



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

September 15, 2006

Docket No. 05000171

License No. DPR-12

Robert C. Braun
Site Vice President
Peach Bottom Atomic Power Station
Exelon Generation Company, LLC
1848 Lay Road
Delta, PA 17314

SUBJECT: INSPECTION 05000171/2006013, PEACH BOTTOM ATOMIC POWER
STATION, EXELON GENERATION COMPANY, LLC, DELTA, PENNSYLVANIA

Dear Mr. Braun:

The NRC has completed an inspection at your Delta, PA facility, which covered an inspection period that began on July 5, 2006, and concluded on August 07, 2006. The findings of the inspection were discussed with you and members of your staff upon the conclusion of the site inspection on July 6, 2006. Additional information regarding Unit 1 water sampling activities provided on August 4, 2006 was reviewed and a summary of the inspection findings for the entire inspection period was discussed with Mr. Foss of your staff during a telephone conversation on August 18, 2006. The enclosed report presents the results of that inspection.

Your programs for management oversight of the Unit 1 Technical Specifications, corrective actions, occupational exposure controls, radiological environmental monitoring, and radioactive effluent controls were inspected during this inspection period. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations made by the inspector. The programs related to the Unit 1 Technical Specifications were appropriately implemented. Within the scope of this inspection, no violations were identified.

In accordance with Section 2.390 of the NRC's "Rules and Practices," Part 2, Title 10, Code of Federal Regulations, 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/NRC/ADAMS/index.html>. No reply to this letter is required.

Sincerely,

/RA/

Marie Miller, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

Enclosure:
Inspection Report No. 05000171/2006013

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
Manager, Financial Control & Co-Owner Affairs
Manager Licensing, PBAPS
Christopher Crane, Chief Nuclear Officer
Steven Taylor, Radiation Protection Manager
Francis Jordan, Chemistry Manager
Director, Training
Correspondence Control Desk
Director, Bureau of Radiation Protection (PA)
R. McLean, Power Plant and Environmental Review Division (MD)
G. Aburn, Maryland Department of Environment
T. Snyder, Director, Air and Radiation Management Administration,
Maryland Department of the Environment (SLO, MD)
Public Service Commission of Maryland, Engineering Division
Board of Supervisors, Peach Bottom Township
B. Ruth, Council Administrator of Harford County Council
Mr. & Mrs. Dennis Hiebert, Peach Bottom Alliance
TMI - Alert (TMIA)
J. Johnsrud, National Energy Committee, Sierra Club
Mr. & Mrs. Kip Adams
Vice President, Licensing and Regulatory Affairs
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Senior Vice President, Nuclear Services
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R. Braun

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000171/2006013
Docket No. 05000171
License No. DPR-12
Licensee: Peach Bottom Atomic Power Station, Unit 1
Location: 1848 Lay Road
Delta, Pennsylvania 17314-9032
Inspection Dates: July 5-6, 2006
Date Followup
Information Received: August 4, 2006

Inspector: Laurie A. Kauffman, Health Physicist
Decommissioning Branch (DB)
Division of Nuclear Materials Safety (DNMS)

Approved By: Marie Miller, Chief
DB, DNMS

Enclosure

EXECUTIVE SUMMARY

Peach Bottom Atomic Power Station, Unit 1
NRC Inspection Report No. 05000171/2006013

Peach Bottom Atomic Power Station, Unit 1 (PB-1) was a high temperature gas-cooled reactor that operated from February 1966 until October 31, 1974, and had been permanently shut down and in SAFSTOR since that time. All fuel had been removed from the reactor and shipped to an offsite fuel reprocessing facility. The spent fuel pool had been drained and decontaminated. All radioactive liquids had been removed, the cooling water drained, and the liquid waste system removed. Final decommissioning will not be scheduled until after 2033, which is the tentative permanent shutdown date for Units 2 and 3. Currently, the licensee conducts semiannual surveillance activities of the facility and focuses on assuring that the site is free from structural deficiencies and that no abnormal conditions exist.

