

January 17, 2002

Mr. Oliver D. Kingsley
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
50-277/01-10, 50-278/01-10

Dear Mr. Kingsley:

On December 29, 2001, the NRC completed an inspection at the Peach Bottom Atomic Power Station. The enclosed report documents the inspection findings which were discussed on January 3, 2002, with Mr. Jay Doering and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the inspectors identified one issue of very low safety significance (Green). This issue was determined to involve a violation of NRC requirements. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating this issue as a non-cited violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny any non-cited violation noted in this report, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Peach Bottom facility.

Immediately following the terrorist attacks on the World Trade Center and the Pentagon, the NRC issued an advisory recommending that nuclear power plant licensees go to the highest level of security, and all promptly did so. With continued uncertainty about the possibility of additional terrorist activities, the Nation's nuclear power plants remain at the highest level of security and the NRC continues to monitor the situation. This advisory was followed by additional advisories, and although the specific actions are not releasable to the public, they generally include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with law enforcement and military authorities, and more limited access of personnel and vehicles to the sites. The NRC has conducted various audits of your response to these advisories and your ability to respond to terrorist attacks with the capabilities of the current design basis threat (DBT). From these audits, the NRC has concluded that your security programs are adequate at this time.

O. Kingsley

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If you have any questions, please contact me at 610-337-5209.

Sincerely,

/RA/

Mohamed Shanbaky, Chief
Projects Branch 4
Division of Reactor Projects

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

Enclosure: Inspection Report No. 50-277/01-10 and 50-278/01-10

Attachments: (1) Supplemental Information

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W. Bohlke, Senior Vice President, Nuclear Services
J. Skolds, Chief Operating Officer
J. Doering, Vice President, Peach Bottom Atomic Power Station
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Mr. & Mrs. Dennis Hiebert, Peach Bottom Alliance
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U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Docket Nos: 50-277, 50-278

License Nos: DPR-44, DPR-56

Report Nos: 50-277/01-10, 50-278/01-10

Licensee: Exelon Generation Company, LLC
Correspondence Control Desk
200 Exelon Way, KSA 1-N-1
Kennett Square, PA 19348

Facility: Peach Bottom Atomic Power Station Units 2 and 3

Location: 1848 Lay Road
Delta, PA 17314

Inspection Period: November 18, 2001 through December 29, 2001

Inspectors: A. McMurtray, Senior Resident Inspector
M. Buckley, Resident Inspector
J. Jang, Senior Radiation Specialist
H. Williams, Senior Operations Engineer

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

SUMMARY OF FINDINGS

IR 05000277-01-10, IR 05000278-01-10, on 11/18-12/29/2001; Exelon Generation Company, Peach Bottom Atomic Power Station; Units 2&3. Operability Evaluations.

The inspection was conducted by resident inspectors, a senior radiation specialist, and a senior operations engineer. The inspection identified one Green finding which was considered a non-cited violation. The significance of most findings is indicated by the color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "no color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at: <http://www.nrc.gov/reactors/operating/oversight.html>

A. Inspector Identified Findings

Cornerstone: Mitigating Systems

- **Green.** The inspectors identified a Non-Cited violation of very low safety significance (Green) of Technical Specification 5.4.1, because the gravity feed block valve in the line from the diesel generator coolant expansion tank was closed, contrary to system operating procedures, which caused the E-2 emergency diesel generator (EDG) to be inoperable. The EDG was inoperable for an unknown period of time between October 12 and October 30, 2001.

This issue was determined to be of very low safety significance based on a phase 2 risk evaluation in accordance with our significance determination process. The other three EDGs and both offsite power sources remained operable during this time period. (Section 1R15)

B. Licensee Identified Violations

- A violation of very low significance, which was identified by Exelon, has been reviewed by the inspectors. Corrective actions, taken or planned by Exelon, appeared reasonable. This violation is described in Section 4OA7 of this report.

Report Details

SUMMARY OF PLANT STATUS

UNIT 2

Unit 2 began this inspection period at 100 % power. On November 30, 2001, operators commenced a scheduled power reduction to approximately 19 % to repair an instrument nitrogen leak in the drywell. Following repairs, the unit power was increased and reached 100% on December 2, 2001. Unit 2 operated at approximately 100% power for the remainder of the inspection period except for scheduled power changes to support routine maintenance activities and rod pattern adjustments.

