

**Attachment 4 to Enclosure 1 is to be withheld from public disclosure under 10 CFR 2.390.
When separated from this attachment, this letter is decontrolled.**



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

July 19, 2012

10 CFR 50.90
10 CFR 2.390(d)(1)

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: Application to Revise Watts Bar Nuclear Plant Unit 1 Updated Final Safety Analysis Report Regarding Changes to Hydrologic Analysis, TAC No. ME8200 (WBN-UFSAR-12-01)

- References:
1. Tennessee Valley Authority (TVA) Submittal to NRC Document Control Desk, "Commitments Related to Updated Hydrologic Analysis Results for Sequoyah Nuclear Plant, Units 1 and 2, and Watts Bar Nuclear Plant, Unit 1," dated June 13, 2012 (ADAMS Accession No. ML12171A053)
 2. NRC Meeting Summary, "Summary of March 29, 2012, Pre-Application Meeting with Tennessee Valley Authority on Changing the Licensing Basis for Hydrologic Engineering (TAC No. ME8200)," dated April 11, 2012 (ADAMS Accession No. ML12097A306)

In accordance with the provisions of 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," the Tennessee Valley Authority (TVA) is submitting a request for an amendment to Facility Operating License No. NPF-90 for Watts Bar Nuclear Plant (WBN), Unit 1.

This license amendment request seeks approval to revise the WBN Unit 1 Updated Final Safety Analysis Report (UFSAR) to adopt a revised hydrologic analysis for the WBN Unit 1 site. These changes to the WBN Unit 1 UFSAR incorporate updates previously submitted in support of the initial licensing of WBN Unit 2 as well as more recently discovered input information. Given that the WBN Unit 1 UFSAR and Unit 2 Final Safety Analysis Report (FSAR) are separate documents at this time, TVA will submit an update to the affected sections of the WBN Unit 2 FSAR on or before August 30, 2012 to assure that the hydrology licensing bases are consistent.

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The proposed changes in the updated hydrologic analysis include updated input information, and updates to methodology which includes use of the U.S. Army Corps of Engineers (USACE) Hydrologic Modeling System (HEC-HMS) and River Analysis System (HEC-RAS) software. As a result of these proposed changes, the design basis flood (DBF) elevations at the WBN Unit 1 site are revised.

These changes are determined to impact existing flood protection requirements for several WBN Unit 1 safety-related systems, structures, or components, which includes the Thermal Barrier Booster (TBB) Pump Motors and applicable Essential Raw Cooling Water (ERCW) equipment required for flood mode operation located on elevation 722.0 ft of the Intake Pumping Station (IPS). To restore margin for the TBB Pump Motors, a temporary flood protection barrier has been designed to be installed around the TBB Pump Motors prior to the event of a Stage I flood warning. Installation of the temporary flood protection barrier is in progress at WBN Unit 1. For the IPS, a compensatory measure of staged sandbags to be constructed into a berm at any time prior to or during the event of a Stage I flood warning has been implemented.

Permanent plant modifications are planned to restore or gain additional margin between the revised DBF elevations and these and other limiting safety-related systems, structures, and components. The commitments to implement the permanent plant modification for the TBB Pump Motors and to address impact on the ERCW equipment in the IPS, as well as other actions regarding the updated hydrologic analysis, are provided in the first reference letter.

Enclosure 1 provides a description, technical evaluation, regulatory evaluation and environmental consideration of the proposed technical changes. TVA is requesting NRC review and approval of all of the technical changes to the WBN Unit 1 UFSAR as described in Enclosure 1 to incorporate the cumulative effects that have occurred in the WBN Unit 1 hydrologic analysis since issuance of the Operating License. Specific technical changes are proposed in WBN Unit 1 UFSAR Sections 2.4, 2.4.1, 2.4.2, 2.4.3, 2.4.4, 2.4.11, and 2.4.14. Additional editorial changes are shown for WBN Unit 1 UFSAR Section 2.4 and do not require NRC review and approval.

Attachment 1 to Enclosure 1 provides the existing WBN Unit 1 UFSAR text marked up to show the proposed changes.

Attachment 2 to Enclosure 1 provides the proposed replacement WBN Unit 1 UFSAR Section 2.4 tables.

Attachment 3 to Enclosure 1 provides the proposed replacement WBN Unit 1 UFSAR Section 2.4 figures suitable for public disclosure.

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Attachment 4 to Enclosure 1 provides the proposed replacement WBN Unit 1 UFSAR Section 2.4 figures that contain security-related information identified by the designation "Security-Related Information - Withhold Under 10 CFR 2.390." TVA hereby requests this information be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390(d)(1).

Enclosure 2 provides responses to the issues identified by the NRC Staff in the second reference letter regarding the pre-application meeting held between TVA and the NRC Staff on March 29, 2012. The description, technical evaluation, regulatory evaluation and environmental consideration of the proposed technical changes provided in Enclosure 1 address these issues where applicable.

TVA requests that the NRC approve this amendment by July 19, 2013, to support licensing actions for submittal of the updated WBN Unit 2 FSAR consistent with the technical changes to the WBN Unit 1 UFSAR approved by the NRC, and subsequent preparation and submittal of the combined WBN Unit 1 and 2 UFSAR following WBN Unit 2 Operating License issuance.

TVA has determined that there are no significant hazards considerations associated with the proposed changes and that the changes qualify for a categorical exclusion from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9).

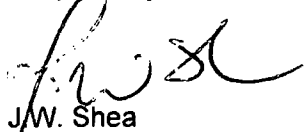
The WBN Plant Operations Review Committee and the WBN Nuclear Safety Review Board have reviewed the proposed changes and determined that operation of WBN in accordance with the proposed changes will not endanger the health and safety of the public.

Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and the enclosure to the Tennessee Department of Environment and Conservation.

Enclosure 3 contains a list of new regulatory commitments in this letter. Please address any questions regarding this request to Terry Cribbe at 423-751-3850.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 19th day of July 2012.

Respectfully,



J.W. Shea
Vice President, Nuclear Licensing

Enclosures:

1. Evaluation of Proposed Changes

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2. Evaluation of Issues from Pre-Application Meeting
3. List of New Regulatory Commitments

cc (Enclosures):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector – Watts Bar Nuclear Plant, Unit 1
Director, Division of Radiological Health - Tennessee State Department of Environment
and Conservation

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NRC Project Manager - Watts Bar Nuclear Plant, Unit 1
NRC Project Manager - Watts Bar Nuclear Plant, Unit 2

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