



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

CNL-19-054

June 6, 2019

10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

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: **Correction to Application for Technical Specification Change Regarding Risk-Informed Justification for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program (WBN-TS-18-14) (EPID L-2018-LLA-0279)**

References: 1. TVA Letter to NRC, CNL-18-067, "Application for Technical Specification Change Regarding Risk-Informed Justification for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program (WBN-TS-18-14)," dated October 12, 2018 (ML18288A352)

2. TVA Letter to NRC, CNL-19-035, "Response to Request for Additional Information Regarding Application for Technical Specification Change Regarding Risk-Informed Justification for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program (WBN-TS-18-14) (EPID L-2018-LLA-0279)," dated May 7, 2019 (ML19127A323)

In Reference 1, Tennessee Valley Authority (TVA) submitted a license amendment request (LAR) to the Technical Specifications (TS) for the Watts Bar Nuclear Plant (WBN), Units 1 and 2 to modify the WBN TS by relocating specific surveillance frequencies to a licensee-controlled program with the implementation of Nuclear Energy Institute (NEI) 04-10, "Risk-Informed Technical Specifications Initiative 5b, Risk-Informed Method for Control of Surveillance Frequencies." In Reference 2, TVA submitted a response to a request for additional information (RAI) regarding this LAR. Subsequent to these submittals, TVA has identified a need to make a correction to the LAR.

Consistent with guidance of Technical Specification Task Force (TSTF) Traveler 425, "Relocate Surveillance Frequencies to Licensee Control – RITSTF Initiative 5b," TVA proposed the relocation of the TS definition of "STAGGERED TEST BASIS" to licensee control, as well as replacement of the surveillance frequencies using this definition with a reference to the Surveillance Frequency Control Program (SFCP). However, it was not recognized that Paragraph d. to WBN Units 1 and 2 TS 5.7.2.20, "Control Room Envelope

Habitability Program,” also included the phrase “STAGGERED TEST BASIS.” This had been previously introduced by a license amendment implementing TSTF-448, “Control Room Habitability” for WBN Unit 1, and with initial issuance of the WBN Unit 2 Operating License. Inasmuch as the Safety Evaluation for TSTF-425 (ML0713604) does not authorize the application of the SFCP to non-surveillance testing intervals, TVA is rescinding the deletion of this definition from TS Section 1.1. This is the approach taken by other licensees who have adopted both TSTF-425 and TSTF-448. The enclosure to this letter provides change instructions to pages of the Reference 1 LAR. This change has no effect on the Reference 2 RAI response.

The enclosure to this letter does not change the no significant hazards consideration or the environmental considerations contained in Reference 1. Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and the enclosure to the Tennessee Department of Environment and Conservation.

There are no new regulatory commitments associated with this submittal. Please address any questions regarding this request to Kimberly Hulvey, TVA Fleet Licensing Manager, at 423-751-3275.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 6th day of June 2019.

Respectfully,



E. K. Henderson
Director, Nuclear Regulatory Affairs

Enclosure: Change Instructions to the October 12, 2018, License Amendment Request

cc (Enclosure):

NRC Regional Administrator - Region II
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

Enclosure

Change Instructions to the October 12, 2018, License Amendment Request

(6 Pages)

Surveillance Requirements versus the WBN Surveillance Requirements is provided in Attachment 7. Attachment 7 provides individual dispositions of each STS and WBN change. Where the changes are identical, a disposition of "No variation" is provided. Similarly, differences due to bracketed information in TSTF-425 compared with unbracketed WBN site-specific information (~~such as the relocation of the Staggered Test Basis definition to licensee control~~) is not a variation. Where a variation is taken, the disposition provides a cross-reference to the paragraph in this Attachment that provides justification.

2.2.1 Administrative Variations

The following variations taken from the TSTF-425 template for NUREG-1431 are considered to be administrative in nature. A cross-reference of the TSTF-425 Surveillance Requirements versus the WBN Surveillance Requirements is included in Attachment 7.

- 2.2.1.1 WBN Surveillance Requirements (SRs) with Surveillance numbers that differ from the corresponding Westinghouse Standard Technical Specifications (NUREG-1431) Surveillances, have wording that is slightly different, and have differing existing Frequencies with a similar testing intent are administrative variations from TSTF-425 with no effect on the NRC staff's model safety evaluation dated July 6, 2009 (74 FR 31996). Attachment 7 itemizes these variations.
- 2.2.1.2 For NUREG-1431 surveillances that are not contained in the WBN TS, the corresponding NUREG-1431 mark-ups included in TSTF-425 for these Surveillances are not applicable to WBN. These are administrative variations from TSTF-425 with no effect on the NRC staff's model safety evaluation dated July 6, 2009 (74 FR 31996).
- 2.2.1.3 Various TSTF-425 Section 3.3 instrumentation surveillances are invoked by Instrumentation Functions contained in tables. The analogous WBN surveillances may have different SR numbers, slightly different wording, and may be invoked by a different set of Functions. These are administrative variations from TSTF-425 with no effect on the NRC staff's model safety evaluation dated July 6, 2009 (74 FR 31996).
- 2.2.1.4 Various WBN Unit 1 surveillances include one-time, historical requirements not depicted on the TSTF-425 markup. While these are not being removed from the WBN Unit 1 TS, they are nonetheless considered to be administrative variations from TSTF-425 with no effect on the NRC staff's model safety evaluation dated July 6, 2009 (74 FR 31996).
- 2.2.1.5 Various WBN plant-specific Surveillances with fixed periodic Frequencies are not contained in NUREG-1431, and therefore, are not included in the NUREG-1431 mark-ups provided in TSTF-425. TVA has assessed these SRs and determined that the relocation of the Frequencies for these SRs is consistent with TSTF-425, Revision 3, and with the NRC staff's model safety evaluation dated July 6, 2009 (74 FR 31996), based on the scope exclusions identified in Section 1.0, "Introduction," of the model safety evaluation. In accordance with TSTF-425, changes to the Frequencies for these Surveillances would be controlled under the SFCP.
- 2.2.1.6 The TS Bases insert provided in TSTF-425 to replace text describing the basis for each frequency relocated to the SFCP has been revised from "The Surveillance

1.1 Definitions

SHUTDOWN MARGIN (SDM) (continued)

would be subcritical from its present condition assuming:

- a. 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
- b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level.

