



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

February 16, 2021

Mr. James Barstow  
Vice President, Nuclear Regulatory  
Affairs and Support Services  
Tennessee Valley Authority  
1101 Market Street, LP 4A-C  
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2; AND WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2 – CORRECTION OF AMENDMENT NOS. 352, 346, 141, AND 47 REGARDING THE ADOPTION OF TECHNICAL SPECIFICATION TASK FORCE TRAVELER, TSTF-569, REVISION 2, "REVISE RESPONSE TIME TESTING DEFINITION" (EPID L-2020-LLA-0133)

Dear Mr. Barstow:

On January 25, 2021, the U.S. Nuclear Regulatory Commission (NRC) issued Amendment Nos. 352 and 346 to Renewed Facility Operating License Nos. DPR-77 and DPR-79, for the Sequoyah Nuclear Plant, Units 1 and 2, respectively; and Amendment Nos. 141 and 47 to Facility Operating License Nos. NPF-90 and NPF-96 for the Watts Bar Nuclear Plant, Units 1 and 2, respectively. The amendments revised the Technical Specifications (TSs) to adopt Technical Specification Task Force Traveler, TSTF-569, Revision 2, "Revise Response Time Testing Definition." During issuance of the amendment, the NRC staff used a version of TS page 1.1-6 for Watts Bar Nuclear Plant, Unit 2, that inadvertently omitted the number "42" from the list of amendments in the footer of the page.

In addition, the NRC staff's safety evaluation included the following statement on page 2:

[...] and for RPS [reactor protection system] RESPONSE TIME "[i]n lieu of measurement, response time may be verified for selected components provided that ... the components have been evaluated in accordance with an NRC approved methodology."

RPS RESPONSE TIME applies only to Combustion Engineering-designed plants and is not applicable to either Sequoyah Nuclear Plant, Units 1 and 2, or Watts Bar Nuclear Plant, Units 1 and 2.

The purpose of this letter is to issue a correction to Watts Bar, Unit 2, TS page 1.1-6 to include the number "42" in the list of applicable amendments in the footer of the page. In addition, the NRC staff is issuing a revised page 2 of its safety evaluation to delete the inapplicable discussion. A copy of the Watts Bar, Unit 2, TS page 1.1-6, and page 2 of the safety evaluation for Amendment Nos. 352, 346, 141, and 47 is enclosed. The NRC staff concludes that the enclosed corrections do not change the staff's previous conclusion in the safety evaluations for Amendment Nos. 352, 346, 141, and 47, nor do they affect the no significant hazards considerations, as published in the *Federal Register* on August 25, 2020 (85 FR 52374).

If you have any questions regarding this matter, please contact me at (301) 415-6459 or by e-mail at [michael.wentzel@nrc.gov](mailto:michael.wentzel@nrc.gov).

Sincerely,

**/RA/**

Michael J. Wentzel, Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-327, 50-328,  
50-390 and 50-391

Enclosures:

1. Corrected Technical Specification Page 1.1-6
2. Corrected Safety Evaluation Page 2

cc: Listserv

ENCLOSURE 1

WATTS BAR NUCLEAR PLANT, UNIT 2

DOCKET NO. 50-391

CORRECTED TECHNICAL SPECIFICATION PAGE 1.1-6

1.1 Definitions (continued)

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QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3459 MWt.
REACTOR TRIP SYSTEM (RTS) RESPONSE TIME	The RTS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and the methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.
SHUTDOWN MARGIN (SDM)	<p>SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming:</p> <ol style="list-style-type: none"> <li>All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM; and</li> <li>In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level.</li> </ol>
SLAVE RELAY TEST	A SLAVE RELAY TEST shall consist of energizing each slave relay and verifying the OPERABILITY of each slave relay. The SLAVE RELAY TEST shall include, as a minimum, a continuity check of associated testable actuation devices.

(continued)

ENCLOSURE 2

SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-327, 50-328, 50-390, AND 50-391

CORRECTED SAFETY EVALUATION PAGE 2

initiates necessary safety systems, based on the values of selected unit parameters, to protect against violating core design limits and the RCS pressure boundary and to mitigate accidents.

The RTT verifies that the individual channel or train actuation response times are less than or equal to the maximum values assumed in the accident analyses. The RTT acceptance criteria are under licensee control. Individual component response times are not modeled in the accident analyses. The analyses model the overall or total elapsed time, from the point at which the parameter exceeds the trip setpoint value at the sensor to the point at which the equipment reaches the required functional state (e.g., control and shutdown rods fully inserted in the reactor core).

## 2.2 Proposed Changes to the Technical Specifications

Sequoyah and Watts Bar Limiting Condition for Operation (LCO) 3.3.2 requires the ESFAS instrumentation for each Function in TS Table 3.3.2-1, "Engineered Safety Feature Actuation System Instrumentation," to be OPERABLE. To assure the LCO is met, Sequoyah SR 3.3.2.9 and Watts Bar SR 3.3.2.10 require the licensee to verify that ESFAS RESPONSE TIMES are within limits. Similarly, Sequoyah and Watts Bar LCOs 3.3.1 require the RTS instrumentation for each Function in TS Table 3.3.1-1, "Reactor Trip System Instrumentation," to be OPERABLE, and Sequoyah SR 3.3.1.14 and Watts Bar SR 3.3.1.15 requires the licensee to verify that RTS RESPONSE TIMES are within limits. Section 1.1 of the TS define ESF RESPONSE TIME and RTS RESPONSE TIME, state acceptable means to measure each response time, and provide an alternative that may be used "[i]n lieu of measurement."

In its application, the licensee stated that it requests adoption of NRC-approved TSTF-569. The only revision of TSTF-569 that is NRC approved is Revision 2. As described in Section 1, "Summary Description," of Revision 2 of TSTF-569:

The proposed change revises the definitions to eliminate the requirement for prior NRC review and approval of the response time verification of similar components, while retaining the requirement for the verification to be performed using the methodology contained in Attachment 1, titled, "Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing." The proposed change will permit licensees to verify the response time of similar component types using the methodology contained in Attachment 1, without obtaining prior NRC approval for each component.

Accordingly, as shown in the licensee's LAR, the proposed changes would add an additional "in lieu of measurement," alternative to measuring ESF RESPONSE TIME and RTS RESPONSE TIME for Sequoyah and Watts Bar. The additional alternative for ESF RESPONSE TIME would be "[i]n lieu of measurement, response time may be verified for selected components provided ... the components have been evaluated in accordance with an NRC approved methodology." Similarly, for RTS RESPONSE TIME, "[i]n lieu of measurement, response time may be verified for selected components provided that ... the components have been evaluated in accordance with an NRC approved methodology."

The application stated that the licensee concluded that the justifications presented in TSTF-569 and the safety evaluation prepared by the NRC staff are applicable to Sequoyah and Watts Bar

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