April 12, 2001

Mr. Oliver D. Kingsley, President
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 05000277/2001-003, 05000278/2001-003

Dear Mr. Kingsley:

On March 31, 2001, the NRC completed an inspection at the Peach Bottom Atomic Power Station. The enclosed report documents the inspection results which were discussed on April 5, 2001, 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 of the results of this inspection, the inspectors identified one issue having a 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 of the NRC's Enforcement Policy. 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 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.

In accordance with 10 CFR 2.790 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 Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

If you have any questions, please contact me at 610-337-5185.

Sincerely,

/RA/

Donald J. Florek, Acting Chief
Projects Branch 4
Division of Reactor Projects

Docket Nos.: 05000277, 05000278
License Nos.: DPR-44, DPR-56

Enclosure: Inspection Report No. 05000277/2001-003 and 05000278/2001-003

Attachments: (1) Supplemental Information

cc w/encls:
J. Hagan, Senior Vice President, Exelon Generation Company, LLC
J. Cotton, Senior Vice President, Operations Support
W. Bohlke, Senior Vice President, Nuclear Services
J. Skolds, Chief Operating Officer
J. Doering, Vice President, Peach Bottom Atomic Power Station
G. Johnston, Plant Manager, Peach Bottom Atomic Power Station
J. A. Benjamin, Vice President - Licensing and Regulatory Affairs
J. A. Hutton, Director, Licensing, Exelon Generation Company, LLC
G. Hunger, Chairman, Nuclear Review Board
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J. H. Walter, Chief Engineer, Public Service Commission of Maryland
Mr. & Mrs. Dennis Hiebert, Peach Bottom Alliance
Mr. & Mrs. Kip Adams
Commonwealth of Pennsylvania
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TMI - Alert (TMIA)

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U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Docket Nos:	05000277 05000278
License Nos:	DPR-44 DPR-56
Report Nos:	05000277/2001-003 05000278/2001-003
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
Inspection Period:	February 18, 2001 through March 31, 2001
Inspectors:	A. McMurtray, Senior Resident Inspector M. Buckley, Resident Inspector R. Nimitz, Senior Radiation Specialist G. Smith, Senior Security Inspector P. Frechette, Security Inspector C. Sisco, Operations Engineer J. Caruso, Operations Engineer
Approved by:	Donald J. Florek, Acting Chief Projects Branch 4 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000277/2001-003, 05000278/2001-003, on 02/18/01-03/31/01; Exelon Generation Company; Peach Bottom Atomic Power Station; Units 2&3. Physical Protection.

The report was conducted by resident inspectors, a senior security inspector, a senior radiation specialist, a security engineer, and two operations engineers. The inspection identified one Green finding which was a non-cited violation. The significance of most findings is indicated by their 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/NRR/OVERSIGHT/index.html.

A. Inspector Identified Findings

Cornerstone: Physical Protection

- Green. The inspectors identified a non-cited violation of 10 CFR 73.55 (b)(3) because on at least two occasions required personnel were not notified within the specified time to remove terminated individuals from the access authorization list.

  The finding was of very low safety significance because there was no malevolent act, no actual intrusion occurred, and there have not been greater than two similar findings in the past four quarters. (Section 3PP2)

Report Details

SUMMARY OF PLANT STATUS

UNIT 2

Unit 2 operated at approximately 100% power throughout the inspection period.

UNIT 3

Unit 3 operated at approximately 100% power throughout this inspection period.

1. REACTOR SAFETY
Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R07 Heat Sink Performance

a. Inspection Scope

The inspectors observed the following:

- Unit 2 "C" Residual Heat Removal Heat Exchanger Capacity Test (RT-O-010-660-2, Rev. 6)

b. Issues and Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope (7111111B)

The Peach Bottom Unit 2 and 3 Licensed Operator Requalification program was evaluated during the week of March 19, 2001. The following areas were reviewed with respect to 10 CFR 55.59: operating history based on assessments from inspection reports, licensee condition reports, and the NRC plant issues matrix. The senior resident inspector was also consulted for insights regarding operating history. The inspectors reviewed events that indicated deficiencies in licensed operator performance and verified that facility training and or operations staff had addressed performance deficiencies through appropriate training methods.

The inspectors reviewed a sample of this year's annual operating exams to determine if the exam content and quality met the requirements of 10 CFR 55.59 and guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors". The inspectors reviewed operating exams administered to different crews for duplication. The inspectors observed the training staff administer the operating test to one shift crew and one administrative crew, and also observed the facility's evaluation of crew and individual operator performance.

