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

February 10, 2004

Docket No. 50-171 License No. DPR-12

Mr. Christopher M. Crane
President and CNO
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
5th Floor
Warrenville, IL 60555

SUBJECT: NRC INSPECTION REPORT 50-171/2004006, EXELON NUCLEAR, PEACH BOTTOM ATOMIC POWER STATION, UNIT 1, DELTA, PENNSYLVANIA

Dear Mr. Crane:

On January 6-7 2004, Ms. Laurie Peluso of this office and Ms. Kristina Banovac of the Office of Nuclear Materials Safety and Safeguards conducted an inspection at the Peach Bottom Atomic Power Station, Unit 1 (Unit 1). The findings of the inspection were discussed with members of your staff on January 7, 2004. The enclosed report presents the results of that inspection.

The inspection consisted of examinations of selected procedures, the organization, site tours and interviews with personnel, and observations to determine the status of Unit 1 and to evaluate decommissioning support activities and radiological safety. The scope of the inspection included the planned exclusion area semi-annual surveillance tests, radiological surveys, material condition inspections, fire protection, and security. The programs were considered to be appropriately implemented. No safety concerns were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room (PDR) and will be accessible from the NRC Web site at http://www.nrc.gov/reading-rm.html. No reply to this letter is required.

We appreciate your cooperation during this inspection.

Sincerely,

/RA/

Ronald R. Bellamy, Chief
Decommissioning and Laboratory Branch
Division of Nuclear Material Safety

Enclosure:
1. NRC Inspection Report No. 50-171/2004006

cc w/encl:
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J. Stone, Plant Manager

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Docket No.:	50-171
License No.:	DPR-12
Report No.:	50-171/2004006
Licensee:	Peach Bottom Atomic Power Station, Unit 1 1848 Lay Road Delta, Pennsylvania 17314-9032
Facility:	Peach Bottom Atomic Power Station, Unit 1
Location:	Delta, Pennsylvania
Dates:	January 6-7, 2004
Inspectors:	Laurie Peluso, Health Physicist, Decommissioning Branch, Division of Nuclear Materials Safety (DNMS) Kristina Banovac, Project Manager, Office of Nuclear Materials Safety and Safeguards (NMSS)
Approved by:	Ronald Bellamy, Chief, Decommissioning Branch, DNMS

EXECUTIVE SUMMARY

Peach Bottom Unit 1
NRC Inspection Report No. 50-171/2004006

This inspection included observations and reviews of licensee activities associated with implementing the Unit 1 Technical Specifications (TS). Specifically, the inspection included activities regarding the semi-annual surveillance test of the exclusion area, which is the area encompassed by the reactor containment structure including its security fencing, the spent fuel area including its security fencing, and the secured radioactive waste area. The inspection also included the radiological protection and controls, security, and fire protection programs. The report covers one inspection conducted on January 6-7, 2004 by NRC headquarters and regional personnel. The licensee's programs were considered to be appropriately implemented. No safety concerns were identified.

Radiological Protection and Controls

The licensee's performance was appropriate to complete semi-annual inspections (surveillance tests) of the exclusion area. Adequate radiological controls and radiological protection practices were in place. The fire protection and security programs were implemented. No safety or security concerns were identified. The annual report accurately documented the results of the surveillance tests. The Unit 1 TS requirements were met.

REPORT DETAILS

Summary of Facility Activities

The Peach Bottom Atomic Power Station, Unit 1 (Unit 1) is a permanently shutdown, high temperature, gas cooled, demonstration power reactor. Unit 1 has been permanently shutdown since October 31, 1974 and has been in SAFSTOR since that time. SAFSTOR is a decommissioning method by which the nuclear facility is placed in long term storage followed by decontamination and dismantlement of equipment. No dismantlement or disposal activities of the facility had been conducted in 2003, as required by Facility Operating License No. DPR-12, Amendment 11. Final decommissioning will not be scheduled until after 2033, which is the tentative permanent shutdown date for Units 2 and 3. The licensee implemented the Unit 1 TS contained in Appendix A of the license. The TS and associated activities that were implemented included Administrative Organization and Controls, Records, Semi-Annual Inspections, and Reports. The licensee performed the semi-annual exclusion area inspection on July 2, 2003 and on January 7, 2004.

