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U.S. Nuclear Regulatory Commission  
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Washington, DC 20555

**SUBJECT:** Peach Bottom Atomic Power Station Unit 1  
Annual Unit 1 Decommission Report - 2004

Gentlemen,

In accordance with Peach Bottom Atomic Power Station, Unit 1 Technical Specifications, inspections are periodically performed to verify radiation and contamination levels, barrier integrity, liquid and gaseous effluents, and water intrusion. All records of Unit 1 inspections are maintained for retrieval and review.

Radiological surveys are performed semi-annually in the accessible areas of the exclusion area. In 2004, radiation levels did not exceed 0.2 mrem/hour and all smearable contamination levels were less than 1000 dpm/100cm<sup>2</sup> beta-gamma. No non-naturally occurring airborne radioisotopes were identified. No liquid or gaseous radiation effluents were identified.

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 visually degraded from previous reports.

Water intrusion inspections are performed semi-annually. In 2004, water from the containment sump was sampled, and a radio-analysis was performed. No radio-nuclides were identified as a result of this analysis.

There were no reportable events involving Unit 1 for the year 2004.

Sincerely,



Joseph P. Grimes, Plant Manager  
Peach Bottom Atomic Power Station

JPG/RAN/MAL/DAB

CCN 05-14040

cc: S. J. Collins, Administrator, Region I, US NRC  
G. F. Wunder, Project Manager, US NRC  
US NRC Senior Resident Inspector, PBAPS A4

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