UNIT 3

Unit 3 began the inspection period at 100% power. On November 18, 2001, operators commenced a scheduled power reduction to approximately 19% because a primary containment isolation valve in the residual heat removal system in the drywell failed to close when it was tested. After the primary containment isolation valve function was restored, the unit power was increased and reached 100% on November 20, 2001. Unit 3 operated at approximately 100% power throughout the remainder of the inspection period except for a scheduled power change to support a rod pattern adjustment.

1. REACTOR SAFETY

Initiating Events / Mitigating Systems / Barrier Integrity [Reactor-R]

1R04 Equipment Alignment

.1 Partial System Walkdowns

a. Inspection Scope

The inspectors performed a partial system walkdown to verify system and component alignments and note any discrepancies that would impact system operability. The inspectors verified selected portions of redundant or backup systems/trains were available while a system was out of service. The inspectors reviewed selected valve positions, electrical power availability, and the general condition of major system components. The walkdown involved the following system:

- Unit 3 high pressure coolant injection

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors reviewed the Fire Protection Plan, Technical Requirements Manual and the respective Pre-Fire Action Plan procedures to determine the required fire protection design features, fire area boundaries, and combustible loading requirements for the areas examined during this inspection. The inspectors then performed walkdowns of these area to assess control of transient combustible material and ignition sources, fire detection and suppression capabilities, fire barriers, and any related compensatory measures. The fire areas included:

- Unit 2 Switchgear Building (2 start-up switchgear building)
- Station Black Out Switchgear Building
- Main control room, cable spreading room, fan room (165' elevation)
- Unit 2 and Unit 3 13.2 kV switchgear areas
- Unit 2 and Unit 3 common standby gas treatment train and fan room
- Unit 2 and Unit 3 reactor building closed cooling water and recirculation pump motor/generator oil pump rooms
- Unit 3 Turbine Building - wing areas
- Unit 2 refueling floor
- Unit 2 Reactor Building 195' elevation
- Unit 3 electro-hydraulic control pump room
- Unit 3 high pressure coolant injection room

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors reviewed flood protection measures, observed Peach Bottom's flood protection equipment, and reviewed mitigation plans to verify that they were consistent with design requirements. The inspectors reviewed and/or observed the condition and adequacy of sump pumps, level alarm circuits, cables/splices qualified for submergence, and adequate drainage from manholes. The inspectors reviewed Exelon's evaluation of the affects of water submergence on safety-related cables, splices and cable supports. The inspectors walked down the emergency core cooling compartments, emergency diesel generator rooms, the emergency service water (ESW) and high pressure service water (HPSW) pumps rooms and the emergency cooling water pump structure. The inspectors reviewed:

- the adequacy of watertight doors
- the sealing of equipment below postulated flood levels
- the condition of sump pumps and room flooding alarms

The inspectors also walked down the moats or surrounding areas for the following large, on-site tanks:

- Units 2 and 3 condensate storage tanks
- refueling water storage tank
- torus dewatering tank
- auxiliary boiler fuel oil storage tank
- clarified water storage tank
- demineralized water storage tank

The inspectors also verified that there were no unanalyzed sources of flooding, including holes and unsealed penetrations in floors and walls between flood areas and the common drain systems and sumps between flood areas. The inspectors reviewed several risk significant alarm response procedures related to compartment and general area flooding. The inspectors reviewed Peach Bottom's corrective action system to verify that previous flooding issues and equipment problems had been identified, analyzed and resolved. The inspectors also reviewed analysis regarding internal flooding concerns in the ESW/HPSW pumps rooms during a seismic event.

