



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 25, 2019

Mr. Joseph W. Shea
Vice President, Nuclear Regulatory Affairs
and Support Services
Tennessee Valley Authority
1101 Market Street
Chattanooga, TN 37402

SUBJECT: WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2 – CORRECTION REGARDING
STAFF REVIEW OF SEISMIC PROBABILISTIC RISK ASSESSMENT
ASSOCIATED WITH REEVALUATED SEISMIC HAZARD IMPLEMENTATION OF
THE NEAR-TERM TASK FORCE RECOMMENDATION 2.1: SEISMIC
(EPID NO. L-2017-JLD-0044)

Dear Mr. Shea:

The purpose of this letter is to provide a correction regarding the staff's evaluation of the Watts Bar Nuclear Plant, Units 1 and 2 (Watts Bar), seismic probabilistic risk assessment (SPRA) which was submitted in response to Near-Term Task Force (NTTF) Recommendation 2.1 "Seismic." The correction does not change the U.S. Nuclear Regulatory Commission (NRC) staff's previous conclusion that no further response or regulatory action associated with NTTF Recommendation 2.1 "Seismic" is required for Watts Bar.

By letter dated March 12, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12053A340), the NRC issued a request for information under Title 10 of the *Code of Federal Regulations* Section 50.54(f) (hereafter referred to as the 50.54(f) letter). The request was issued as part of implementing lessons learned from the accident at the Fukushima Dai-ichi nuclear power plant. Enclosure 1 to the 50.54(f) letter requested that licensees reevaluate seismic hazards at their sites using present-day methodologies and guidance. Enclosure 1, Item (8), of the 50.54(f) letter requested that certain licensees complete an SPRA to determine if plant enhancements are warranted due to the change in the reevaluated seismic hazard compared to the site's design-basis seismic hazard.

By letter dated June 30, 2017 (ADAMS Accession No. ML17181A485), Tennessee Valley Authority (TVA, the licensee), provided its SPRA submittal in response to Enclosure 1, Item (8) of the 50.54(f) letter, for Watts Bar. The SPRA report was later supplemented by letter dated April 10, 2018 (ADAMS Accession No. ML18100A966). The NRC staff reviewed the SPRA submittal and provided its evaluation by letter dated July 10, 2018 (ADAMS Accession No. ML18115A138). This review used the guidance in NRC staff memorandum dated August 29, 2017, titled, "Guidance for Determination of Appropriate Regulatory Action Based on Seismic Probabilistic Risk Assessment Submittals in Response to Near Term Task Force Recommendation 2.1: Seismic" (ADAMS Accession No. ML17146A200; hereafter referred to as the SPRA Screening Guidance) to develop a recommendation based on its review of the SPRAs submitted by licensees in response to the 50.54(f) letter.

During an internal self-assessment review, the staff recently uncovered an error in the spreadsheet used in the SPRA Screening Guidance to evaluate the Watts Bar SPRA submittal. The correction of the error results in changes to certain numerical values documented in the staff's Watts Bar SPRA evaluation dated July 10, 2018. The affected portions of the staff's evaluation are located on page 3 of Enclosure 2 to the evaluation letter in the first and second full paragraphs. Specific changes are as follows (changes shown in **bold**):

First full paragraph, sixth sentence

Original Version: "For this analysis, NRC staff determined the RRW [risk reduction worth] threshold from the SCDF [seismic core damage frequency]-based MACR to be 1.045 (Unit 1) and 1.026 (Unit 2)."

Corrected Version: "For this analysis, NRC staff determined the RRW threshold from the SCDF-based MACR to be **1.065** (Unit 1) and **1.046** (Unit 2)."

Second full paragraph, sixth sentence

Original Version: "For SLERF [seismic large early release frequency], RRW thresholds of 1.045 (Unit 1) and 1.026 (Unit 2) were used assuming a remaining operating life of 18 years for Unit 1 and 38 years for Unit 2."

Corrected Version: "For SLERF, RRW thresholds of **1.065** (Unit 1) and **1.046** (Unit 2) were used assuming a remaining operating life of 18 years for Unit 1 and 38 years for Unit 2."

The staff has confirmed that the changes to the numerical values do not impact or change the NRC decision documented by the previously referenced staff evaluation dated July 10, 2018.

The NRC staff regrets any inconvenience this may have caused. If you have any questions, please contact me at (301) 415-2833, or via e-mail at Peter.Bamford@nrc.gov.

Sincerely,



Peter Bamford, Senior Project Manager
Beyond-Design-Basis Management Branch
Division of Licensing Projects
Office of Nuclear Reactor Regulation

Docket Nos. 50-390 and 50-391

cc: Distribution via Listserv

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