



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

May 24, 2013

Docket No. 05000171

License No. DPR-12

Mr. Michael J. Pacilio  
Senior Vice President, Exelon Generation Company, LLC  
President and Chief Nuclear Officer, Exelon Nuclear  
4300 Winfield Rd.  
Warrenville, IL 60555

SUBJECT: EXELON GENERATION COMPANY, LLC, PEACH BOTTOM ATOMIC POWER  
STATION UNIT 1 – NRC INSPECTION REPORT NO. 05000171/2013009

Dear Mr. Pacilio:

On May 13 - 15, 2013, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Peach Bottom Atomic Power Station Unit 1. The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and the conditions of your license. The inspection consisted of observations by the inspector, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with Mike Massaro, Site Vice President, and other members of your organization on May 15, 2013, at the conclusion of the inspection. The enclosed report presents the results of this inspection. No findings of safety significance were identified.

Current NRC regulations and guidance are included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **Nuclear Materials; Med, Ind, & Academic Uses**; then **Regulations, Guidance and Communications**. The current Enforcement Policy is included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents**; then **Enforcement Policy (Under 'Related Information')**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

M. Pacilio

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Please contact Laurie Kauffman at (610) 337-5323 if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Mr S Ferdas", with a long horizontal stroke extending to the right.

Marc S. Ferdas, Chief  
Decommissioning Branch  
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 05000171/2013009

cc w/encl: Distribution via ListServ

M. Pacilio

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Please contact Laurie Kauffman at (610) 337-5323 if you have any questions regarding this matter.

Sincerely,

**Original signed by Marc S. Ferdas**

Marc S. Ferdas, Chief  
Decommissioning Branch  
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 05000171/2013009

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Inspection No. 05000171/2013009  
Docket No. 05000171  
License No. DPR-12  
Licensee: Exelon Generation Company, LLC (Exelon)  
Facility: Peach Bottom Atomic Power Station Unit 1 (PB-1)  
Address: 1848 Lay Road  
Delta, Pennsylvania 17314-9032  
  
Inspection Dates: May 13 - 15, 2013  
  
Inspector: Laurie A. Kauffman  
Health Physicist  
Decommissioning Branch  
Division of Nuclear Materials Safety  
  
Approved By: Marc S. Ferdas, Chief  
Decommissioning Branch  
Division of Nuclear Materials Safety

## **EXECUTIVE SUMMARY**

Exelon Generation Company, LLC  
Peach Bottom Atomic Power Station Unit 1  
NRC Inspection Report No. 05000171/2013009

A routine announced safety inspection was conducted on May 13 through 15, 2013 at PB-1. The inspection included a review of operations, management oversight, maintenance, corrective action program implementation, and plant support activities while in safe storage (SAFSTOR) status. The inspection consisted of observations by the inspector, interviews with Exelon personnel, and a review of procedures and records. The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in Inspection Manual Chapter (IMC) 2561, "Decommissioning Power Reactor Inspection Program." There are currently no ongoing decommissioning activities being conducted at PB-1. Based on the results of this inspection, no findings of safety significance were identified.

## REPORT DETAILS

### 1.0 Background

PB-1 is a high temperature gas-cooled demonstration power reactor that operated from February 1966 until October 31, 1974, and has been permanently shut down and in SAFSTOR since that time. All fuel has been removed from the reactor and shipped to an offsite facility. The spent fuel pool has been drained and decontaminated, and all radioactive liquids have been removed.

The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in IMC 2561. The inspection consisted of observations by the inspector, interviews with Exelon personnel, and a review of procedures and records.

### 2.0 SAFSTOR Performance and Status Review

- a. Inspection Scope (Inspection Procedures (IPs) 36801, 37801, 40801, 62801, 71801, 83750, 84750, 86750)

A routine announced safety inspection was conducted on May 13 through 15, 2013 at PB-1. The inspector reviewed the SAFSTOR program as outlined in the Updated Final Safety Analysis Report (UFSAR), Technical Specifications (TS), and procedure LS-PB-800, "Unit 1 Process Control Program," to assess the adequacy of management oversight of SAFSTOR responsibilities for the PB-1 facility. Specifically, the inspector reviewed the decommissioning management and staff organization and Exelon's implementation of SAFSTOR activities related to safe storage of radioactive material. The inspector discussed any design changes or modifications since the previous inspection. The inspector also conducted a tour to assess the material condition of the PB-1 facility (reactor building, containment building, radioactive waste building, and spent fuel pool building).

The inspector observed Exelon perform portions of the semi-annual surveillance test (ST), ST-H-099-960-2, "Unit 1 Exclusion Area Semi-Annual Inspection." The inspector reviewed the results of surveillance testing conducted on November 19, 2012, and May 13 and 14, 2013, to ensure exclusion area barriers and personnel access doors to the containment building, the radioactive waste building, and the spent fuel pool building were being maintained in accordance with TS 2.1(b)1 and that water accumulation in the containment sump was less than TS 2.1(b)9 limits.