The following procedures were included in the review:

- Peach Bottom Atomic Power Station (PBAPS) Updated Final Safety Analysis Report (UFSAR) Section 2.4, "Hydrology"
- PBAPS UFSAR Appendix C, "Structural Design Criteria"
- PBPAS Units 2 and 3 Individual Plant Examination for External Events
- PBPAS Fire Protection Plan, Chapter 6, "Special Topics"
- SE-4, Revision 19, "Flood"
- SE-4 BASES, Revision 9, "Flood - Bases"
- T-103, Revision 14, "Secondary Containment Control"
- T-103 BAS, Revision 12, "Secondary Containment Control - Bases"

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspectors reviewed Peach Bottom's requalification exam results for the biennial testing cycle. The inspectors assessed whether pass rates were consistent with the guidance of NUREG-1021, Revision 8, "Operator Licensing Examination Standards for Power Reactors" and NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)."

The specific pass rates that were assessed were:

- Crew pass rate was greater than 80%.
- Individual pass rate on the written exam was greater than 80%.
- Individual pass rate on the walk-through exam was greater than 80%.
- More than 75% of the individuals passed all portions of the exam.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed the follow-up actions for issues identified on systems, structures, or components (SSCs) and the performance of these SSCs, to assess the effectiveness of Exelon's maintenance activities. The inspectors verified that problem identification and resolution of these issues had been appropriately monitored, evaluated, and dispositioned in accordance with Exelon's procedures and the requirements of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance." In addition, the inspectors reviewed selected SSC classification, performance criteria and goals, and corrective actions to verify that the actions were reasonable and appropriate. The following systems and documents were reviewed:

Systems

- Unit 2 control rod drive
- Unit 2 service water
- Unit 2 wide range neutron monitoring system
- Unit 3 reactor water clean-up
- Unit 2 feedwater heaters and extraction steam
- Unit 2 reactor recirculation system
- Unit 3 residual heat removal system

Procedures and Documents

- Maintenance Rule Expert Panel Meeting Minutes
- Peach Bottom System Health Overview Reports
- Peach Bottom Maintenance Rule Bases Documentation
- Maintenance Rule Systems, Structures, and Components Bases Information Document
- Action Requests (A1289692, A1349701, A1344638)
- AG-CG-028.1, Rev 8, Maintenance Rule Implementation Program"
- AG-CG-028.1-5, Rev 1, "PECO Energy Approach to Use Maintenance Preventable Functional Failures for Maintenance Rule Performance Monitoring"
- AG-CG-028.1-9, Rev 6, "Guidance for Identifying and Evaluating Maintenance Preventable Functional Failures"
- AG-CG-028.1-3, Rev 3, "Rules for Governing Expert Panel Activities"

- AG-CG-028.1-6, Rev 0, "PECO Energy Approach to Setting Acceptable Performance Levels for Monitoring Maintenance Preventable Functional Failures"

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed risk evaluations and contingency plans for selected planned and emergent work activities to verify that appropriate risk evaluations were performed and to assess Exelon's management of overall plant risk. The inspectors compared the risk assessments and risk management actions against the requirements of 10 CFR 50.65(a)(4) and the recommendations of NUMARC 93-01 Section 11, "Assessment of Risk Resulting from Performance of Maintenance Activities." The inspectors verified that risk assessments were performed when required and appropriate risk management actions were identified.

The inspectors attended planning meetings and discussed the risk management of the activities with operators, maintenance personnel, system engineers, and work coordinators to verify that risk management action thresholds were identified correctly. The inspectors also verified that appropriate implementation of risk management actions were performed. The following planned and emergent work activities were reviewed:

- Unit 2 residual heat removal testable check valve (AO-2-10-46A) stroking for nitrogen leak detection while performing emergency bus (E-42) testing
- On-going work activities on or near protected equipment while the Unit 2 residual heat removal testable check valve (AO-2-10-46A) was inoperable
- Planned outage of the 'B' standby gas treatment system during Unit 2 fuel sipping activities
- Unit 3 high pressure coolant injection gland seal condenser bottom head seal replacement

In addition, the inspectors reviewed the assessed risk configurations against the actual plant conditions and any in-progress evolutions or external events to verify that the assessments were accurate, complete, and appropriate for the issues. The inspectors performed control room and field walkdowns to verify that compensatory measures identified by the risk assessments were appropriately performed.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed four operability evaluations to assess the adequacy of the evaluations, the use and control of compensatory measures, compliance with the Technical Specifications, and the risk significance of the issues. The inspectors verified that the operability determinations were performed in accordance with LS-AA-105, Rev. 0, "Operability Determinations," NOM-C-11.1, Rev. 1, "Operability" and A-C-901, Rev. 10, "Control of Nonconformances." The inspectors used the Technical Specifications, Technical Requirements Manuals, the Final Safety Analysis Report, associated Design Basis Documents, and system procedure SO52.3.A Rev 6, "Diesel Generator Jacket Coolant/Air Coolant System Fill" as references during these reviews. The issues reviewed included:

