

July 31, 2009

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

Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3
Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-277 and 50-278

Subject: Groundwater Protection Initiative (GPI) – Voluntary Special Report for Tritium
Discovered On-Site

This voluntary, special report is submitted in accordance with NEI 07-07, *Industry Ground Water Protection Initiative – Final Guidance Document*.

On July 8, 2009, three water samples containing tritium were confirmed to contain a level of tritium in excess of the NEI 07-07 voluntary reporting threshold of 20,000 picocuries per liter. These water samples were collected on July 6, 2009. The highest level of tritium measured was a confirmatory sample analyzed on July 8, 2009 at 127,252 picocuries/liter. These samples were taken just outside of the northeast corner of the Unit 3 Turbine Building.

It has been determined that there has been no adverse affect on the health and safety of the public. Augmented sampling has been performed and no detectable levels of tritium were found off-site as a result of this event. Samples of other on-site wells have been below the threshold of 20,000 picocuries per liter. Using worst-case assumptions, the bounding annual dose to a member of the public has been determined to be 2.0E-6 mrem/year, a very small fraction of the 10CFR 50 Appendix I dose limits.

A cross-functional team of engineers, environmental experts and operations personnel are working to locate the source of the tritium and make any necessary repairs.

There are no regulatory commitments contained in this document. If you have any questions or require additional information, please contact Mr. Larry Lucas, Chemistry Manager at 717-456-3608.

Sincerely,



William F. Maguire
Site Vice President
Peach Bottom Atomic Power Station



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