-3Q, Nuclear Oversight Quarterly Report PBAPS (3rd Quarter 2004)
NOSPA-PB-04-4Q, Nuclear Oversight Quarterly Report PBAPS (4th Quarter 2004)
NOSPA-PB-05-1Q, Nuclear Oversight Quarterly Report PBAPS (1st Quarter 2005)

Self Assessments:
(*BMK - Benchmarcking; CIA - Check In Assessment; FASA - Focused Area Self Assessment*)

BMK #282029, Force-on-Force (January-March 2005)
CIA #201239, PBAPS Regulatory Assurance Qualifications (February 2004)
CIA #202759, Maintenance Human Performance and Procedure Adherence Standards (December 2004)
CIA #202817, Maintenance Training for Performance Improvement (Objective 1) (September 2004)
CIA #203032, Annual Confined Space Program Review (March 2004)
CIA #289524, 2005 PBAPS Self Assessment PBAPS Environmental Qualification Program (June 2005)

CIA #289898, Permanent Plant Modifications and 50.59
FASA #134001, Human Error Prevention (March 2003)
FASA #134050, PBAPS Use of Operating Experience by Maintenance (April 2004)
FASA #134162, Radiation Protection Instrumentation Program (April 2003)
FASA #134407, PBAPS Corrective Action Program (May 2003)
FASA #134409, PBAPS Operability Program (March 2003)
FASA #134411, Conduct of Plant Engineering (2003)
FASA #203026, Dose Control (December 2004)
FASA #203395, Facilities and Equipment HIT Team Assessment (August-September 2004)
FASA #203953, PBAPS 2004 Air Operated Valve Program (July 2004)
FASA #213719, CCA of Exelon Fleet Technical Rigor (May 2004)
FASA #248205 / 203086, New CAP Implementation for Exelon Nuclear Fleet (January 2005)
FASA #273913, Security Standard Training Program (June 2005)
FASA #274824 / 297960, PBAPS Operations Fundamentals (April 2005)
FASA #292969, 2005 Maintenance Corrective Action Program (June 2005)

Condition Reports (* denotes an CR generated as a result of this inspection):

Note: CR numbers prior to the use of PASSPORT (April 2004) are preceded by an "A"

A1295039	A1467631	A1491189	00165811	00174950	00180228	00193795
A1335787	A1468546	A1491296	00165901	00175364	00180764	00195171
A1355028	A1469840	A1493824	00165927	00175531	00181396	00195867
A1357616	A1469845	A1495620	00166273	00175737	00181528	00195915
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00221323	00236218	00263078	00296246	00316735	00333469	00351644
00221827	00237941	00264117	00296428	00317057	00333471	00351700
00222163	00238539	00264193	00296982	00317312	00333714	00352581*
00222536	00239445	00264279	00297022	00318980	00334165	00355095
00223657	00239835	00266359	00297086	00320358	00334216	00356234
00223674	00239846	00268601	00297665	00321192	00334665	00356633
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00223840	00241234	00270249	00297739	00321887	00336743	00356960
00224737	00241240	00270818	00298017	00321917	00336904	00357197*
00224811	00241598	00271123	00298073	00322330	00337680	00357211*
00225504	00242812	00271404	00298079	00322337	00337791	00357219*
00226318	00243114	00271791	00299069	00322495	00338541	00357222*
00227081	00243124	00272555	00299204	00322658	00339343	00357831*
00227630	00245488	00275073	00299460	00323747	00339656	00357841*
00227633	00246583	00277608	00300429	00326191	00339661	00357847*
00228416	00248779	00278063	00301289	00326235	00339868	00358813

Non-Cited Violations and Findings Reviewed:

NCV 2003003-01: Inadequate E2 EDG Maintenance Procedure Resulted in a Lube Oil Leak That Caused a Small Fire

NCV 2003003-02: "A" Train of Standby Gas Treatment System Rendered Inoperable Due to Inadequate Control of Testing of the Associated Fire Protection Deluge System