The inspectors reviewed the training staff's response to student feedback on training and also reviewed remedial training records of operators who had failed some portion of the exam. The inspectors reviewed a sample of training attendance records and operator license reactivation records.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors interviewed appropriate facility personnel and reviewed documentation to determine whether the selected systems met maintenance rule requirements with respect to: scoping, risk significance, performance criteria, goals, characterization of failures, and corrective action programs. The following systems were reviewed for Units 2 and 3:

- Electrohydraulic Control System
- Units 2 and 3 Feedwater System
- Unit 2 Instrument Air System

b. Issues and Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment 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 attended planning meetings and discussed the risk management aspect of the activities with operators, maintenance personnel, system engineers, and work coordinators for the following issues:

- Unit 2 'B' residual heat removal tube support baffle plate inspection and E-3 emergency diesel generator preparation activities
- E-3 emergency diesel generator maintenance work

b. Issues and Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed three operability evaluations to ensure that the required Technical Specification actions were satisfied and the component or system remained available so that no unrecognized increase in risk occurred. The inspectors discussed the evaluations with cognizant engineering personnel and control room supervisors. The following evaluations were reviewed:

- Backseating Unit 3 reactor core isolation cooling steam supply valve, (MO-3-13-16)
- End of cycle/recirculation pump trip relay failure
- D/W Purge Supply Valves (AO-3-07B-3505 and AO-3-07B-3520) missing bolts

b. Issues and Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed the following permanent plant modification:

- Station Blackout Modification Implementation, MOD P907

b. Issue and Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed and observed portions of the following surveillance tests, and compared test data with established acceptance criteria to verify the system demonstrated the capability of performing its intended safety functions and its operational readiness.

- Unit 2 Emergency Service Water Inservice Testing and Residual Heat Removal Room Cooler Testing (RT-I-033-631-2, Rev.5)
- 2A&C Station Battery Quarterly Inspection (ST-O-57B-710-2 Rev. 11)
- 3 AD001 and 3CD001 Battery Yearly Inspection (ST-M-57B-751/753-3, Rev. 2)

b. Issues and Findings

No findings of significance were identified.

1R23 Temporary Plant Modification

a. Inspection Scope

The inspectors reviewed the following temporary modifications:

- Engineering Change Request (ECR) No. PB 99-02690, "3EV026B Drywell Cooler Lack of Cooling Capability."
- Engineering Change Request (ECR) No. PB 00-00783, "Valve Position Change for HV-3-16-33177A/B," which isolated both core spray testable check valves instrument nitrogen regulators.

b. Issues and Findings

No findings of significance were identified.

2. RADIATION SAFETY
Cornerstone: Occupational Radiation Safety

2OS1 Access Control To Radiologically Significant Areas

a. Inspection Scope

The inspectors reviewed the following items and associated controlling documents:

- Status and sign-out of keys to access points to High and Very High Radiation Areas to determine if keys were controlled in accordance with administrative controls and if missing keys were signed out.

- Review and challenge of 12 locked High Radiation Area access points and review of two access points to areas controlled as Very High Radiation Areas to determine if access controls were sufficient to preclude unauthorized entry.

- Recent practices and procedure changes for administrative procedures providing requirements for access to High and Very High Radiation Areas to ensure no degradation in area access or egress controls had occurred.

- Adequacy and effectiveness of radiological controls for entry by personnel into the Unit 2 and Unit 3 primary containment (drywell) with the reactor at power on October 23, 2000, and December 17, 2000, respectively.

The review included verification of conduct of a pre-job ALARA review assessment, documentation of neutron dose, conduct of pre-job briefings, and completion of drywell access authorization forms. Several of the radiation survey instruments used during the

entries were reviewed for performance of calibration and operability checks. (See Section 2OS3 of this report.)

- Direct observation of the packaging and loading of a liner of segmented irradiated hardware into a shipping cask in the Unit 3 spent fuel pool on February 28, 2001, including radiological job requirements, radiation work permit (RWP) briefing, and observation to verify implementation and adequacy of RWP controls.

- Radiation worker and radiation protection personnel performance during activities to ascertain worker knowledge and implementation of prescribed radiological controls.

- Problem identification and resolution data base to identify radiological incidents and concerns since the previous inspection(PEP Nos. I0012340, I00011768 and I0012028) to ensure items were properly entered and actions, as appropriate, were initiated to address the specific issues. The review included a check for any observable patterns.

