



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

October 31, 2011

10 CFR 100

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

Watts Bar Nuclear Plant, Unit 2
Docket No. 50-391

Subject: Results of the Hydrology Analysis Without Use of Sand Baskets

Reference: TVA to NRC letter dated April 20, 2011, "Response to Request for Additional Information Regarding Final Safety Analysis Report Section 2.4 (TAC NO. ME3945)"

By the Reference letter, the Tennessee Valley Authority (TVA) committed to provide the results of the hydrology analysis without crediting the use of sand baskets at Fort Loudoun dam for the seismic dam failure and flood combination or the seismic test of the sand baskets to the Nuclear Regulatory Commission by October 31, 2011. TVA performed the hydrology analysis without use of the sand baskets under TVA Calculation CSQ000020080080, "Flood Levels at WBN and SQN from Seismic Dam Failures." The hydrology analysis confirms the sand baskets are not required to be in-place during and following the seismic events defined in Section 2.4.4 of the WBN Final Safety Analysis Report (FSAR). Testing to demonstrate stability of the sand baskets during a seismic event is not required. Enclosure 1 provides the WBN flood levels and warning time of the revised hydrology analysis.

This submittal addresses SSER 24, Appendix HH, Item 133. Enclosure 2 provides the list of commitments for this submittal.

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If you have any questions, please contact Gordon Arent at (423) 365-2004.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 31st day of October 2011.

Respectfully,



David Stinson
Watts Bar Unit 2 Vice President

Enclosures:

1. Results of the Hydrology Analysis Without Use of Sand Baskets
2. List of Commitments

cc (Enclosures):

U. S. Nuclear Regulatory Commission
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U.S. Nuclear Regulatory Commission
Director, Office of Federal and State Materials and
Environmental Management Programs
Washington, D.C. 20555-0001

NRC Resident Inspector Unit 2
Watts Bar Nuclear Plant
1260 Nuclear Plant Road
Spring City, Tennessee 37381

ENCLOSURE 1

**RESULTS OF THE HYDROLOGY ANALYSIS WITHOUT USE
OF SAND BASKETS**

TENNESSEE VALLEY AUTHORITY
DOCKET NO. 50-391

In the Reference letter, TVA committed to perform either a hydrology analysis without crediting the use of the sand baskets at Fort Loudoun dam for the seismic dam failure and flood combination or perform a seismic test of the sand baskets. This commitment was made because Fort Loudoun dam was the only location where credit for sand baskets was taken during a seismic event.

To address the commitment, TVA re-performed the hydrological analysis (Calculation CDQ000020080080) for the seismic failure combinations which utilized sand baskets to increase the elevation of embankments at the dams. In this reanalysis, the sand baskets were not credited to increase the height of the Fort Loudoun embankment. As a result of this re-analysis, the flood elevation at Watts Bar Nuclear Plant (WBN) increased from 731.11 feet to 731.17 feet, and the flow discharge past the plant increased from 977,618 cubic feet per second to 979,385 cubic feet per second. The flood wave warning time decreased from 36 hours to 35 hours, which is still greater than the controlling warning time of 28 hours. These elevation, flow, and warning time changes will be provided in the next update of the WBN Unit 2 FSAR.

ENCLOSURE 2

LIST OF COMMITMENTS

1. These elevation, flow, and warning time changes will be provided in the next update of the WBN Unit 2 FSAR.