NCV 2003004-01: Did Not Meet 10CFR55.53(f)(2) When Reactivating Senior Reactor Operators to Support Fuel Handling
NCV 2003004-02: Inadequate Corrective Actions on U2 RCIC Pump for Automatic Flow Control
NCV 2003004-04: Inadequate E-Plan Change Documentation, 10CFR50.54(g)
NCV 2003004-05: De-energized U3 HPCI Alternate Control Station Power Supply
NCV 2003004-Licensee Identified: 10CFR50.54(q) - Did Not Properly Inventory or Maintain Emergency Response Kits at Local Hospitals
NCV 2003004-Licensee Identified: 10CFR50.54(q) - Did Not Make Available Public Education Brochures for Emergency Response Actions to Operators of Recreational Areas
NCV 2003005-01: Inadequate Clearance Restoration Results in Automatic Start of All Four EDGs
NCV 2003005-02: Inadequate Procedure Maintenance Guidance Results in U2 HPCI System Check Valve Failure
NCV 2003005-03: Failure to Properly Use Respiratory Protective Equipment in Accordance with 10CFR20.1703(a)
NCV 2003005-04: Inadequate Corrective Action for High U2 Steam Tunnel Temperature
NCV 2003005-Licensee Identified: Failure to Follow Written Guidance for Control Rod Withdrawal Caused a Single Rod to Not Be Withdrawn in Sequence
FIN 2003012-01: Inadequate Corrective Action for Equipment Performance Problems with a Reactor Feed Pump Turbine Overspeed Solenoid
NCV 2003013-03: Ineffective Instructions for Installation of Safety Relief Valve Packing
NCV 2003013-04: EOP Support Procedures Not Adequately Established with Steps to Bypass Containment Isolations
FIN 2003013-05: Inadequate Corrective Actions to Correct a Hotwell Level Controller
NCV 2004002-01: Maintenance Rule Bases Exceeded on the 2A RBCCW HX and E2 EDG
NCV 2004003-01: Design Change Made to the HPSW MOV on the RHR HX Discharge Valve
NCV 2004003-02: U2 HPCI Turbine Failure During PMT Due to Mis-Positioning Oil Supply Valve
NCV 2004003-Licensee Identified: 10CFR55.25 - Failure to Notify NRC of a Change in Medical Condition of a Licensed Operator
NCV 2004004-01: U3 HPCI System Trip Circuit Wire Not Reinstalled Following Testing
NCV 2004004-02: Failure to Follow DOT Package Closure Requirements
NCV 2004005-01: HPCI CST Suction Valve Resulted in HPCI Inoperability
NCV 2004005-02: Exelon Did Not Adhere to RP Procedures for Control of Radioactive Material Within the RCA
FIN 2004011: Supplemental Inspection of Exelon's Evaluation of White PI Associated with the PB2 Scrams
NCV 2005002-01: Failure to Scope Outer Intake Structure Trash Racks
NCV 2005002-02: SBO Power Supply to Emergency Buses with SBO Transformer Tap Loss of Function

Operating Experience Reviews:

NRC GL 2003-01, Control Room Habitability
NRC IN 1998-22, Deficiencies Identified During NRC Design Inspections
NRC IN 2000-14, Non-Vital Bus Fault Leads to Fire and Loss of Offsite Power

NRC IN 2000-20, Potential Loss of Redundant Safety-Related Equipment Because of the Lack of High-Energy Line Break Barriers
NRC IN 2001-13, Inadequate Standby Liquid Control System Relief Valve Margin
NRC IN 2002-06, Design Vulnerability in BWR Reactor Vessel Level Instrumentation Backfill Modification
NRC IN 2002-18, Effect of Adding Gas Into Water Storage Tanks on the Net Positive Suction Head For Pumps
NRC IN 2002-29, Recent Design Problems in Safety Functions of Pneumatic Systems
NRC IN 2002-34, Failure of Safety-Related Circuit Breaker External Auxiliary Switches at Columbia Generating Station
NRC IN 2003-03, Part 21 - Inadequately Staked Capscrew Renders Residual Heat Removal Pump Inoperable
NRC IN 2003-15, Importance of Follow-up Activities in Resolving Maintenance Issues
NRC IN 2004-19, Problems Associated with Back-up Power Supplies to Emergency Response Facilities and Equipment
NRC IN 2005-04, Single-Failure and Fire Vulnerability of Redundant Electrical Safety Buses
NRC IN 2005-06, Failure to Maintain Alert and Notification System Tone Alert Radio Capability
NRC IN 2005-07, Results of HEMYC Electrical Raceway Fire Barrier System Full Scale Fire Testing
NRC IN 2005-08, Monitoring Vibration to Detect Circumferential Cracking of Reactor Coolant Pump and Reactor Recirculation Pump Shafts
NRC IN 2005-16, Outage Planning and Scheduling - Impacts on Risk
Industry Event, Failure of Safety/Relief Valve Tee-Quencher Support Bolts at Hatch Unit 2

