



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

CNL-15-198

September 28, 2015

10 CFR 50.54(f)

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

Browns Ferry Nuclear Plant, Units 1, 2, and 3  
Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68  
NRC Docket Nos. 50-259, 50-260, and 50-296

**Subject: Commitment Revision Associated with Flood Hazard Reevaluation Report for Browns Ferry Nuclear Plant, Response to NRC Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3 and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident**

**Reference:** Letter from TVA to NRC, CNL-15-041, "Flood Hazard Reevaluation Report for Browns Ferry Nuclear Plant, Response to NRC Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3 and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2015 (ML15072A130)

On March 12, 2015, Tennessee Valley Authority (TVA) submitted the Flooding Hazard Reevaluation Report (HRR) for Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3 (Reference letter). The HRR reflected, in Section 12.1, that the potential existed for water to backflow into the diesel generator buildings through normally open emergency drain paths during the Flood Hazard Reevaluation local intense precipitation (LIP) event, potentially impacting the function of safety-related (SR) equipment. TVA committed in Enclosure 2 of the Reference letter to "...determine a resolution to the potential backflow through the diesel generator interior flooding drain lines into the Diesel Generator Buildings during the LIP event by September 28, 2015."

TVA reviewed multiple options to resolve the potential impact to SR equipment from backflow through the diesel generator buildings' interior flooding drain lines, including physical modifications. The review concluded that the resolution will be accomplished through BFN procedurally defined manual actions to close the exterior building drain isolation valves; however, adoption of this resolution requires verification that an adequate LIP warning time exists.

Key factors in the warning time determination are the critical location-specific LIP flood depth and a bounding but realistic site LIP flood hydrograph. The current LIP flood depth and hydrograph is based on a simplistic one-dimensional hydrological analysis. To ensure the warning time is maximized, the confirmed impact to BFN safety-related structures, systems, and components is prevented, a more refined two-dimensional analysis of the LIP event is needed. This two-dimensional analysis and, if required, the final warning time analysis and warning procedural development, will take significantly more time than originally planned. Therefore, TVA is revising the commitment to establish the selected resolution and modify the completion time of the resolution.

The purpose of this letter is to submit a revised commitment to address any potential impact to SR equipment resulting from the backflow condition. TVA will perform a two-dimensional analysis of the LIP event, and, if required to protect safety-related functions, revise existing procedures or create new procedures to isolate the diesel generator interior flooding drain lines for the LIP event based on the results of the two-dimensional hydrologic model and the NRC-endorsed NEI 15-05 "Warning Time for Local Intense Precipitation Events."

The enclosure to this letter provides the revised commitment for BFN. This commitment supersedes Commitment 3 in Enclosure 2 of the Reference letter.

If you have questions regarding this letter, please contact Russell Thompson at (423) 751-2567.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 28th day of September 2015.

Respectfully,

**J. W. Shea**

Digitally signed by J. W. Shea  
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J. W. Shea

Enclosure:

Revised Commitment

cc (Enclosure):

NRR Director - NRC Headquarters  
NRR JLD Director - NRC Headquarters  
NRC Regional Administrator - Region II  
NRR JLD Project Manager - Browns Ferry Nuclear Plant  
NRC Senior Resident Inspector - Browns Ferry Nuclear Plant  
NRR Project Manager - Browns Ferry Nuclear Plant

## **ENCLOSURE**

### **REVISED COMMITMENT**

TVA will perform a two-dimensional hydrologic analysis of the local intense precipitation (LIP) event, and, if required to protect safety-related functions, revise existing procedures or create new procedures to isolate the diesel generator interior flooding drain lines for the LIP event based on the results of the two-dimensional hydrologic model and the NRC-endorsed NEI 15-05 "Warning Time for Local Intense Precipitation Events," by August 31, 2016.