



Technical Specification 2.4(a)

March 27, 2020

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Peach Bottom Atomic Power Station (PBAPS) Unit 1
Facility Operating License No. DPR-12
NRC Docket No. 50-171

Subject: PBAPS Unit 1 Decommissioning Status Report - 2019

In accordance with Peach Bottom Atomic Power Station, Unit 1 Technical Specifications, the annual report is required to:

- Describe the results of facility radiation surveys,
- Report the quantities of radioactive effluents released,
- Report the status of the facility and evaluate the performance of security and surveillance measures
- And provide containment vessel accumulated water analyses, as applicable.

Radiation Surveys:

Radiological surveys are performed semi-annually in the exclusion area. There were no significant concerns detected. All surveys were less than the required 1 mR/hr in accessible areas. Additionally, all smearable contamination levels were less than 1000 dpm/100cm² beta-gamma. The results of these surveys are available in the station records.

Quantities of Radioactive Effluents Released:

In 2019, there were no direct gaseous or liquid releases or discharges from Unit 1 to the environment. During the reporting period, there were two releases of Unit 1 water through the Unit 2 and Unit 3 liquid radwaste system. These releases included all Unit 1 water drummed in 2018 (333 gallons) and water pumped from the Unit 1 spent fuel pool from 2018 and 2019, which contained low levels of Cs-137 (326 gallons from 2018 and 600 gallons from 2019). The permitted liquid effluent doses for all the Unit 1 water released through the Unit 2 and Unit 3 liquid radwaste system was 5.08E-07 mrem to the adult total body and 8.00E-07 mrem to the teen liver, 1.69E-05% and 8.00E-06% of quarterly ODCM limit, respectively.

Status of Facility and an Evaluation of the Performance of Security and Surveillance Measures:

There were no significant events involving Unit 1. All inspections were determined to be satisfactory with no major issues identified. The structural inspections performed in accessible areas showed no indication of significant corrosion, cracks, or structural integrity concerns.

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The water intrusion mitigation project has completed the installation of the French drain around the Unit 1 Containment and regraded the pavement to new and existing drainage inlets. These efforts have significantly reduced the water level present in the Spent Fuel Pool floor when compared to the previous inspections. This water intrusion mitigation project is continuing through 2020. The stormwater drainage piping beneath the roadway located northeast of the Unit 1 Containment will be rerouted through new and existing drainage inlets to allow for adequate flow to the river. This roadway section will also be regraded to the new and existing drainage inlets to complete this project.

The unit remains in the SAFSTOR status of decommissioning. All exclusion area barriers as described in the Technical Specifications are maintained locked except when opened to provide access and egress for inspections, surveys, or repairs. Exclusion area barriers have not degraded from previous reports.

The removal of hazardous materials such as asbestos, lead and mercury located in containment is currently in progress.


Monitoring wells for the Radioactive Groundwater Protection Program in the vicinity of Unit 1 remain at normal background levels. All tritium concentrations sampled and analyzed were below detectable level in wells MW-PB-8, MW-PB-10, MW-PB-14, MW-PB-15, and MW-PB-16.

Containment Vessel Accumulated Water Analyses:

A total of approximately 339.6 gallons of water accumulated in Peach Bottom Unit 1 Containment in 2019. Two inspections and pump outs occurred in 2019 in May and December, collecting 64.6 and 275 gallons respectively. During each inspection, the accumulated water was less than the maximum allowable Technical Specification limit for water collection in containment, 500 gallons. The water was collected from the Containment Sump and the source of the water was attributed to groundwater in-leakage. The containment water contained only tritium, with an average concentration of 1.45E-03 $\mu\text{Ci/mL}$, and a maximum concentration of 1.79E-03 $\mu\text{Ci/mL}$. The tritiated water was removed and transferred to Units 2 & 3 for future processing and release.

There are no regulatory commitments contained in this letter. If you have any questions, please contact Cathy Hardee Senior Project Manager 717-456-3154 or Dan Dullum Regulatory Engineer 717-456-3339 .

Respectfully,



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Plant Manager
Peach Bottom Atomic Power Station

cc: NRC Regional Administrator, Region I
NRC Senior Resident Inspector
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CCN 20-37