- Degraded MO-2-02-53A recirculation pump discharge valve motor operator
- Units 2 and 3 steam carryover measurement inaccuracies impact on thermal heat balance calculations
- E-2 emergency diesel generator trip on 10/30/01 due to jacket coolant low pressure when the coolant expansion tank gravity block valve was found closed
- Air bubbles found in the Unit 3 reactor water cleanup system high flow isolation instrumentation lines after a surveillance test failure

b. Findings

E-2 Emergency Diesel Generator Inoperability

The inspectors identified a Non-Cited violation of very low safety significance (Green) of Technical Specification 5.4.1. The violation was due to closure of the gravity feed block valve in the line from the diesel generator coolant expansion tank that was contrary to system operating procedures. The closure of the valve caused the E-2 emergency diesel generator (EDG) to be inoperable. The EDG was inoperable for an unknown period of time between October 12, 2001 (last successful E-2 EDG test) and October 30, 2001 (block valve discovered closed). The other three EDGs and both offsite power sources remained operable during this time period.

On October 30, 2001, the E-2 EDG tripped on low jacket coolant discharge pressure during routine testing. Exelon identified that the gravity feed block valve in the line from the diesel generator coolant expansion tank was closed rather than open as required by procedure, SO52.3.A Rev 6, "Diesel Generator Jacket Coolant/Air Coolant System Fill." Exelon determined that with this valve closed both the jacket and air coolant pumps for the diesel would not function properly and, as a result, the E-2 EDG was neither operable nor available.

Although Exelon was unable to determine who closed this valve or exactly when it was closed, they did determine that the valve was closed somewhere in the period between October 12, 2001 and October 30, 2001. Exelon determined that the gravity feed block valve was open on October 12, 2001, since the E-2 EDG was successfully tested for approximately two hours on that date. During the root cause investigation of this event, Exelon concluded that the mis-positioning was accidental and most likely occurred when coolant was manually added to the expansion tank. Coolant was manually added six times between October 12 and 30, due to leaks in the jacket coolant system.

The E-2 EDG was successfully tested and returned to service on October 31, 2001. Data from the return-to-service run of the E-2 EDG and Exelon's operability evaluation concluded that the E-2 EDG was not physically damaged during the several minutes that the diesel ran before it tripped on October 30. Additionally, the gravity feed block valves on the other three diesels were verified open on October 31. Exelon's corrective action included adding these gravity feed block valves to the locked valve program by January 31, 2002.

The closure of the gravity feed block valve on the E-2 EDG was more than minor because it had a credible impact on safety in that the E-2 EDG was unavailable to power the E-22 and E-23 emergency buses if a loss of offsite power had occurred. The closure of the gravity feed block valve affected the Mitigating Systems and Barrier cornerstones since it caused the E-2 EDG to be unavailable and inoperable for core and containment heat removal.

The significance determination process (SDP) as defined in the Significance Determination of Reactor Inspection Findings for At-Power Situations was applied to determine the risk associated with this finding. Since both the Mitigating System and Barrier Integrity cornerstones were affected, the guidance required a phase 2 risk evaluation be performed using the Peach Bottom specific SDP worksheets. During the period of October 12 - 30, Unit 3 operated at full power and Unit 2 was operating from October 12-23, shutdown from October 23 - 27, and operating from October 27 - 30. This finding applied to both units. The phase 2 risk evaluation was performed using the operating status of Unit 3 because the risk evaluation results for Unit 3 would be higher than for Unit 2. Since the exact time the E-2 EDG became unavailable is unknown, one half of the time between the identification of the failure and the time that the EDG was last successfully tested ($18 \text{ days}/2 = 9 \text{ days}$) was used as the exposure time in the phase 2 risk evaluation. The phase 2 risk evaluation results indicated that for an E-2 EDG unavailability of 9 days, the issue was of very low safety significance (Green).

