



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

CNL-18-021

February 8, 2018

10 CFR 50.90

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: Supplement to Sequoyah Nuclear Plant, Units 1 and 2 and Watts Bar Nuclear Plants, Units 1 and 2 License Amendment Request to Modify Technical Specification (TS) Surveillance Requirement 3.2.4, "QPTR," and TS 3.3.1, "Reactor Trip System (RTS) Instrumentation," Condition D (SQN-TS-17-02 and WBN-TS-17-014)

Reference: TVA Letter to NRC, CNL-17-008, "Sequoyah Nuclear Plant, Units 1 and 2 and Watts Bar Nuclear Plant Units 1 and 2 License Amendment Request to Modify Technical Specification (TS) Surveillance Requirement 3.2.4, 'QPTR,' and TS 3.3.1, 'Reactor Trip System (RTS) Instrumentation,' Condition D (SQN-TS-17-02 and WBN-TS-17-014),' dated August 7, 2017 (ML17219A505)

In the referenced letter, Tennessee Valley Authority (TVA) submitted for Nuclear Regulatory Commission (NRC) approval, a request for an amendment to Renewed Facility Operating License Nos. DPR-77 and DPR-79 for the Sequoyah Nuclear Plant (SQN), Units 1 and 2, respectively, and Facility Operating License Nos. NPF-90 and NPF-96 for the Watts Bar Nuclear Plant (WBN) Units 1 and 2, respectively. The proposed license amendment request (LAR) revises the SQN Units 1 and 2 and WBN Units 1 and 2 Technical Specification (TS) 3.2.4, "QPTR," Surveillance Requirement (SR) 3.2.4.2 and TS 3.3.1, "Reactor Trip System (RTS) Instrumentation," and associated Bases. Specifically, the proposed change would revise SR 3.2.4.2 (and the associated Note) and TS 3.3.1, Condition D to provide clarity as to when an incore power distribution measurement for quadrant power tilt ratio (QPTR) is required.

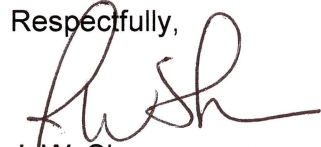
The proposed LAR also revised WBN Units 1 and 2 SR 3.2.4.1, Note 1 to change "THERMAL POWER < 75% RTP" to "THERMAL POWER \leq 75% RTP" and the Note to SR 3.2.4.2, to change "THERMAL POWER \geq 75% RTP" to "THERMAL POWER > 75% RTP." The change to WBN Units 1 and 2 SR 3.2.4.1, Note 1 was characterized as an "administrative change" in Section 1.0, "Summary Description," and Section 3.1.1, "TS 3.2.4 and SR 3.2.4 Changes," of the referenced letter. Similarly, the change to the Note to WBN Units 1 and 2 SR 3.2.4.2 was also characterized as an "administrative change" in Sections 1.0 and 3.1.1 of the referenced letter.

TVA has determined that the changes to WBN Units 1 and 2 SR 3.2.4.1, Note 1, and the Note to WBN Units 1 and 2 SR 3.2.4.2 should not have been characterized as an "administrative change." Therefore, TVA is providing additional information to further justify the change to WBN Units 1 and 2 SR 3.2.4.1, Note 1, and the Note to WBN Units 1 and 2 SR 3.2.4.2. The enclosure to this letter supplements the reference letter by providing a revised Section 1.0 and Section 3.1.1 to more accurately justify the changes to WBN Units 1 and 2 SR 3.2.4.1, Note 1, and the Note to WBN Units 1 and 2 SR 3.2.4.2. Changes to these sections are indicated by change bars in the right hand margins. The revised Sections 1.0 and 3.1.1 supersede those in the referenced letter.

This supplement does not change the no significant hazards consideration contained in the referenced letter. There are no new regulatory commitments made in this letter. Please address any questions regarding this request to Mr. Edward D. Schrull at (423) 751-3850.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 8th day of February 2018.

Respectfully,



J. W. Shea
Vice President, Nuclear Regulatory Affairs and Support Services

Enclosure:

Supplement to Evaluation of Proposed Change

cc (Enclosure):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Sequoyah Nuclear Plant
NRC Project Manager - Sequoyah Nuclear Plant
NRC Senior Resident Inspector - Watts Bar Nuclear Plant
NRC Project Manager - Watts Bar Nuclear Plant
Director, Division of Radiological Health - Tennessee State Department of
Environment
and Conservation (w/o enclosure)

Enclosure

Supplement to Evaluation of Proposed Change

1.0 SUMMARY DESCRIPTION

This evaluation supports a request to amend Renewed Facility Operating License (OL) Nos. DPR-77 and DPR-79 for the Tennessee Valley Authority (TVA) Sequoyah Nuclear Plant (SQN), Units 1 and 2, respectively, and Facility OL Nos. NPF-90 and NPF-96 for the TVA Watts Bar Nuclear Plant (WBN) Units 1 and 2, respectively.

The proposed Technical Specification (TS) amendment revises the SQN Units 1 and 2 and WBN Units 1 and 2 TS 3.3.1, "Reactor Trip System (RTS) Instrumentation," Condition D, and TS 3.2.4, "QPTR," Surveillance Requirement (SR) 3.2.4.2, including the associated Note, to avoid confusion as to when an incore power distribution measurement for quadrant power tilt ratio (QPTR) is required.