Maintenance Work Orders:

C0214222	R0702753	R0848411	RT-O-OID-404-2
M1424470	R0774172	R0923365	

System Health Reports:

Quarterly SHIP System Report for Emergency Diesel Generators (Common), 1st Quarter 2005
Quarterly SHIP System Report for Emergency Lighting Battery Pack / Appendix R Lighting (Units 2 & 3), 1st Quarter 2005
Quarterly SHIP System Report for High Pressure Coolant Injection (Units 2 & 3), 1st Quarter 2005
Quarterly SHIP System Report for High Pressure Service Water (Units 2 & 3), 1st Quarter 2005
Quarterly SHIP System Report for Radiation Monitoring (Unit 2), 1st Quarter 2005
Quarterly SHIP System Report for Reactor Building Closed Cooling Water (Units 2 & 3), 1st Quarter 2005
Quarterly SHIP System Report for Reactor Core Isolation Cooling (Units 2 & 3), 1st Quarter 2005
Quarterly SHIP System Report for Residual Heat Removal (Units 2 & 3), 1st Quarter 2005

Maintenance Rule Action Plans for (a)(1) Systems:

Maintenance Rule (a)(1) Action Plan for Emergency Diesel Generators
Maintenance Rule (a)(1) Action Plan for Fire Safe Shutdown Emergency Lighting Units
Maintenance Rule (a)(1) Action Plan for High Pressure Coolant Injection
Maintenance Rule (a)(1) Action Plan for Reactor Building Closed Cooling Water

Miscellaneous:

50.54(q) Program Evaluation and Effectiveness Review
Engineering Corrective Action Grading (January - June 2005)
Executive Review of Exelon Nuclear's Learning Programs for June, April, May 2005
GE schematic wiring diagram 947D336, Sheets 5&6
LER 05000278/04-03-00: Technical Specification Non-Compliance due to Loose Wire on the HPCI Suction Valve Logic Relay
LER 05000277/03-02-00: Condition Prohibited by Technical Specifications due to Inoperability of Standby Gas Treatment Filter Train
NRC Inspection Report 50-277/2004-011, Supplemental Inspection for the Unit 2 Unplanned Scrams Performance Indicator Crossing the Green-White Threshold
NRC Inspection Report 50-277,278/2003-013, Augmented Inspection Team for the Dual Unit Scram on September 15, 2003
NRC Inspection Report 50-277/2003-007, Special Inspection Team for the December 21, 2002, Unit 2 Reactor Scram with Loss of Normal Heat Removal Path
PBAPS Technical Requirement Manual - Units 2 & 3
PBAPS Technical Specifications - Units 2 & 3
PBAPS Updated Final Safety Analysis Report, Revision 20
Peach Bottom Engineering Action Tracking Daily Report (AT004E), July 18, 2005
Piping & Instrumentation Diagram 6280-M-361, Residual Heat Removal System, Revision 79
Power Labs Failure Analysis Report, PEA-33945
Security Score Card Observations, First Two Weeks of July
Security Recordable Log, 1st & 2nd Quarters of 2005
Sequence of Events printout and GP-18 Review of the July 10, 2005, Unit 2 Scram
SRV Certification Test Report 50163-2

LIST OF ACRONYMS

ACE	Apparent Cause Evaluation
CAP	Corrective Action Program
CAPCo	Corrective Action Program Coordinator
CFR	Code of Federal Regulations
CCA	Common Cause Analysis
CR	Condition Report
ECP	Employee Concerns Program
FASA	Focused Ares Self Assessments
LSRO	Senior Reactor Operator Limited to Fuel Handling
MRC	Management Review Committee
NCV	Non-Cited Violation

NRC	Nuclear Regulatory Commission
PBAPS	Peach Bottom Atomic Power Station
PI&R	Problem Identification and Resolution
RCA	Root Cause Analysis
SCWE	Safety-Conscious Work Environment
SOC	Station Ownership Committee
SRV	Safety Relief Valve
TS	Technical Specification