Technical Specification 5.4.1 requires written procedures be established, implemented and maintained covering activities listed in Regulatory Guide 1.33. Regulatory Guide 1.33 includes written procedures for startup, operation and shutdown of emergency power sources (e.g., diesel generators). The EDG lineup for automatic start, SO52.3.A Rev 6, Diesel Generator Jacket Coolant/Air Coolant System Fill" required the E2 D/G coolant expansion tank gravity feed block valve (HV-0-52E-10025B) to be open. Contrary to this requirement, on October 30, 2001, procedure SO52.3A was not adequately implemented since this valve (HV-0-52E-10025B) was found closed. This caused the E2 EDG to trip on low jacket coolant discharge pressure during a routine test. With the gravity feed block valve closed the emergency diesel generator would not have been able to fulfill its intended safety function for core and containment heat removal. This violation of Technical Specifications 5.4.1 is being treated as a Non-Cited Violation consistent with Section VI.A.1 of the NRC Enforcement Policy. Exelon entered the issue into the corrective action system as Condition Report (CR) # 00081006 (**NCV 50-277&278/01-10-01**)

a. Inspection Scope

The inspectors reviewed the following permanent plant modification packages to verify that (1) the design bases, licensing bases, and performance capability of risk significant Structures Systems or Components (SSCs) had not been degraded through modifications, and (2) modifications performed during increased risk configurations did not place the plant in an unsafe condition. The following modification packages were reviewed:

- Unit 3 high pressure coolant injection turbine gland seal carbon ring removal (ECR PB 01-00684)
- Utilization of Unit 3 RHR HV-3-10-33451A as the PCIV and high/low pressure interface in lieu of RHR valve AO-3-10-163A (ECR PB 01-01156)

The following documents were used during the modifications reviews:

- PBAPS UFSAR Section 6.0, "Core Standby Cooling Systems"
- PBAPS Unit 3 Technical Specifications, Section 3.5, "Emergency Core Cooling Systems and Reactor Core Isolation Cooling System"
- Design Basis Document (DBD) P-S-03, Rev. 19, "HPCI System"
- GE Specification, HPCI System, M-1-U-203
- PBAPS UFSAR Section 5.2, "Primary Containment"
- PBAPS UFSAR Section 7.3, "Primary Containment and Reactor Vessel Isolation Control System"
- PBPAS Fire Protection Plan, Chapter 6, "Special Topics"
- PBAPS Unit 3 Technical Specifications, Section 3.6.1.3, "Primary Containment Isolation Valves"
- Design Basis Document P-S-09, Rev. 16, "RHR System"
- Design Basis Document P-S-26, Rev. 4, "Primary Containment Isolation System"
- Design Basis Document P-T-12, Rev. 5, "Design Basis Accidents, Transients, and Events"

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors observed portions of post-maintenance testing activities in the field and reviewed selected test data at the job site. The inspectors observed whether the tests were performed in accordance with the approved procedures and assessed the adequacy of the test methodology based on the scope of maintenance work performed. In addition, the inspectors assessed the test acceptance criteria to verify whether the test demonstrated that the tested components satisfied the applicable design and licensing bases and the Technical Specification requirements. The inspectors reviewed the recorded test data to evaluate whether the acceptance criteria were satisfied. The specific activities reviewed included:

- 'A' Emergency Service Water (ESW) pump breaker operation and closure after preventive maintenance (SO 54.7.C, Rev 15, "4KV Breaker Rack-out/Rack-in")
- diesel driven fire pump run after preventive maintenance (ST-O-37D-340-2, Rev 4, "Diesel Driven Fire Pump Flow Rate Test")
- Unit 2 RIS-4132 drywell rad gas monitor verification and calibration check after corrective maintenance (SI2R-63G-4132-XXCQ, Rev 10, "Calibration Check of Drywell Radiation Monitor")
- Unit 2 'D' RHR pump room cooler flow and leak tightness verification after cleaning (C019378906)
- Unit 3 HPCI testing following replacement of the gland seal condenser bottom head seal (ST-O-023-301-3, Rev 28, "HPCI Pump, Valve, Flow and Unit Cooler Functional and In-Service Test")

