



Tennessee Valley Authority, Sequoyah Nuclear Plant, P.O. Box 2000, Soddy Daisy, Tennessee 37384

January 18, 2018

10 CFR 50.4
10 CFR 50.46

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

Subject: 10 CFR 50.46 30-Day Report for Sequoyah Nuclear Plant, Units 1 and 2

Reference: Letter from TVA to NRC, "10 CFR 50.46 Annual Report for Sequoyah Nuclear Plant, Units 1 and 2," dated November 28, 2017 (ML17332A033)

The purpose of this letter is to provide the 30-Day Report of changes or errors discovered in the emergency core cooling system (ECCS) evaluation model for Sequoyah Nuclear Plant (SQN), Units 1 and 2. This report is required in accordance with Title 10 of the Code of Federal Regulations (10 CFR) 50.46, "Acceptance Criteria for ECCS for Light-Water Nuclear Power Reactors," paragraph (a)(3)(ii), which states, in part, that a holder of an operating license is required to report significant changes or errors and its estimated effect on the limiting ECCS analysis to the NRC within 30 days.

As defined in 10 CFR 50.46(a)(3)(i), a significant change affecting an ECCS evaluation model includes one which results in a calculated peak fuel cladding temperature (PCT) different by more than 50°F from the temperature calculated for the limiting transient using the last acceptable model, or is a cumulation of changes and errors such that the sum of the absolute magnitudes of the respective temperature changes is greater than 50°F. This report is the result of an error in the realistic large break loss of coolant accident (RLBLOCA) analysis and the small break loss of coolant accident (SBLOCA) analysis stemming from an incorrect input of the cladding dimensions for surface area of swollen fuel. Correction of this error results in an increase in the metal-water reaction heat generated during the event and an increase in PCT. The increase in PCT for the RLBLOCA analysis is estimated to be 61°F, which results in a revised licensing basis PCT for the RLBLOCA of 2001°F. The increase in PCT for the SBLOCA analysis is estimated to be 0°F, which results in no additional cumulative change to the PCT of 1543°F. Previous PCT results were provided in the referenced letter. This change is considered significant in accordance with 10 CFR 50.46(a)(3)(i). Therefore, a 30-day report is required for the RLBLOCA and SBLOCA analyses. The local oxidation and whole core hydrogen generated for the RLBLOCA and SBLOCA analyses remain within the 10 CFR 50.46 acceptance criteria with the correction of this error.

U.S. Nuclear Regulatory Commission

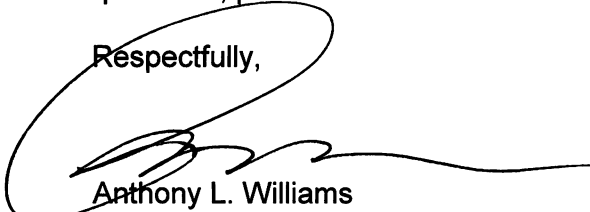
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10 CFR 50.46(a)(3)(ii) also requires the licensee to provide a proposed schedule for providing a reanalysis, or taking other action as may be needed to show compliance with the 10 CFR 50.46 requirements. TVA has concluded that no further action is required to show compliance with 10 CFR 50.46 requirements, because the RLBLOCA and SBLOCA analyses continue to meet all 10 CFR 50.46 acceptance criteria.

There are no regulatory commitments associated with this submittal. Should you have any questions, please contact Mike McBrearty at (423) 843-7170.

Respectfully,



Anthony L. Williams
Site Vice President
Sequoyah Nuclear Plant

cc:

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Sequoyah Nuclear Plant
NRC Project Manager - Sequoyah Nuclear Plant