Implementation of the following documents:

- Procedure HP-315, Rev. 11, Initial Drywell Entry
- procedure HP-317, Rev. 2, Drywell Entries at Power
- Procedure HP-C-202, Rev. 8, Locked High Radiation Area Controls
- Health Physics Job Standard HPJS -7.2, Coverage of High Radiation Area Entries
- Health Physics Job Standard HPJS -7.5, Electron Isotope Control
- Procedure HP-C-215, Rev. 3, Establishing and Posting Radiologically Controlled Areas
- Procedure HP-C-310, Rev. 3, Radiation Work Permit Program
- Regulatory Guide 8.38, Control of Access to High and Very High Radiation Areas in Nuclear Power Plants, June 1993

b. Issues and Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls

a. Inspection Scope

The inspectors selectively reviewed Exelon's program to reduce occupational radiation exposure to as low as is reasonably achievable (ALARA). The inspectors conducted the following activities and reviewed the following documents to determine the effectiveness of the ALARA program:

- The plans to preclude recurrence of unexpected elevated ambient radiation levels encountered in the Unit 2 reactor drywell during initial entry on September 15, 2000, and associated PEP (No. I0011768).

- The post-outage refueling report and adequacy and effectiveness of ALARA planning and controls for outage activities (e.g., control rod drive work, scaffolding installation, drywell shielding activities, valve work, and refueling) to verify that planned ALARA controls and measures were implemented.

- Work planning and controls for work on a reactor water clean-up pump radiation work permit (RWP) Nos. 2-20000 and 2-2001) to ascertain the adequacy and effectiveness of radiological controls and dose estimates for selected workers.

- Plant collective exposure history, current exposure trends, ongoing and planned activities to assess current performance and exposure challenges, and the station's two year and three year rolling average collective dose data.

- ALARA goals and dose reduction initiatives to reduce occupational exposure, including source term control strategy.

- Recent Station ALARA Council Meeting Minutes to ascertain management involvement in the ALARA program and the ALARA Dose Reduction Plan.

- The problem identification and resolution data base to identify issues and concerns, since the previous inspection, in the area of ALARA and the implementation of evaluations and corrective actions as appropriate. PEP I0012340 was reviewed. The review included a check for observable patterns.

The implementation of the following were reviewed:

- 10 CFR 20.21101, Radiation Protection Programs
- Procedure HP-C-324, Rev. 3, ALARA Job Reviews
- Procedure HP-CG-307, Rev. 0, Cost-Benefit Reviews

b. Issues and Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation

a. Inspection Scope

The inspectors reviewed elements of the radiation monitoring instrumentation program to determine the adequacy of calibration and checking of radiation monitoring instruments that are used in the protection of occupational workers. The following activities and associated documentation were reviewed:

- Identification of the types of potable radiation detection instrumentation used for job coverage of high radiation area work and calibration and operability checking of the instrumentation including instruments used during drywell entries in October and December 2000, and in real time use on the Unit 3 refueling floor:

- RO-2/2a - 558, 3477, 4051, 3571, 278
- ASP-1/NRD- 2503, 2436
- AMP 100-5097024,
- SAIC - 991742, 991588
- R0-7 - 442
- Telepole - 6698016, 6698053
- AMS-4 air monitor - 334630, 334632
- EC-4, 533, 535, 8730

- Calibration and source checking of full body personnel contamination monitors (PMW- 9712002 and PM-7- 296)

- Various fixed instruments installed at the station, which provide notification of changing radiological conditions as follows:

  - Unit 2 drywell high range radiation monitors - 2RI-8103A, B, C, D (calibration and source check data dated August 2000)
  - Unit 3 drywell high range radiation monitors - 3RI-9103A, B, C, D (calibration and source check information dated September 1999)
  - Station area radiation monitors 2-6, 2-8, 3-10, 4-5, 6-10, 7-10

- Calibration, expiration and source checking response of radiation detection instruments staged for use was verified and radiation protection technicians were observed for appropriate instrument selection and self-verification of instrument operability prior to use.

- The periodic re-verification of calibration sources for portable instrumentation including the instruments used for the re-verification was reviewed (calibrators 8195 and 8148)(sources 410-106-2, DD-266 and VV-407).

- The items placed in the corrective action system (PEP No. I0012342) were reviewed to ensure items were properly entered and actions taken, as appropriate.

The implementation of the following were reviewed:

- Procedure HP-C-400, Rev.1, Health Physics Instrumentation Program
- Procedure HP-CG-400, Rev. 2, Health Physics Instrumentation Operations Guideline
- Procedure HP-CG-401, Rev. 0, Health Physics Instrumentation Response Checks
- ANSI N323A, 1997, American National Standard Radiation Protection Instrumentation Test and Calibration, Portable Survey Instruments

b. Issues and Findings

No findings of significance were identified.