The inspector reviewed activities and documentation associated with the following SAFSTOR programs: occupational exposure, radioactive effluent control, and site radiological environmental monitoring program (REMP). The inspector reviewed radioactive gaseous effluent release permits, the groundwater monitoring program, the annual REMP report, and the annual effluent release report, which included a summary of the radioactive waste management and transportation programs.

The inspector reviewed the annual Decommissioning Status Report for 2012, dated March 29, 2013. The inspector also reviewed corrective action program (CAP) issue reports and assignment reports associated with PB-1 to determine if issues were being properly identified and evaluated, and if corrective actions were appropriately prioritized in the CAP.

b. Observations and Findings

The inspector noted that there were two personnel changes within the Exelon organization related to the SAFSTOR activities and confirmed that the staff effectively implemented SAFSTOR activities. The inspector confirmed that no design changes, or plant modifications were made since the previous inspection and PB-1 required reporting submittals were completed in accordance with TS requirements. The inspector verified that the maintenance and surveillance program for systems and components had been conducted in accordance with the TS requirements and established procedures. The inspector also verified that the semi-annual inspection was performed according to TS 2.3(b) and associated procedures. The inspector also confirmed that no dismantlement or decommissioning activities were performed since the previous inspection. The annual radiological effluent and radiological environmental monitoring reports demonstrated that all calculated doses were below regulatory dose criteria of 10 CFR 50, Appendix I.

The inspector determined that issues were entered into the CAP, and prioritized and evaluated commensurate with their safety significance. Corrective actions were implemented to address identified issues and were being tracked to closure using the CAP.

c. Conclusions

There are currently no ongoing decommissioning activities being conducted at PB-1. Based on the results of this inspection, no findings of safety significance were identified.

**3.0 Exit Meeting Summary**

On May 15, 2013, the inspector presented the inspection results to Mike Massaro, Site Vice President, and other members of Exelon's staff. The inspector confirmed that proprietary information was not provided or examined during the inspection.

## **PARTIAL LIST OF PERSONS CONTACTED**

### **Licensee**

J. Cohen, NOS Lead Auditor  
C. Crabtree, Environmental Chemist  
D. Dullum, Regulatory Affairs Engineer  
D. Foss, Regulatory Affairs Engineer  
D. Hines, Radiation Protection Supervisor  
R. Holmes, Radiation Protection Manager  
D. Hornberger, Chemistry/Radwaste Technician  
M. Massaro, Site Vice President  
H. McCrory, Radiation Protection Technical Support Manager  
P. Navim, Plant Manager  
S. O'Dwyer, Radwaste/Environmental Supervisor  
R. Reiner, Chemistry/Environmental/Radioactive Waste Manager  
R. Salvadore, NOS Manager  
E. Schwarz, Radiochemist  
J. Stenclik, Chemistry Manager

## **ITEMS OPEN, CLOSED, AND DISCUSSED**

None

## **LIST OF DOCUMENTS REVIEWED**

UFSAR, Revision 7.0, April 2012  
TS, Amendment 11, dated August 27, 2003  
PBAPS Unit 1 Decommissioning Status Report - 2012, dated March 29, 2013  
PBAPS Annual Radioactive Effluent Release Report 55; January 1, 2012 - December 31, 2012  
Liquid Effluent Release Permits, January 2012 through May 2013  
Annual Radiological Environmental Operating Report 69; January 1, 2011 – December 31, 2011  
REMP analysis results, January 2012 through May 2013  
LS-PB-800, Revision 1, "Unit 1 Process Control Program"  
CY-PB-200-100, Revision 0, "Entry into Unit 1 During SAFSTOR Decommissioning Status"  
ST-H-099-960-2, Revision 19, "Unit 1 Exclusion Area Semi-Annual Inspection"  
ST-C-095-805-2, Revision 13, "Liquid Radwaste Discharge"  
SE-4, "Flood Procedure"  
RP-AA-401, Revision 15, "Operational ALARA Planning and Controls"  
RP-AA-600-1005, Revision 15, "Radioactive Material and Non Disposal Site Waste Shipments"  
Radiation Work Permit: PB1-13-10002  
Issue Reports/Assignment Reports: 01385686; 01514069; 01172342; 00877291  
Engineering Change Reports: PB 11-00272



## LIST OF ACRONYMS USED

CAP	Corrective Action Program
Exelon	Exelon Generation Company, LLC
IMC	Inspection Manual Chapter
IP	Inspection Procedure
NRC	Nuclear Regulatory Commission
PB-1	Peach Bottom Atomic Power Station Unit 1
REMP	Radiological Environmental Monitoring Program
SAFSTOR	Safe Storage
ST	Surveillance Test
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report