

August 11, 2005

Mr. Karl W. Singer  
Chief Nuclear Officer and  
Executive Vice President  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 — REQUEST FOR ADDITIONAL  
INFORMATION REGARDING THE TEMPORARY USE OF PENETRATIONS IN  
THE SHIELD BUILDING DOME DURING MODES 1-4 (TAC NO. MC6569)

Dear Mr. Singer:

By letter dated April 4, 2005, Tennessee Valley Authority submitted an application for a temporary license amendment to the Watts Bar Nuclear Plant (WBN), Unit 1, technical specifications (TSs) that would allow them to use one of two penetrations in the Shield Building dome during normal power operation (Modes 1-4).

During the Cycle 6 refueling outage, two penetrations through the Shield Building dome were created in preparation for steam generator replacement activities during the Cycle 7 refueling outage. These penetrations were each closed with a steel hatch assembly prior to entering Mode 4 at the end of the outage. The proposed TS change will allow WBN Unit 1 to open one of the penetrations in the Shield Building dome up to 5 hours a day, 6 days a week while in Modes 1-4 during Cycle 7 operation. This action will continue until the start of the Cycle 7 refueling outage in the fall of 2006.

In order for the staff to complete its review of the subject license amendment submittal, we request that the licensee provide responses to the enclosed request for additional information.

Sincerely,

***/RA/***

Douglas V. Pickett, Senior Project Manager, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosure: Request for Additional Information

cc w/enclosure: See next page

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## **WATTS BAR NUCLEAR PLANT**

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REQUEST FOR ADDITIONAL INFORMATION

WATTS BAR NUCLEAR PLANT, UNIT 1

TEMPORARY USE OF PENETRATIONS IN SHIELD BUILDING DOME DURING MODES 1-4

1. The Loss-of-Coolant Accident (LOCA) dose analysis that was performed to support the license amendment request credits filtration of the release by the Emergency Gas Treatment System (EGTS) after 15 minutes. The submittal states that the assumption is that the open shield building penetration can be closed by the prestaged dedicated individual within 12 minutes, which leaves 3 minutes for the EGTS to depressurize the annulus and enable filtration of the release. How long does it take for the EGTS to adequately depressurize the annulus after the penetration is closed? By what means do you ensure that this goal is met?
2. Considering that manual operation is used to close the shield building, have any analyses been performed to determine the impact that delaying the closure would have on the offsite and control room doses during a LOCA? Have sensitivity analyses been performed to determine how long closure may be delayed before Title 10 of the *Code of Federal Regulations*, Part 100 or General Design Criterion-19 dose criteria are exceeded?
3. With exception to the EGTS filtration and release timing assumptions, are all other inputs, assumptions and methods used in the LOCA dose analysis the same as those discussed in the Watts Bar Updated Final Safety Analysis Report (UFSAR), Revision 4, and summarized in UFSAR Table 15.5-6?

Enclosure