This routine inspection included a review of SAFSTOR activities related to safely storing radioactive material and implementation of the Unit 1 Technical Specifications (TS). The inspection focused on implementation of the TS requirement to perform semiannual surveillances of the exclusion area barriers and accessible areas within the exclusion areas. The inspection also included a review of management oversight and control including, quality assurance and corrective actions, facilities and equipment, and plant support responsibilities, including the occupational radiation exposure, posting and labeling, radiological environmental monitoring and radioactive effluent controls, and solid radioactive waste treatment and transportation programs.

Facilities and Management Control

The licensee's organization and management controls were adequate to support oversight of the Unit 1 SAFSTOR activities and maintained an adequate corrective action program to identify and resolve issues.

The licensee's safety review program was effectively conducted, managed, and controlled. The licensee effectively implemented the SAFSTOR program and met TS requirements.

Plant Support

The licensee maintained an effective radiation control program to control and limit occupational radiation exposures. The licensee's performance was appropriate to complete the semiannual surveillance test. Adequate radiological controls and radiological protection practices were in place. The licensee accurately documented the results of the previous surveillance test in the Unit 1 annual decommissioning report.

REPORT DETAILS

1.0 Facilities and Management Control

1.1 Organization, Management Controls, and Corrective Action Program

a. Inspection Scope (Inspection Procedures (IPs) 36801, 40801)

The inspector evaluated the licensee's organization regarding management oversight of SAFSTOR responsibilities for Unit 1, required by Technical Specifications (TS). The inspector evaluated aspects of the Corrective Action Program (CAP) through a review of selected Issue Reports and Action Reports (IR/ARs) from January through July 2006 relative to Unit 1 issues. The inspector focused on issues related to water intrusion. The inspector evaluated the program based on the nature of the issues and the licensee's ability to correctly characterize, disposition, and complete corrective actions.

b. Observations and Findings

No findings of significance were identified.

The inspector determined that prior to the surveillance test on June 27, 2006, the licensee had noticed that the Unit 1 north side storm drain was blocked. The licensee further noted that water also entered the accessible areas of the Unit 1 building and approximately 4-6in (4,000 gal) of water accumulated in the basement of the radioactive waste building. The licensee generated an Action Report (AR00503865) for immediate corrective action. The licensee collected a dip sample of the water for analysis. The inspector noted that the licensee did not first pump the water to a vessel and collect a representative sample prior to discharge. The inspector also noted that the licensee's procedures did not contain guidance for water sampling of Unit 1. Based on the sample collected, the analytical results did not indicate the presence of radioactivity in the water. The licensee stated that procedures for sampling water from Unit 1 would be evaluated. The inspector will review this issue during the next inspection.

On July 6, 2006, the surveillance in the radioactive waste building revealed that water was still slowly accumulating on the basement floor. The water was entering the basement through an overhead penetration. At the time of the inspection, the licensee was unable to trace the line. This matter was discussed with the licensee and the licensee stated that this issue would be corrected. The inspector will reexamine this issue during the next inspection.

c. Conclusion

The licensee's organization and management controls were adequate to support oversight of the Unit 1 SAFSTOR activities and maintained an adequate corrective action program to identify and resolve issues.

1.2 Facilities and Decommissioning (SAFSTOR) Status

a. Inspection Scope (IPs 37801, 71801)

The scope of this inspection area was to verify whether the licensee conducted effective safety reviews prior to implementing the surveillance and to evaluate the status of SAFSTOR activities and to verify whether the licensee was conducting SAFSTOR activities in accordance with the TS. The inspector toured the perimeter of the containment, spent fuel, and radioactive waste buildings with the licensee and observed the licensee conduct visual inspections of the exclusion area barriers surrounding each entrance for abnormal conditions, such as obvious damage, structural degradation, or corrosion. The inspector entered each building with the licensee and observed the licensee conduct interior visual inspections for abnormal conditions, including obvious indication of ground water intrusion.

b. Observations and Findings

No findings of significance were identified.

