UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

May 23, 2018

Docket No. 05000171 License No. DPR-12

Mr. Bryan Hanson
Senior Vice President, Exelon Generation, 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. 05000171/2018001

Dear Mr. Hanson:

On May 7-9, 2018, 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 inspectors, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with Pat Navin, Site Vice President, and other members of your organization on May 9, 2018, 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; 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; 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).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC document system (ADAMS), accessible from the NRC website at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

No reply to this letter is required. Please contact Laurie Kauffman (610-337-5323) if you have any questions regarding this matter.

Sincerely,

/RA/

Raymond Powell, Chief
Decommissioning and Technical
Support Branch
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 05000171/2018001

cc w/encl: Distribution via ListServ

No reply to this letter is required. Please contact Laurie Kauffman (610-337-5323) if you have any questions regarding this matter.

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No.	05000171/2018001
Docket No.	05000171
License No.	DPR-12
Licensee:	Exelon Generation Company, LLC (Exelon)
Facility:	Peach Bottom Atomic Power Station Unit 1
Address:	1848 Lay Road Delta, Pennsylvania 17314-9032
Inspection Dates:	May 7 – 9, 2018
Inspectors:	Laurie Kauffman Health Physicist Decommissioning & Technical Support Branch Division of Nuclear Materials Safety Kim Conway Project Manager Reactor Decommissioning Branch Division of Decommissioning, Uranium Recovery, and Waste Programs Office of Nuclear Material Safety and Safeguards
Approved By:	Raymond Powell, Chief Decommissioning & Technical Support Branch Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

Exelon Generation Company, LLC
Peach Bottom Atomic Power Station Unit 1 (Unit 1)
NRC Inspection Report No. 05000171/2018001

An announced safety inspection was conducted on May 7-9, 2018, at Unit 1. The inspectors reviewed activities related to the safe storage of radioactive material, including site operations, engineering, maintenance, fire protection, plant support activities, management oversight, and corrective action program (CAP) implementation. The inspection consisted of observations by the inspectors, interviews with Exelon personnel, a review of procedures and records, and plant walk-downs. 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." Based on the results of this inspection, no findings of safety significance were identified.

REPORT DETAILS

1.0 Background

Unit 1 was 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 safe storage (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 radioactive liquids have been removed. Water that collects in the reactor building sump is periodically pumped out of the sump and into drums. This water is then transported to the common radwaste building for Peach Bottom Units 2 and 3 for processing.

The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in IMC 2561.

2.0 SAFSTOR Performance and Status Review

a. Inspection Scope (Inspection Procedures (IPs) 36801, 37801, 40801, 62801, 64704, 71801, 83750, 84750, 86750)

A routine announced safety inspection was conducted on May 7-9, 2018, at Unit 1. The inspection consisted of observations by the inspectors, interviews with Exelon personnel, and a review of procedures and records. The inspectors reviewed the SAFSTOR program as outlined in the Updated Final Safety Analysis Report (UFSAR), Technical Specifications (TS), and procedure DC-PB-800, “Unit 1 Process Control Program,” to assess the adequacy of management oversight of SAFSTOR responsibilities for the Unit 1 facility. Specifically, the inspectors reviewed the decommissioning management and staff organization and Exelon’s implementation of SAFSTOR activities related to safe storage of radioactive material. The inspectors discussed any design changes or modifications since the previous inspection. The inspectors also conducted a walk-down to assess the material condition of the Unit 1 facility (reactor building, containment building, and spent fuel pool building).

The inspectors reviewed the results of Exelon’s ST-H-099-960-2, Rev. 23, “Unit 1 Exclusion Area Inspection” semi-annual surveillance test that was conducted in November 2017. The semi-annual surveillance test is intended to ensure exclusion area barriers and personnel access doors to the containment building, the radioactive waste building, and the spent fuel pool building are 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 limit of 500 gallons.

The inspectors reviewed activities and documentation associated with the following SAFSTOR programs: occupational exposure, fire protection, radioactive effluent control monitoring, environmental monitoring, and groundwater monitoring.

The inspectors reviewed the annual Decommissioning Status Report for 2017, dated March 30, 2018, and liquid effluent release records for 2017. The inspectors also reviewed a Unit 1 audit report and CAP issue reports and assignment reports associated with Unit 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 inspectors confirmed that the SAFSTOR program was effectively implemented. The required Unit 1 reporting submittals were completed in accordance with TS. The inspectors verified that the maintenance and surveillance program for systems and components had been conducted in accordance with TS and established procedures. The inspectors confirmed that the fire protection program was implemented in accordance with the UFSAR. The inspectors confirmed that no design changes or plant modifications were made since the previous inspection.