2. Safeguards

Cornerstone: Physical Protection

3PP1 Access Authorization Program

a. Inspection Scope

The following activities were conducted to determine the effectiveness of Exelon's behavior observation portion of the personnel screening and fitness-for-duty programs. On March 7, 2001, five supervisors representing Health Physics, Chemistry, Radiation Protection and Security were interviewed regarding their understanding of behavior observation responsibilities and the ability to recognize aberrant behavior traits. In addition, these individuals were interviewed to establish their knowledge level relative to their responsibilities when performing escort duties. Two Access Authorization/Fitness-for-Duty self-assessments, an audit, and event reports and loggable events for the four previous quarters were reviewed. Behavior observation training procedures and records were also reviewed.

b. Issues and Findings

No findings of significance were identified.

3PP2 Access Control

a. Inspection Scope

The following activities were conducted to verify that Exelon had effective site access controls and equipment in place designed to detect and prevent the introduction of contraband (firearms, explosives, incendiary devices) into the protected area:

- A random sample of personnel vital area access approvals which granted individuals unescorted access to various protected and vital areas, was reviewed to assure that they were properly screened, identified and authorized. In addition, documentation was reviewed to verify that Exelon has a procedure in place that adequately describes the method to remove access for personnel who have been terminated.

- Site access control activities were observed, including personnel and package processing through the search equipment at both access points during peak ingress periods on March 6 and 7, 2001. On March 7, 2001, testing of all access control equipment; including the metal detectors, explosive material detectors, and x-ray examination equipment was observed. The Access Control event log, an audit, and three maintenance work requests were also reviewed.

b. Issues and Findings

On March 8, 2001, the inspectors reviewed randomly selected records of individuals who were terminated and no longer had a need for site access. The inspector noted that on at least two occasions the Supervisor Personnel Processing was not notified within five working days after these individuals were terminated to remove these

individuals from the access authorization list. 10 CFR 73.55(b)(3), states, in part, "The licensee shall have a management system to provide for the development, revision, implementation, and enforcement of security procedures." Additionally, Section 1.1.1 of the Peach Bottom Physical Security Plan, Revision 17, dated January 9, 2001, states, in part, "The Nuclear Security Section at PBAPS is charged with overall responsibility for...implementation and initiating revision of ....Security Procedures." The Peach Bottom Physical Security Plan is required to be implemented by Section C.4 of the Facility Operating License DPR-56. Security procedure, SEC-C-5, states in part, "Notification of unescorted termination is required to be promptly communicated to the Supervisor Personnel Processing within five working days." The failure to implement this portion of the security plan diminished assurances that adequate controls are in place to control unescorted access, and constituted a violation of 10 CFR 73.55(b)(3) and the NRC approved Physical Security Plan.

This issue is more than minor in that, it had a credible impact on safety. Specifically, failure to promptly remove terminated individuals from the access authorization list could result in an unauthorized entry into the Protected Area. The issue affected the Physical Protection Cornerstone since it involved a non-conformance with a safeguards requirement related to Access Authorization and was considered to have very low safety significance (Green) using the Physical Protection Significance Determination Process, because there was no malevolent act, no actual intrusion occurred, and there have not been greater than two similar findings in the past four quarters. This violation of 10 CFR 73.55(b)(3) and Exelon's NRC approved Physical Security Plan is being treated as a Non-Cited Violation consistent with Section IV.A of the NRC Enforcement Policy Issued May 1, 2000 (65FR25368). Exelon entered the issue into the problem identification and corrective action system as PEP No. I0012352. **(NCV 05000277/05000278/2001-03-01)**

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

.1 Occupational Exposure Control Effectiveness

a. Inspection Scope

The inspectors reviewed corrective action program records to identify occurrences involving high radiation areas, very high radiation areas, and unplanned personnel exposures since the previous inspection. These records were reviewed against the applicable criteria specified in NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 0, to verify that conditions that met the NEI criteria were recognized and identified as Performance Indicators.

b. Issues and Findings

No findings of significance were identified.

.2 Fitness-for-Duty, Personnel Screening, and Protected Area Security Equipment

a. Inspection Scope

The inspectors reviewed Exelon's programs for gathering and submitting data for the Fitness-for-Duty, Personnel Screening, and Protected Area Security Equipment Performance Indicators. The review included Exelon's tracking and trending reports, personnel interviews and security event reports for the Performance Indicator data submitted from the 1st quarter of 2000 through the 1st quarter of 2001.

b. Issues and Findings

No findings of significance were identified.

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 April 5, 2001. Exelon management acknowledged the findings presented. No proprietary information was identified.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Opened/Closed

0500277;278/2001-03-01	NCV	Failure to implement a portion of a security procedure in accordance with the requirements of 73.55(b)(3)

Closed

None

PARTIAL LIST OF PERSONS CONTACTED

Exelon Generation Company

M. Bruecks, Security Manger
J. Doering, Site Vice President
C. Heimbach, Analyst, Nuclear Security
G. Johnston, Plant Manager
R. Lubaszewski, Rad Material Shipping Coordinator
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