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed and observed the following surveillance test, and compared test data with established acceptance criteria to verify the system demonstrated the capability of performing the intended safety functions. The inspectors also verified that the system and components maintained operational readiness, met applicable Technical Specification requirements, and were capable of performing the design basis functions. The inspector observed and reviewed the following surveillance test:

- Unit 2 HPCI Pump, Valve, Flow and Unit Cooler Functional and In-Service Test (ST-O-023-301-2, Rev 27)

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

This review was performed to determine whether the temporary changes adversely affected system or support system availability, or adversely affected a function important to plant safety. The inspectors reviewed the associated system design bases, including the FSAR and Technical Specifications, and assessed the adequacy of the 10 CFR 50.59 safety evaluations screening for this issue. The inspectors also assessed configuration control of the temporary changes by reviewing selected drawings and procedures to verify that appropriate updates had been made, and in compliance with Exelon Nuclear's procedure, "Temporary Plant Alternations (TPA)," MOD-C-7, Rev. 6. The inspectors reviewed the temporary modification documents to verify that the implemented changes were consistent with the approved documents. The inspectors reviewed selected post-installation test results to confirm that the actual impact of the temporary changes had been adequately verified by test. The following temporary modification and documents were included in the review:

Temporary Modifications

- Temporary Plant Alteration (TPA) to Close HV-3-16-33176A

Procedures and Documents

- MOD-C-7, Rev 6, "Temporary Plant Alterations"
- Engineering Change Request (ECR) PB 01-01153-000
- PBAPS UFSAR Section 5.2, "Primary Containment"
- Design Basis Document (DBD) P-S-09, Rev. 16, "RHR System"
- Design Basis Document P-S-26, Rev. 4, "Primary Containment Isolation System"

b. Findings

No findings of significance were identified.

Emergency Preparedness [EP]

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed a simulator-based training evolution drill conducted by the licensee on December 4, 2001. The inspectors focused on the performance of risk significant evolutions by site personnel in the technical support center. These risk significant evolutions included emergency classification, offsite notification, radiological assessment, and coordination with the emergency operations facility to issue the protective action recommendations. The inspectors also evaluated the emergency

response organization's recognition of abnormal conditions, command and control, communications, utilization of repair and field monitoring teams, and the overall implementation of the emergency plan. The inspectors observed the licensee's conduct of the drill critique and verified that any weaknesses or deficiencies observed during the drill were discussed and evaluated during the critique.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator (PI) Verification

.1 RETS/ODCM Radiological Effluent Occurrences

a. Inspection Scope

The inspectors verified that all conditions that met the Nuclear Energy Institute (NEI) 99-02, Revision 2, "Regulatory Assessment Performance Indicator Guideline" criteria were recognized, identified, and reported for this NRC PI. The information contained in the following records was compared against the criteria contained in NEI 99-02. The inspectors reviewed the following documents to ensure the licensee met all requirements of this PI from the third quarter 2000 through the third quarter 2001 for Units 2 and 3:

- Monthly projected dose assessment results due to radioactive liquid and gaseous effluent releases
- Quarterly projected dose assessment results due to radioactive liquid and gaseous effluent releases
- Associated station procedures

The inspectors also performed an independent verification of the licensee's capability for properly calculating projected doses to the public resulting from discharges of radioactive liquids and gases to the environment. The licensee had implemented a new computer code to calculate the projected doses. The inspectors used the "NRC PC-DOSE computer code" and the results were compared with the following:

- Comparisons of projected doses due to radioactive liquid release pathway
- Comparisons of projected doses due to noble gas release pathway
- Comparisons of projected doses due to radioactive particulate release pathway

b. Findings

No findings of significance were identified.