Plant Support

Radiological Protection and Controls

Implementation of Unit 1 Technical Specifications

Administrative Organization and Controls

a. Inspection Scope:

The inspector verified the adequacy of the implementation of TS 2.1 through reviews of the organization chart and procedures, site tours, direct observations, and interviews with cognizant personnel. TS 2.1(a) stipulates that the Peach Bottom Plant Manager maintain the responsibility for administration of all Unit 1 functions. TS 2.1(b) states that the exclusion area barriers are maintained locked; timely and appropriate reporting is conducted regarding any observed indication of change in facility status (i.e., smoke, fire, attempted break-in); security of the facility is included as part of the Peach Bottom Atomic Power Station security plan; radiation level and airborne activity surveys are performed prior to planned work in the controlled area of containment; all work is performed in accordance with written procedures and instructions; liquid and gaseous effluent release limits are met; and water intrusion limits are met.

b. Observations:

The inspector conducted a document review and interviews to assess the implementation of the Unit 1 functions. The organization chart, dated September 30, 2003, reflected the current organization. The administrative procedure, LS-PB-800, “Unit 1 Process Control Program”, stipulated the requirements for implementing the TS. The procedure was well organized, clear, and concise, and included all the TS requirements and the 10 CFR 50.48(f) fire protection requirements. The inspector determined that several departments, such as Radiation Protection, Regulatory Affairs, and Security, continue to have specific responsibilities and coordinate together to implement the TS requirements. The Plant Manager was aware of and maintained the responsibility for administration of all Unit 1 functions.

During the site tour, the inspector verified that several TS requirements were satisfied. The integrity of the exclusion areas was maintained with exclusion area barriers locked. Appropriate signs and precautions were posted. No combustible materials were stored within the exclusion areas. Fire detection equipment, extinguishers, and sprinklers were located in the containment building and the adjacent Unit 1 training center. The inspector reviewed records that indicated that fire extinguishers and hose stations were inspected regularly. Material condition in the building was adequate; neither corrosion nor structural degradation was obvious. Lighting and ventilation were adequate, and working conditions were safe. Security measures were being implemented.

Records and Semi-Annual Inspections

Inspection Scope:

The inspector verified the adequacy of the implementation of TS 2.2(a), "Records" and TS 2.3(b), "Semi-Annual Inspections", through direct observations of the licensee conducting the semi-annual inspection (surveillance test) of the exclusion area and procedure review. The procedures reviewed were ST-H-099-960-2, Unit 1 Exclusion Area Semi-Annual Inspection, Rev. 10; RP-AA-300, Radiological Survey Program, Rev. 0; and RP-AA-301, Radiological Air Sampling Program, Rev. 0. The inspector reviewed the records of previous surveillance tests.

Observations and Findings:

The inspector observed the licensee conduct the surveillance test of the exclusion area. The exclusion area is the area encompassed by the reactor containment structure, including its security fencing, the spent fuel area including its security fencing, and the secured radioactive waste area. The licensee conducted a pre-job briefing, which was detailed and described the scope of work, radiological and industrial safety, human performance, and confined space precautions. The team members signed onto the correct Radiation Work Permit, used the appropriate dosimetry and survey instrumentation, and performed the appropriate notifications to the control room and security. The licensee performed and verified radiation level and airborne activity surveys prior to containment entry, radiological surveys and wipes, and analysis of the surveys and wipes. The high efficiency particulate filter on the containment breather line was surveyed for activity and was changed. Visual inspections for structural integrity and material condition of components, water intrusion, and exclusion area security fencing and lock integrity were performed. The licensee concluded, and the inspector independently verified, that the liquid and gaseous effluent release limits and the water intrusion limits were met based on the surveillance test results. The inspector determined that the work was performed in accordance with the appropriate procedures; personnel were knowledgeable in radiation monitoring and the radiological hazards associated with the decommissioned plant; records of the inspections were maintained on file as required by TS 2.2(a); and that the licensee adequacy implemented TS 2.3(b).

