

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

March 18, 2019

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

SUBJECT: WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2 – ISSUANCE OF AMENDMENT NOS. 124 AND 25 RE: APPLICATION TO REVISE TECHNICAL SPECIFICATIONS TO ADOPT TSTF-266-A, REVISION 3 (EPID L-2018-LLA-0209)

Dear Mr. Shea:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 124 to Facility Operating License No. NPF-90 for Watts Bar Nuclear Plant (Watts Bar), Unit 1, and Amendment No. 25 to Facility Operating License No. NPF-96 for Watts Bar, Unit 2. These amendments are in response to your application dated August 1, 2018, as supplemented by letter dated March 4, 2019.

The amendments revise the Technical Specifications (TSs) to adopt, with minor variation, Technical Specification Task Force (TSTF) Traveler TSTF-266-A, Revision 3, "Eliminate the Remote Shutdown System Table of Instrumentation and Controls." Specifically, TVA proposed to delete the comparable TS Table 3.3.4-1, "Remote Shutdown System Instrumentation and Controls," from Watts Bar, Units 1 and 2, TS 3.3.4, "Remote Shutdown System."

A copy of the related safety evaluation is also enclosed. Notice of issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

Robert G. Schaaf, Senior Project Manager Plant Licensing Branch II-2 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Docket Nos. 50-390 and 50-391

Enclosures:

- 1. Amendment No. 124 to NPF-90
- 2. Amendment No. 25 to NPF-96
- 3. Safety Evaluation

cc: Listserv



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-390

WATTS BAR NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 124 License No. NPF-90

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

- A. The application for amendment by Tennessee Valley Authority (TVA, the licensee) dated August 1, 2018, as supplemented by letter dated March 4, 2019, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
- B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
- C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
- D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
- E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

- Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-90 is hereby amended to read as follows:
 - (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A as revised through Amendment No. 124 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. TVA shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance, and shall be implemented by March 24, 2019.

FOR THE NUCLEAR REGULATORY COMMISSION

Undine Shoop, Chief Plant Licensing Branch II-2 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Attachment: Changes to the Operating License and Technical Specifications

Date of Issuance: March 18, 2019

ATTACHMENT TO AMENDMENT NO. 124

WATTS BAR NUCLEAR PLANT, UNIT 1

FACILITY OPERATING LICENSE NO. NPF-90

DOCKET NO. 50-390

Replace page 3 of Facility Operating License No. NPF-90 with the attached revised page 3.

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove Pages 3.3-46 3.3-48 Insert Pages 3.3-46 3.3-48

- (4) TVA, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required, any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis, instrument calibration, or other activity associated with radioactive apparatus or components; and
- (5) TVA, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified or incorporated below.
 - (1) <u>Maximum Power Level</u>

TVA is authorized to operate the facility at reactor core power levels not in excess of 3459 megawatts thermal.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A as revised through Amendment No. 124 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. TVA shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) <u>Safety Parameter Display System (SPDS) (Section 18.2 of SER</u> Supplements 5 and 15)

> Prior to startup following the first refueling outage, TVA shall accomplish the necessary activities, provide acceptable responses, and implement all proposed corrective actions related to having the Watts Bar Unit 1 SPDS operational.

(4) Vehicle Bomb Control Program (Section 13.6.9 of SSER 20)

During the period of the exemption granted in paragraph 2.D.(3) of this license, in implementing the power ascension phase of the approved initial test program, TVA shall not exceed 50% power until the requirements of 10 CFR 73.55(c)(7) and (8) are fully implemented. TVA shall submit a letter under oath or affirmation when the requirements of 73.55(c)(7) and (8) have been fully implemented.

Facility License No. NPF-90

Amendment No. 124

3.3 INSTRUMENTATION

3.3.4 Remote Shutdown System

LCO 3.3.4 The Remote Shutdown System Functions shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

-----NOTE------

Separate Condition entry is allowed for each Function.

	CONDITION		REQUIRED ACTION	COMPLETION TIME
А.	One or more required Functions inoperable.	A.1	Restore required Function to OPERABLE status.	30 days
В.	Required Action and associated Completion Time not met.	B.1 <u>AND</u>	Be in MODE 3.	6 hours
		B.2	Be in MODE 4.	12 hours

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Watts Bar-Unit 1

3.3-48

Amendment 100, 124



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-391

WATTS BAR NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 25 License No. NPF-96

- 1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Tennessee Valley Authority (TVA, the licensee) dated August 1, 2018, as supplemented by letter dated March 4, 2019, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

- 2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF 96 is hereby amended to read as follows:
 - (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A as revised through Amendment No. 25 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. TVA shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented by March 24, 2019.

FOR THE NUCLEAR REGULATORY COMMISSION

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Undine Shoop, Chief Plant Licensing Branch II-2 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Attachment: Changes to the Operating License and Technical Specifications

Date of Issuance: March 18, 2019

ATTACHMENT TO AMENDMENT NO. 25

WATTS BAR NUCLEAR PLANT, UNIT 2

FACILITY OPERATING LICENSE NO. NPF-96

DOCKET NO. 50-391

Replace page 3 of Facility Operating License No. NPF-96 with the attached revised page 3.

