



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

December 19, 2011

10 CFR 50.4

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

Watts Bar Nuclear Plant, Unit 1  
Facility Operating License No. NPF-90  
NRC Docket No. 50-390

**Subject: Notification of the Number of Tritium Producing Burnable Absorber Rods for the Operating Cycle 12 Reactor Core**

The purpose of this letter is to inform the Nuclear Regulatory Commission of the number of Tritium Producing Burnable Absorber Rods (TPBARs) that TVA plans to irradiate in the Watts Bar Nuclear Plant (WBN), Unit 1 reactor core during Operating Cycle 12. Based on current schedules, TVA expects to commence a planned refueling outage in September 2012 and expects to begin WBN, Unit 1 Operating Cycle 12 operation in October 2012. TVA plans to irradiate 544 TPBARs in WBN, Unit 1 during Operating Cycle 12.

TVA has evaluated its plans to irradiate 544 TPBARs during Cycle 12 operation with regard to tritium permeation into the reactor coolant system. In conducting the analysis, TVA considered recent WBN, Unit 1 operating experience with TPBARs. TVA concludes that WBN Unit 1 can be operated in compliance with regulatory requirements and in conformance with its licensing basis with regard to tritium permeation with the specified number of TPBARs during Cycle 12.

There are no new regulatory commitments in this letter. If you have any questions, please contact Kara M. Stacy at (423) 751-3489.

Respectfully,

A handwritten signature in black ink, appearing to read "J. W. Shea".

J. W. Shea  
Manager, Corporate Nuclear Licensing

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NRC

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cc: NRC Regional Administrator - Region II  
NRC Senior Resident Inspector - Watts Bar Nuclear Plant, Unit 1  
NRC Senior Resident Inspector - Watts Bar Nuclear Plant, Unit 2