As currently written, TS 3.3.1, Condition D could result in the option of only performing Required Actions D.1.1 and D.1.2; thereby potentially overlooking the requirement to do an incore power distribution measurement for QPTR within 12 hours per SR 3.2.4.2. This possible confusion has resulted in several nuclear plants revising their TS in order to eliminate any confusion associated with the cross-reference to SR 3.2.4.2 within TS 3.3.1, Condition D (e.g., References 1 through 4). The proposed amendment better aligns the requirement to perform an incore power distribution measurement once per 12 hours with TS 3.2.4.

Changes are also being made to WBN Units 1 and 2 SR 3.2.4.1, Note 1, and the Note for SR 3.2.4.2 for consistency with the current and proposed changes to TS 3.3.1, Condition D and the existing SQN Units 1 and 2 SR 3.2.4.1, Note 1, and the Note for SQN Units 1 and 2 SR 3.2.4.2.

The SR 3.2.4 and TS 3.3.1 Bases are also revised to reflect the changes.

3.1.1 TS 3.2.4 and SR 3.2.4 Changes

SQN

The existing Note in SQN Units 1 and 2 SR 3.2.4.2 is revised to clarify when the SR is applicable along with the requirement to initially perform this SR within 12 hours. It should be noted that the current wording for the Note in SQN Units 1 and 2 SR 3.2.4.2 is consistent with NUREG-1431, Revision 4 and TSTF-109-A, "Clarify the QPTR surveillances," (Reference 14). However, as noted in Reference 12, the proposed change to the Note in SQN Units 1 and 2 SR 3.2.4.2 and the corresponding frequency is consistent with the existing Note in the Required Actions for TS 3.3.1, Condition D that is being deleted.

The proposed change achieves consistency between the WBN Units 1 and 2 SR 3.2.4.2 and the SQN Units 1 and 2 SR 3.2.4.2 with the exception that after the initial 12-hour surveillance, WBN would continue to perform this SR every 12 hours while SQN would continue to perform the SR in accordance with the Surveillance Frequency Control Program (SFCP) (currently every 12 hours) because WBN does not have an SFCP. This proposed change eliminates potential confusion regarding the completion time to perform SR 3.2.4.2.

Enclosure

WBN

1. The change to Note 1 in WBN Units 1 and 2 SR 3.2.4.1 to change "< 75% RTP" to " \leq 75% RTP" is minor and inconsequential while restoring consistency with the required actions in TS 3.3.1, Condition D (both the current and proposed change), the existing SQN Units 1 and 2 SR 3.2.4.1, Note 1, and NUREG-1431, Revision 4. Further justification is provided in item 3 below.
2. The existing Note in WBN Units 1 and 2 SR 3.2.4.2 limits performing this SR to when one power range channel is inoperable with thermal power \geq 75% RTP. The Note is clarified to require performance only if the input to QPTR from one or more power range neutron flux channels are inoperable with thermal power > 75% RTP. If the inoperable power range channel remains capable of providing a valid input to QPTR, there is no need to perform SR 3.2.4.2. The change from " \geq 75% RTP" to "> 75% RTP" is minor and inconsequential while restoring for consistency with TS 3.3.1, Condition D, the SQN SR 3.2.4.2, and NUREG-1431, Revision 4. Further justification is provided in item 3 below.
3. Currently, there is a conflict between the requirements of WBN Units 1 and 2 TS 3.3.1, Condition D, and the requirements of WBN Units 1 and 2 SR 3.2.4.1, Note 1, and the Note in WBN Units 1 and 2 SR 3.2.4.2 regarding the required actions when thermal power is maintained exactly at 75% RTP. With an inoperable power range neutron flux channel and RTP equal to 75%, current WBN Units 1 and 2 TS 3.3.1, Required Action D.1.2 provides an alternative to performing SR 3.2.4.2 pursuant to WBN Units 1 and 2 TS 3.3.1, Required Action D.2.2. However, current WBN Units 1 and 2 SR 3.2.4.2 applies when a power range neutron flux channel is inoperable and thermal power is equal to 75% RTP. Therefore, the Note to WBN Units 1 and 2 SR 3.2.4.2 needs to be changed to > 75% RTP for consistency.

This change is also consistent with the Standard TS Bases B.3.3.1A in NUREG-1431, Volume 2, Revision 4 that states calculating QPTR every 12 hours, in accordance with SR 3.2.4.2, compensates for the lost monitoring capability due to the inoperable nuclear instrumentation system (NIS) power range channel and allows continued unit operation at power levels > 75% RTP. As noted in item 2, the proposed change to the Note in WBN Units 1 and 2 SR 3.2.4.2 is consistent with the existing Note in SQN Units 1 and 2 SR 3.2.4.2 and NUREG-1431, Revision 4.

To be consistent with the change to the Note in WBN Units 1 and 2 SR 3.2.4.2 (i.e., from " \geq 75% RTP" to "> 75% RTP"), Note 1 in WBN Units 1 and 2 SR 3.2.4.1 also needs to be changed from "< 75% RTP" to " \leq 75% RTP." As noted in item 1, the proposed change to Note 1 in WBN Units 1 and 2 SR 3.2.4.1 is consistent with the existing SQN Units 1 and 2 SR 3.2.4.1, Note 1, and NUREG-1431, Revision 4.

4. The change from "QTPR" to "QPTR" in WBN Unit 1 TS Bases 3.2.4 is an administrative change to correct an abbreviation error.