



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

CNL-14-187

September 30, 2014

10 CFR 50.4

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

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

**Subject: WATTS BAR NUCLEAR PLANT (WBN) UNIT 2 – FINAL SAFETY ANALYSIS REPORT (FSAR) SECTION 2.4 – HYDROLOGIC ENGINEERING**

- References:
1. Supplement to Application to Revise Watts Bar Nuclear Plant Unit 1 Updated Final Safety Analysis Report Regarding Changes to Hydrologic Analysis (WBN-UFSAR-12-01) dated September 30, 2014
  2. Watts Bar Nuclear Plant (WBN) – Unit 2 – Final Safety Analysis Report (FSAR), Amendment 112 dated May 30, 2014

The purpose of this submittal is to provide changes to the Unit 2 Final Safety Analysis Report Section 2.4, "Hydrologic Engineering." This submittal provides only the changes being made to the Unit 2 FSAR and is consistent with the changes provided for Unit 1 in Reference 1. Further detailed information (e.g., technical basis for these changes and responses to request for additional information) can be found in Reference 1.

Enclosure 1 provides a markup of the changes required for Section 2.4 (Reference 1) to adopt a revised hydrologic analysis resulting from the Tennessee Valley Authority's reevaluation efforts regarding site hydrology. These changes incorporate updates to the hydraulic analysis methodology, including the use of the U.S. Army Corps of Engineers (USACE) Hydrologic Modeling System (HEC-HMS) and Hydrologic Engineering Centers River Analysis System (HEC-RAS) software, and updates to the TVA River Operations dam stability acceptance criteria.

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U.S. Nuclear Regulatory Commission  
Page 2  
September 30, 2014

Enclosure 2 provides a clean version of Unit 2 FSAR Section 2.4 which will be included in Amendment 113 scheduled for October 2014. Enclosure 3 provides a "roadmap" for the changes proposed in this submittal.

The Tennessee Valley Authority requests NRC approval via safety evaluation by November 15, 2014 to support Unit 2 licensing. Upgrades to Cherokee, Douglas, Douglas Saddle, Fort Loudoun, Tellico, Watts Bar, and Watt Bar West Saddle Dams will be implemented prior to Unit 2 fuel Load.

Enclosure 4 provides a list of commitments contained in this letter. 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 30th day of September, 2014.

Respectfully,

**J. W. Shea**

Digitally signed by J. W. Shea  
DN: cn = J. W. Shea, o = Tennessee Valley Authority,  
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Date: 2014.09.30 18:57:14 -0400

J. W. Shea  
Vice President, Nuclear Licensing

Enclosures:

1. Unit 2 FSAR Section 2.4 Markups
2. Unit 2 FSAR Section 2.4 Clean Pages
3. FSAR Significant Change Roadmap
4. List of Commitments
5. DVDs containing hydrology calculation input and output data

cc: See page 3

U.S. Nuclear Regulatory Commission  
Page 3  
September 30, 2014

cc (Enclosure):

U. S. Nuclear Regulatory Commission  
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