During a telephone status update held July 31, 2003, to discuss the results of the surveillance test conducted July 2, 2003, the licensee stated that the results of a large area swipe indicated radiological contamination (approximately 3000 dpm/ 100 cm^2) at a survey location (S-20), which is on the refueling floor inside containment. The action limit is 1000 dpm/ 100 cm^2 beta-gamma, according to ST-H-099-960-2. The licensee generated a condition report, re-surveyed the area, and took more swipes. The results were below the action limit. During this

inspection, the licensee conducted a survey of the area, collected wipe samples at location S-20, and analyzed the data. The inspector independently reviewed and verified that the results of both sets of data were below the action limit.

Reports

Inspection Scope:

The inspector verified the adequacy of the implementation of TS 2.4(a), "Reports", through a review of the Annual Unit 1 Decommission Report - 2002. TS 2.4(a) stipulates that an annual report be submitted to the NRC, describing the results of facility radiation surveys, a summary of the quantities of radioactive effluents released, the status of the facility, and an evaluation of the performance of security and surveillance measures. The TS also requires that the report include the results of the radiological analysis, along with an evaluation of the source of the water and corrective actions taken, for sample quantities of water accumulation in the containment vessel.

Observations and Findings:

The Annual Unit 1 Decommission Report - 2002, dated March 25, 2003, was received by the NRC on April 15, 2003. The report summarized the results of the semi-annual surveillance tests (January and July 2002) of the accessible areas of the exclusion area. The report stated that radiological levels did not exceed 0.2 mrem/hour; loose contamination levels were less than 1000 dpm/ 100 cm^2 beta-gamma; liquid and gaseous effluents were not identified; exclusion area barriers were locked, except during semi-annual inspections; water intrusion accumulation that could be sampled in the accessible areas below ground level in the containment vessel was not identified and, therefore, radiological analysis was not performed. The summary was factual and was supported by the observations and document review conducted during this inspection, and documented in this inspection report.

Conclusions:

Based on the above observations, document reviews, and interviews, the licensee's performance was appropriate to complete semi-annual surveillance tests of the exclusion area. Adequate radiological controls and radiological protection practices were in place. The fire protection and security programs were implemented. No safety or security concerns were identified. The annual report accurately documented the results of the surveillance test. The Unit 1 TS requirements were met.

III. Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to Mr. John Stone, Plant Manager, members of licensee management, and other members of staff, at the conclusion of the inspection on January 7, 2004. The licensee acknowledged the findings presented by the inspector. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. Some proprietary items were reviewed during the inspection, but no proprietary information is presented in this report. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

E. Anderson, Regulatory Assurance Manager
T. Deneen, Jr., Radiological Protection Supervisor
D. Foss, Regulatory Assurance Engineer
C. Heimbach, Security Analyst
M. Lyate, Radiological Engineering Manager
G. McCarty, Radiological Protection Team Supervisor
H. McCrory, Radiological Engineer
T. Powell, Nuclear Oversight Lead Assessor
C. Sinopoli, Fire Protection Program Manager
J. Stone, Plant Manager

INSPECTION PROCEDURES USED

IP 36801	Organization, Management & Cost Controls at Permanently Shutdown Reactors
IP 40801	Self Assessment, Auditing, and Corrective Actions
IP 83750	Occupational Radiological Exposure
IP 84750	Radioactive Waste Treatment and Effluent & Environmental Monitoring
IP 86750	Solid Radioactive Waste Management and Transportation of Radioactive Material

ITEMS OPEN, CLOSED, AND DISCUSSED

Open

None

Closed

None

Discussed

None