



1101 Market Street, Chattanooga, Tennessee 37402

CNL-21-097

December 21, 2021

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  
Renewed Facility Operating License Nos. DPR-77 and DPR-79  
NRC Docket Nos. 50-327 and 50-328

Watts Bar Nuclear Plant, Units 1 and 2  
Facility Operating License Nos. NPF-90 and NPF-96  
NRC Docket Nos. 50-390 and 50-391

**Subject: Status Regarding the Improved Flood Mitigation System Project**

- References:**
1. Letter from TVA to NRC, "Status Regarding the Improved Flood Mitigation System Project," dated September 28, 2018 (ML18274A055)
  2. Letter from TVA to NRC, "Request for Review and Approval of Topical Report TVA-NPG-AWA16, 'TVA Overall Basin Probable Maximum Precipitation and Local Intense Precipitation Analysis, Calculation CDQ0000002016000041,' Revision 1," dated June 22, 2018 (ML18192A510)
  3. Letter from NRC to TVA, "Final Safety Evaluation for Tennessee Valley Authority Topical Report 'TVA Overall Basin Probable Maximum Precipitation and Local Intense Precipitation Analysis Calculation CDQ0000002016000041,' Rev. 1 (EPID L-2016-TOP-0011)," dated March 18, 2019 (ML19010A212)
  4. Letter from TVA to NRC, "Application to Revise Sequoyah Nuclear Plant Units 1 and 2 Updated Final Safety Analysis Report Regarding Changes to Hydrologic Analysis, (SQN-TS-19-02)," dated January 14, 2020 (ML20016A396)
  5. Letter from TVA to NRC, "Supplement to Application to Revise Sequoyah Nuclear Plant Units 1 and 2 Updated Final Safety Analysis Report Regarding Changes to Hydrologic Analysis, (TS-19-02) (EPID L-2020-LLA-0004)," dated February 18, 2020 (ML20048H184)
  6. Letter from TVA to NRC, "Status Regarding the Improved Flood Mitigation System Project," dated June 30, 2021 (ML21181A273)

By letter dated September 28, 2018, Tennessee Valley Authority (TVA) informed the Nuclear Regulatory Commission (NRC) of a change in the specified field implementation completion schedule to install improved flood mode mitigation systems (FMMS) at the Sequoyah Nuclear Plant (SQN), Units 1 and 2, and the Watts Bar Nuclear Plant (WBN), Units 1 and 2 (Reference 1). The change in the implementation schedule was based on the ongoing TVA project to upgrade precipitation models and rerun hydraulic models to determine new probable maximum flood levels for both design basis and beyond-design-basis purposes.

In a letter dated June 30, 2021 (Reference 6), TVA committed to provide a written update regarding the reevaluated SQN and WBN flood levels using updated precipitation data. The purpose of this letter is to provide that update.

TVA completed an updated precipitation calculation that includes updated data (storm and dew point), meteorological science, technology, weather radar, Geographic Information System (GIS) tools, and treatment of topography. TVA submitted this precipitation calculation for NRC review by letter dated June 22, 2018 (Reference 2). The NRC completed the review of the revised precipitation calculation. The review and conclusions drawn from the review are documented in a Safety Evaluation that was provided by NRC by letter dated March 18, 2019 (Reference 3).

The revised precipitation data has been used as input into TVA's hydraulic models to determine the resulting flood levels at the SQN and WBN sites. The preliminary results from the hydraulic models used to establish resulting changes in flood levels at the SQN and WBN sites reflect decreases in analyzed flood levels at both sites. Analysis work is currently ongoing to address a potentially nonconservative assumption that was discussed with NRC on October 13, 2020 (ML20293A080).

TVA has submitted a License Amendment Request (LAR) to update its licensing basis for SQN with the analyzed flood levels by letter dated January 14, 2020 (Reference 4) and supplemented by letter dated February 18, 2020 (Reference 5). A similar LAR for WBN is planned to be submitted in the future.

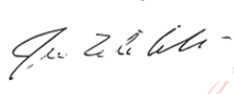
Consequently, as described in Reference 6, TVA has concluded it is prudent to defer the final decision regarding the field implementation of FMMS until resolution of the potentially nonconservative assumption and the submittal of LAR documentation associated with the update to the SQN and WBN licensing bases. This will allow TVA to demonstrate what appropriate margin, if any, should be designed into additional flood mitigating systems at SQN and WBN.

TVA will provide a written update regarding the reevaluated SQN and WBN flood levels using the revised precipitation data by June 30, 2022.

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The enclosure to this letter provides one new regulatory commitment contained in this letter. If additional information is needed regarding this update, please contact Russell Thompson at (423) 751-2567.

Respectfully,

 Digitally signed by Carla Edmondson  
Date: 2021.12.21 12:34:58 -05'00'

James T. Polickoski  
Director, Nuclear Regulatory Affairs

Enclosure

cc (Enclosure):

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

## **ENCLOSURE**

## **COMMITMENT**

1. TVA will provide a written update regarding the reevaluated SQN and WBN flood levels using the revised precipitation data by June 30, 2022.