.2 Units 2 and 3 Emergency AC Power Systems Safety System Unavailability

a. Inspection Scope

The inspectors reviewed the station's records to assess the accuracy and completeness of the selected NRC PI data. The records reviewed included selected Technical Specification limiting condition for operation logs, system surveillance tests, licensee event reports, security logs, action requests and condition reports. The specific indicators included:

- Units 2 and 3 emergency AC power systems unavailability

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up

.1 (Closed) LER 2-01-004: Automatic Reactor Scram due to Electrical Fault on Generator Conductor

On October 23, 2001, Unit 2 automatically shutdown from 100% power when a generator lockout and main turbine trip caused the main turbine control valves to close initiating a reactor scram. The main generator 'A' phase isophase bus ventilation damper became detached from the bus compartment and fell onto the main generator 'A' phase conductor resulting in a ground fault and generator lockout. Unit 2 also experienced Groups II and III primary containment isolation valve closures due to decreased reactor water level as a result of the reactor scram.

The damper that caused this event was repaired and assignments made to upgrade inadequate maintenance procedures (See Section 4OA7). This event has been entered into the licensee's corrective action program as CR 00079965. The inspectors on-site review of this LER identified no findings of significance (See Section 4OA7).

.2 (Closed) LER 2-01-005: E-2 Diesel Generator Not Operable during Unit 2 Entry into Mode 2

On October 30, 2001, the E-2 emergency diesel generator (EDG) tripped on low jacket coolant discharge pressure during routine testing of the EDG. The EDG was inoperable due to the gravity feed block valve in the line from the diesel generator coolant expansion tank being in the closed position. This issue has been entered into the licensee's corrective action program as CR 00081006. The inspectors on-site review of this LER identified the finding described in Section 1R15.

4OA6 Meetings.1 Exit Meeting Summary

The inspectors presented the results of the inspection to Mr. J. Doering and members of Exelon's management on January 3, 2002. Exelon management acknowledged the findings presented. No proprietary information was identified.

4OA7 Licensee Identified Non-compliance

The following finding of very low significance was identified by Exelon and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as a Non-cited Violation (NCV)

NCV Tracking NumberRequirement Licensee Failed to Meet

NCV 50-277/01-10-02

Technical Specification 5.4.1 requires written procedures be established, implemented, and maintained covering activities listed in Regulatory Guide 1.33. Regulatory Guided 1.33 includes maintenance procedures for performing preventive maintenance and inspections of plant equipment. Contrary to the above, prior to the Unit 2 automatic reactor shutdown on October 23, 2001, adequate written instructions were not established in maintenance procedure, M-C-700-227, Rev 0, "Inspection of Generator Iso-phase Bus" for inspecting, bolting and torquing of the isophase bus duct dampers in the main generator. As a result of these inadequate instructions, three threaded holes were stripped due to excessive torque, which caused the screws holding the rod side of the damper to the connection box to fall out. This allowed the damper frame to pivot on the last remaining bolt and contact the 'A' phase bushing causing a ground fault, generator lockout, and reactor scram. The corrective actions for this violation were already in the licensee's corrective action program (Condition Report (CR)# 00079965). This is being treated as a Non-Cited Violation.

If you deny this non-cited violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Room, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United State Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Peach Bottom facility.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION**a. Key Points of Contact**Exelon Generation Company

M. Alfonso, Training Director
 J.T. Anthony, Maintenance Director
 J. Bouck, Operations Director
 P. Davison, Site Engineering Director
 M. Delowery, Senior Manger-Outages
 J. Doering, Site Vice President
 E. Eilola, Shift Operations Superintendent
 C. Hardee, Supervisor Emergency Preparedness
 G. Johnston, Plant Manager
 I. Seddon, Chemistry/Radwaste Manager
 C. Swenson, Work Management Director
 H. Trimble, Radiation Protection Manager
 W. Trump, Nuclear Security Manager
 D. Warfel, Senior Manger, Design Engineering
 A. Winter, Manager, Regulatory Assurance

b. List of Items Opened, Closed, and DiscussedClosed

2-01-004	LER	Automatic Reactor Scram due to Electrical Fault on Generator Conductor
2-01-005	LER	E-2 Diesel Generator Not Operable during Unit 2 Entry into Mode 2

Opened/Closed

50-277&278/01-10-01	NCV	E-2 Emergency Diesel Generator Rendered Inoperable by a Mispositioned Jacket Coolant Expansion Tank Block Valve
50-277/01-10-02	NCV	Inadequate Generator Iso-phase Bus Maintenance Procedure Results in a Unit 2 Automatic Shutdown