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.

~~STAGGERED TEST BASIS~~

~~A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during n Surveillance Frequency intervals, where n is the total number of systems, subsystems, channels, or other designated components in the associated function.~~

THERMAL POWER

THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT)

A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of required alarm, interlock, display, and trip functions. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the required accuracy.

1.1 Definitions (continued)

| | |
|--|--|
| STAGGERED TEST BASIS | A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during n Surveillance Frequency intervals, where n is the total number of systems, subsystems, channels, or other designated components in the associated function. |
| THERMAL POWER | THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant. |
| TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT) | A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of required alarm, interlock, display, and trip functions. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the required accuracy. |

1.1 Definitions (continued)

| | |
|--|--|
| SHUTDOWN MARGIN (SDM) (continued) | <p>a. 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</p> <p>b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level.</p> |
| 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. |
| THERMAL POWER | THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant. |
| TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT) | A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of required alarm, interlock, display, and trip functions. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the required accuracy. |

Delete this page
from Attachment 4.2

1.1 Definitions (continued)

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|--|---|--|
| THERMAL POWER | THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant. | |
| TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT) | A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of required alarm, interlock, display, and trip functions. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the required accuracy. | |

Revise this page in
Attachment 7

TSTF-425 vs. WBN Cross-Reference

| TSTF-425 Section/ SR No. | NUREG-1431 Technical Specification Section Title/Surveillance Description | WBN Section/ SR No. | WBN Technical Specification Section Title/Surveillance Description | Disposition and Attachment 1 Reference |
|--------------------------------|--|---------------------------|--|---|
| 1.1 | Staggered Test Basis put in brackets | 1.1 | Relocated Staggered Test Basis to licensee control Retained Staggered Test Basis definition | No variation |
| 3.1.1 | Shutdown Margin (SDM) | N/A | N/A | |
| 3.1.1.1 | Verify SDM to be within the limits specified in the COLR. | N/A | N/A | Administrative Variation - Section 2.2.1.2 |
| N/A | N/A | 3.1.1 | Shutdown Margin (SDM) – $T_{avg} > 200^{\circ}\text{F}$ | |
| N/A | N/A | 3.1.1.1 | Verify SDM is $\geq 1.6\% \Delta k/k$. | Administrative Variation - Section 2.2.1.5 |
| N/A | N/A | 3.1.2 | Shutdown Margin (SDM) – $T_{avg} \leq 200^{\circ}\text{F}$ | |
| N/A | N/A | 3.1.2.1 | Verify SDM is $\geq 1.0\% \Delta k/k$. | Administrative Variation - Section 2.2.1.5 |
| 3.1.2 | Core Reactivity | 3.1.3 | Core Reactivity | |
| 3.1.2.1 | Verify measured core reactivity is within $\pm 1\%$ $\Delta k/k$ of predicted values. | 3.1.3.1 | Verify measured core reactivity is within \pm $1\% \Delta k/k$ of predicted values. | Administrative Variation - Section 2.2.1.1 |
| 3.1.4 | Rod Group Alignment Limits | 3.1.5 | Rod Group Alignment Limits | |
| 3.1.4.1 | Verify individual rod positions within alignment limit. | 3.1.5.1 | Verify position of individual rods within alignment limit. | Administrative Variation - Section 2.2.1.1 |
| 3.1.4.2 | Verify rod freedom of movement (trippability) by moving each rod not fully inserted in the core ≥ 10 steps in either direction. | 3.1.5.2 | Verify rod freedom of movement (trippability) by moving each rod not fully inserted in the core ≥ 10 steps in either direction. | Administrative Variation - Section 2.2.1.1 |
| 3.1.5 | Shutdown Bank Insertion Limits | 3.1.6 | Shutdown Bank Insertion Limits | |
| 3.1.5.1 | Verify each shutdown bank is within the insertion limits specified in the COLR. | 3.1.6.1 | Verify each shutdown bank is within the insertion limits specified in the COLR. | Administrative Variation - Section 2.2.1.1 |
| 3.1.6 | Control Bank Insertion Limits | 3.1.7 | Control Bank Insertion Limits | |
| 3.1.6.2 | Verify each control bank insertion is within the insertion limits specified in the COLR. | 3.1.7.2 | Verify each control bank insertion is within the limits specified in the COLR. | Administrative Variation - Section 2.2.1.1 |
| 3.1.6.3 | Verify sequence and overlap limits specified in the COLR are met for control banks not fully withdrawn from the core. | 3.1.7.3 | Verify sequence and overlap limits specified in the COLR are met for control banks not fully withdrawn from the core. | Administrative Variation - Section 2.2.1.1 |
| N/A | N/A | 3.1.9 | Physics Tests Exceptions – Mode 1 | |
| N/A | N/A | 3.1.9.1 | Verify THERMAL POWER is $\leq 85\%$ RTP. | Administrative Variation - Section 2.2.1.5 |