Unit 1 TS requires that a semiannual inspection (surveillance test) be performed of the exclusion areas for the containment, spent fuel, and radioactive waste buildings. The Plant Manager maintained overall responsibility for Unit 1 and the Radiation Protection (RP) staff reports to the Plant Manager (PM). The PM attended the pre job brief and accompanied the RP team during the containment entry surveillance test. The RP staff implemented the surveillance test according to procedure, ST-H-099-960-2. The prerequisites and approvals were obtained prior to implementation of the surveillance as required by the procedure. The team reviewed the previous surveillance test results and the planned work activities for this surveillance. The team performed direct radiation surveys, airborne radio activity surveys, and contamination surveys. The interior surveillance of the containment building revealed that water accumulation in the containment sump was less than 500 gallons, per TS 2.1(b)(9). Although water was not present in the containment sump, which is located at the 90" elevation, water was still present under the diamond plate located on the 95" elevation. The water level has remained stable since previous inspection. The results of the survey indicated that water intrusion limits were met for the containment building, liquid and gaseous effluent release limits were met, and the radiological conditions in the facility were unchanged.

c. Conclusion

The licensee's safety review program was effectively conducted, managed, and controlled. The licensee effectively implemented the SAFSTOR program and met TS requirements.

2.0 Plant Support

2.1 Occupational Radiation Exposure and Annual Decommissioning Report

a. Inspection Scope (IPs 83750, 84750)

The scope of this inspection area included observations of radiation worker practices and radiological postings and boundaries. The inspector observed the licensee perform radiological surveys and collect wipes and air samples. The inspector reviewed the Annual Unit 1 Decommissioning Report for 2005, dated March 29, 2006.

b. Observations and Findings

No findings of significance were identified.

The RP technicians conducted radiation surveys and collected wipes and air samples in accordance with the associated procedures. The inspector observed personnel performing radiation surveys and noted that radiation worker practices were appropriate. The inspector examined the instruments used by the licensee for surveys and monitoring, and observed that they were operable and calibrated. The exclusion area boundaries were posted with the appropriate signs as required by 10 CFR 20.1902. The Annual Unit 1 Decommissioning Report for 2005, contained a summary of the previous year's surveillance test results (January and July 2005). The summary was factual and was supported by the recorded results.

c. Conclusions

The licensee maintained an effective radiation control program to control and limit occupational radiation exposures. The licensee's performance was appropriate to complete the semiannual surveillance test. Adequate radiological controls and radiological protection practices were in place. The licensee accurately documented the results of the previous surveillance test in the Unit 1 annual decommissioning report.

5.0 Exit Meeting

The inspector presented the inspection results to representatives of the licensee's staff at the conclusion of the onsite inspection on July 6, 2006. Additional information regarding Unit 1 water sampling activities provided on August 4, 2006, was reviewed and a summary of the inspection findings for the entire inspection period was discussed during a telephone conversation on August 18, 2006. Licensee representatives acknowledged the inspection findings. Although proprietary items were reviewed during the inspection, no proprietary information is presented in this report.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

- * J. Armstrong, Regulatory Assurance Manager
R. Braun, Site Vice President
- ** D. Foss, Senior Regulatory Assurance Engineer
- * J. Grimes, Plant Manager
- * F. Jordan, Chemistry, Environmental and Radwaste Manager
- * M. Lyate, Radiation Protection Support Manager
- * D. Pendleton, Radiation Protection Supervisor
J. Poteet, Radiation Protection Technician
- * W. Scott, Plant Chemistry Supervisor
- * S. Taylor, Radiation Protection Manager
E. Workinger, Radiation Protection Technician

* Denotes individuals present during the exit briefing held on July 6, 2006

** Denotes individuals present during telephone conference held on August 18, 2006

INSPECTION PROCEDURES USED

- 36801 Organization, Management, and Cost Controls
- 37801 Safety Reviews, Design Changes, and Modifications
- 40801 Self-Assessment, auditing and Corrective Action
- 71801 Decommissioning Performance and Status Reviews
- 83750 Occupational Radiation Exposure
- 84750 Radioactive Waste Treatment, and Effluent and Environmental Monitoring

ITEMS OPENED, CLOSED, AND DISCUSSED

OPEN NONE

CLOSED NONE

DISCUSSED NONE

LIST OF ACRONYMS USED

- AR Action Reports
- CAP Corrective Action Program
- IR Issue Reports
- PB-1 Peach Bottom Atomic Power Station
- PM Plant Manager
- RP Radiation Protection
- TS Technical Specifications