There were no gaseous effluents released in calendar year 2017. In calendar year 2017, approximately 532.7 gallons of accumulated reactor sump water was transferred to PB2/PB3 for release via site procedures. There were no liquid or gaseous effluents released from January through May 7, 2018. All calculated doses were well below regulatory dose criteria of 10 Code of Federal Regulations 50, Appendix I. Data from the analysis of groundwater samples from monitoring wells in the vicinity of Unit 1 were less than detectable for tritium and plant-derived gamma-emitting radionuclides.
The inspectors determined that Exelon effectively developed audit plans using standard templates, prior audit results, and current industry operating experience. Depending on the significance, issues identified from audits were tracked by Nuclear Oversight staff and entered into the CAP as issue reports. Exelon effectively addressed identified issues, implemented corrective actions, and tracked them to closure. Issue reports appeared to be prioritized and evaluated commensurate with their safety significance.

c. Conclusions

Based on the results of this inspection, no findings of safety significance were identified.

3.0 Exit Meeting Summary

On May 9, 2018, the inspectors presented the inspection results to Pat Navin, Site Vice President, and other members of Exelon's staff. The inspectors confirmed that no copies of proprietary information were used during this inspection and none were removed from the site.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Baracco, Radiation Protection Manager
R. Benson, Radiation Protection
C. Crabtree, Senior Environmental Chemist
A. Donley, Chemist
D. Dullum, Senior Regulatory Engineer
S. Hansell, Regulatory Affairs
C. Hardee, Unit 1 Project Manager
S. Hesse, Project Management Manager
D. Hines, Radiation Protection Supervisor
D. Hornberger, Radwaste Chemist
J. Kovalchick, Regulatory Assurance Manager
M. Long, Project Management
B. Miller, Fire Protection Project Manager
P. Navin, Site Vice President
S. O'Dwyer, Chemistry, Environmental and Radwaste Manager
S. Patterson, Radiation Protection Technician

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

UFSAR, Rev. 9.0, April 2018
Technical Specifications for Peach Bottom Atomic Power Station Unit No.1 TS, Amendment - 13, dated July 28, 2015
Peach Bottom Atomic Power Station Annual Radioactive Effluent Release Report 60, January 1, 2017 through December 31, 2017, dated March 30, 2018
Peach Bottom Atomic Power Station Annual Radiological Groundwater Protection Program Report, January 1 through December 31, 2017
PBAPS Unit 1 Decommissioning Status Report – 2017, March 30, 2018
DC-PB-800, Rev.0, "Unit 1 Process Control Program"
EN-PB-408-4160, Rev. 4, "RGPP Reference Material for Peach Bottom Atomic Power Station"
ST-H-099-960-2, Rev. 23, "Unit 1 Exclusion Area Inspection", ST performed November 2017
ST-H-099-960-2, Rev. 24, "Unit 1 Exclusion Area Inspection"
Exelon Generation 2 minute drill at the Job Site Briefing Card
Radiation Work Permit: PB-C-17-00121, Rev 2: Unit 1 RCA Areas, Jan 2018
DC-PB-800-1000, Rev. 1, "Entry Into Unit 1 During SAFSTOR Decommissioning Status"

LIST OF DOCUMENTS REVIEWED

Groundwater Monitoring Well Location Map
Groundwater Monitoring Well logs for wells in the vicinity of Unit 1
ST-C-095-805-2, Rev 15, "Liquid Radwaste Discharge", BLDT, Jan 2018 and Aug 2018
RW-PB-900, Rev 2, "Removal and Transfer of Water from U1"
PI-AA-125, Rev. 6 "Corrective Action Program (CAP)"
PI-AA-126-1001, Rev. 2, "Self-Assessments"
Decommissioned Units Audit Report, Audit NOSA-PEA-17-10 (AR 4060883), Peach Bottom Atomic Power Station, November 27 to December 1, 2017
RT-M-37B-320-2, Rev. 3, "Verification of Fire Hose Hydrostatic Testing", August 2017
RT-O-037-325-2, Rev. 22, "Monthly Inspection of Outside Area Fire Extinguishers", Jan-Mar 2018
RT-O-037-335-2, Rev. 19, "Annual Inspection Outside Area Fire Extinguishers" May 2017

Assignment Reports:
4038465, 4042651, 4049322, 4078113, 4079188, 4079354, 4079541, 4079546, 4079550, 4079555, 4079990, 4102153, 4103952, 4118245, 4119126

LIST OF ACRONYMS USED

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