



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

July 19, 2013

10 CFR 50.4

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

Sequoyah Nuclear Plant, Units 1 and 2  
NRC Docket Nos. 50-327 and 50-328  
Facility License Nos. DPR-77 and DPR-79

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

**Subject: Completion of Commitment Related to Prevention of Overtopping of Embankments for Cherokee, Fort Loudoun, Tellico, and Watts Bar Dams (TAC Nos. ME8805, ME8806, and ME8807)**

- References:
1. Letter from TVA 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 (Accession No. ML12171A053).
  2. Letter from NRC to TVA, "Confirmatory Action Letter - Watts Bar Nuclear Plant, Unit 1, and Sequoyah Nuclear Plant, Units 1 and 2, Commitments to Address External Flooding Concerns (TAC Nos. ME8805, ME8806, and ME8807)," dated June 25, 2012 (Accession No. ML12165A527).
  3. Letter from TVA to NRC, "Updated Commitment Related to Prevention of Overtopping of Embankments for Cherokee, Fort Loudoun, Tellico, and Watts Bar Dams (TAC Nos. ME8805, ME8806, and ME8807)," dated April 29, 2013 (Accession No. ML13123A162).

By letter dated June 13, 2012 (Reference 1), Tennessee Valley Authority (TVA) made 16 commitments to mitigate potential external flooding hazards at Watts Bar Nuclear Plant (WBN) Unit 1 and Sequoyah Nuclear Plant (SQN) Units 1 and 2. By Confirmatory Action Letter dated June 25, 2012 (Reference 2), the NRC confirmed TVA's commitments and required, in part, that TVA notify the NRC in writing when TVA has completed the actions addressed in this Confirmatory Action Letter.

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The purpose of this letter is to notify the NRC of completion of Commitment Number 12, which is described in the Reference 2 letter as follows:

“By April 30, 2013, TVA will provide the results of the evaluation conducted in compliance with the National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) Status to define the permanent modifications to prevent overtopping the embankments of the Cherokee, Fort Loudoun, Tellico, and Watts Bar dams.”

This commitment is related to, and an intermediate action for, the succeeding Commitment Numbers 13, 14, 15, and 16 to replace the modular flood barriers with permanent modifications by October 2015 at Cherokee, Fort Loudoun, Tellico, and Watts Bar Dams, respectively. These commitments are similarly worded to each other as follows:

“TVA will implement permanent modifications to prevent overtopping of the embankments of the [Cherokee/Fort Loudoun/Tellico/Watts Bar] dam[s] due to the Probable Maximum Flood. The final solution will be established in an evaluation conducted in compliance with the National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS). Based on the current NEPA EIS schedule, these permanent modifications are scheduled to be installed by October 31, 2015.”

The implementation date of Commitment Number 12 was extended to July 19, 2013 in the Reference 3 letter. The extension was justified by the discussion below.

In 2009, initial conceptual design and alternatives were developed by TVA to implement dam safety modifications to replace the modular flood barriers in support of preparation of the Draft Environmental Impact Statement (DEIS). TVA published a notice of intent (NOI) to prepare an EIS or an environmental assessment of the proposal in the Federal Register in June 2011. Public comments were invited on the scope of the project, including alternatives to meet the project need, and environmental issues that should be addressed, from June 14, 2011 to September 30, 2011. Public meetings were held by TVA in July 2011 and September 2011. TVA has considered the numerous comments received during public scoping in designing the alternatives and developing the DEIS.

TVA issued the DEIS on the proposed dam safety modifications for public review on September 28, 2012. The DEIS addressed three alternatives:

- A. Under Alternative A, No Action, the approximately 19,100 feet of HESCO barrier floodwalls (7,000 feet at Cherokee, 4,500 feet at Fort Loudoun, 6,000 feet at Tellico, and 1,600 feet at Watts Bar) would remain in place and TVA would maintain them as necessary. While TVA has concluded that the No Action Alternative is not an adequate long-term solution for addressing the effect of external flooding events at the downstream nuclear power plants, it represents the baseline conditions against which the effects of the Action Alternatives are evaluated in the DEIS.

- B. Under Alternative B, Permanent Modifications of Dam Structures: Combination of Concrete Floodwalls and Earthen Embankments/Berms, TVA would replace the HESCO barriers with a combination of concrete floodwalls and raised earthen embankments or earthen berms. Heights of the replacement floodwalls and embankments/berms would range from 2.3 feet at Watts Bar Dam to 6.6 feet at Cherokee Dam. The use of either floodwalls or embankments/berms at a particular location is dependent on site and engineering constraints. Floodwalls would be used at five of six locations at Cherokee Dam, all three locations at Fort Loudoun Dam, part of one and all of another of the four locations at Tellico Dam, and none of the four segments at Watts Bar Dam.
- C. Under Alternative C, Permanent Modifications of Dam Structures: All Concrete Floodwalls, TVA would replace the HESCO barriers with concrete floodwalls at all locations.

TVA identified Alternative B, Permanent Modifications of Dam Structures: Combination of Concrete Floodwalls and Earthen Embankments/Berms, as the Preferred Alternative. This alternative would result in less adverse effect to recreation and other visitor use at Cherokee and Tellico dams and less visual effect at Cherokee, Tellico, and Watts Bar dams than would Alternative C, Permanent Modifications of Dam Structures: All Concrete Floodwalls. Construction cost evaluations conducted to date show relatively little difference in Alternatives B and C.

TVA held a public meeting to accept comments on the DEIS on October 25, 2012, in Lenoir City, Tennessee. The public comment period closed November 19, 2012. TVA received comments on the DEIS from three governmental agencies, one Indian tribe, one local homeowners association, and 14 individuals. TVA carefully reviewed the comments and responses to them are included in the Final Environmental Impact Statement (FEIS) which was issued on May 24, 2013. The most frequently mentioned topics in the comments were recreation and visitor use at the dams, visual effects of floodwalls, potential flooding related to the revised probable maximum flood (PMF) elevations, transportation safety, and NEPA compliance.

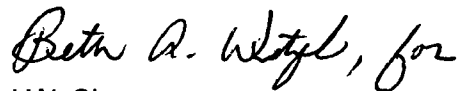
Following the completion of additional engineering and design studies, and after considering the comments on the DEIS, Alternative B was modified by increasing the use of embankments and decreasing the used of concrete floodwalls. These changes reduce the anticipated effects to some of the resources mentioned in the comments on the DEIS. As anticipated, the FEIS did not change this designation as the Preferred Alternative and provides additional design details than that described in the DEIS. The Record of Decision for the FEIS by TVA was signed on July 2, 2013, completing the actions required by Commitment Number 12.

The final design of Alternative B is in progress. Based on the approval of the FEIS, the original commitment dates for the succeeding Commitment Numbers 13, 14, 15, and 16 remain on schedule for October 31, 2015.

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There are no new regulatory commitments in this letter. Please address any questions regarding this letter to Ed Schrull at (423) 751-3850.

Respectfully,



J.W. Shea  
Vice President, Nuclear Licensing

cc:

NRC Regional Administrator - Region II  
NRR Director - NRC Headquarters  
NRC Senior Resident Inspector - Sequoyah Nuclear Plant  
NRC Senior Resident Inspector - Watts Bar Nuclear Plant  
NRR Project Manager - Sequoyah Nuclear Plant  
NRR Project Manager - Watts Bar Nuclear Plant, Unit 1