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove Pages 3.3-48 3.3-50 3.3-50a Insert Pages 3.3-48 3.3-50

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- C. The license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act, and to the rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified or incorporated below.
 - (1) <u>Maximum Power Level</u>

TVA is authorized to operate the facility at reactor core power levels not in excess of 3411 megawatts thermal.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A as revised through Amendment No. 25 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. TVA shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

- (3) TVA shall implement permanent modifications to prevent overtopping of the embankments of the Fort Loudon Dam due to the Probable Maximum Flood by June 30, 2018.
- (4) PAD4TCD may be used to establish core operating limits for Cycles 1 and 2 only. PAD4TCD may not be used to establish core operating limits for subsequent reload cycles.
- (5) By December 31, 2019, the licensee shall report to the NRC that the actions to resolve the issues identified in Bulletin 2012-01, "Design Vulnerability in Electrical Power System," have been implemented.
- (6) The licensee shall maintain in effect the provisions of the physical security plan, security personnel training and qualification plan, and safeguards contingency plan, and all amendments made pursuant to the authority of 10 CFR 50.90 and 50.54(p).
- (7) TVA shall fully implement and maintain in effect all provisions of the Commission approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The TVA approved CSP was discussed in NUREG-0847, Supplement 28, as amended by changes approved in License Amendment No. 7.
- (8) TVA shall implement and maintain in effect all provisions of the approved fire protection program as described in the Fire Protection Report for the facility, as described in NUREG-0847, Supplement 29, subject to the following provision:

3.3 INSTRUMENTATION

3.3.4 Remote Shutdown System

LCO 3.3.4 The Remote Shutdown System Functions shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more required Functions inoperable.	A.1	Restore required Function to OPERABLE status.	30 days
B. Required Action and associated Completion Time not met.	B.1 <u>AND</u>	Be in MODE 3.	6 hours
	B.2	Be in MODE 4.	12 hours

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 124 TO FACILITY OPERATING LICENSE NO. NPF-90

AND AMENDMENT NO, 25 TO FACILITY OPERATING LICENSE NO. NPF-96

TENNESSEE VALLEY AUTHORITY

WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-390 AND 50-391

1.0 INTRODUCTION

By letter dated August 1, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18213A120), as supplemented by letter dated March 4, 2019 (ADAMS Accession No. ML19064A380), Tennessee Valley Authority (the licensee) submitted a license amendment request (LAR) for amendments to Facility Operating License No. NPF-90 for Watts Bar Nuclear Plant (Watts Bar), Unit 1, and No. NPF-96 for Watts Bar, Unit 2. The amendments would revise the Technical Specifications (TSs) to adopt, with minor variation, Technical Specification Task Force (TSTF) Traveler TSTF-266-A, Revision 3, "Eliminate the Remote Shutdown System Table of Instrumentation and Controls" (ADAMS Accession No. ML040620072). Specifically, TVA proposed to delete the comparable TS Table 3.3.4-1, "Remote Shutdown System Instrumentation and Controls," from Watts Bar, Units 1 and 2, TS 3.3.4, "Remote Shutdown System." Upon the deletion of TS Table 3.3.4-1, the licensee will place the content of this table in licensee-controlled documentation.

The supplemental letter dated March 4, 2019, requested expedited completion of the U.S. Nuclear Regulatory Commission (NRC or Commission) review of the application, did not expand the scope of the application as originally noticed, and did not change the staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on February 12, 2019 (84 FR 3510). However, due to the requested date change, the staff has made a final no significant hazards consideration determination in Section 4.0 of this safety evaluation.

2.0 REGULATORY EVALUATION

In September 1992, the NRC issued five improved Standard Technical Specifications (STS), including NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Volume 1 contains the Specifications for all chapters and sections of the improved STS. Volume 2 contains the Bases for Chapters 2.0 and 3.0, and Sections 3.1 - 3.3 of the improved STS. Volume 3 contains the Bases for Sections 3.4 - 3.9 of the improved STS. The improved STS were developed based on the criteria in the interim Commission Policy Statement on Technical

Specification Improvements for Nuclear Power Reactors, dated February 6, 1987. As stated in the Final Policy Statement:

The purpose of Technical Specifications is to impose those conditions or limitations upon reactor operation necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety by identifying those features that are of controlling importance to safety and establishing on them certain conditions of operation which cannot be changed without prior Commission approval.

The Commission explained that the improved STS have been developed and will be maintained, and that the Commission encourages licensees to use the improved STS as a basis for plant-specific technical specifications, using, to the extent practicable, the wording of the STS and associated Bases. Bases "shall not become part of the technical specifications" (10 CFR 50.36(a)(1)). Instead, the Commission further explained that bases should cite references to appropriate licensing information (e.g., Final Safety Analysis Report (FSAR), Topical Report, etc.) to support the bases, while answering questions such as "why was the LCO [limiting condition for operation] determined to be the lowest functional capability or performance level for the system or component in question necessary for safe operation of the facility and, what are the reasons for the Applicability of the LCO?"

Subsequently, on September 10, 1999, the NRC approved TSTF-266-A (ADAMS Legacy Accession No. 9909160189). This traveler revised standard LCO 3.3.4 and the associated standard bases in NUREG-1431 by removing from the remote shutdown system a table that specified what functions needed to be operable, while leaving intact the overall LCO stating that the remote shutdown system must be operable. Information formerly in the TS was provided in the standard bases. The current revision of NUREG-1431, "Standard Technical Specifications Westinghouse Plants," Revision 4.0, Volume 1, "Specifications" (ADAMS Accession No. ML12100A222), and Volume 2, "Bases" (ADAMS Accession No. ML12100A228), continues to incorporate TSTF-266-A, Revision 3, "Eliminate the Remote Shutdown System Table of Instrumentation and Controls."

2.1 System Description

The Watts Bar Remote Shutdown System (RSS) provides the control room operator with sufficient instrumentation and controls to place and maintain the unit in a safe shutdown condition from a location other than the control room. This capability is necessary to protect against the possibility that the control room becomes inaccessible. The TSs define a safe shutdown condition as Mode 3.

If the control room becomes inaccessible, the operators can establish control in the auxiliary control room, and place and maintain the unit in Mode 3. Not all controls and necessary transfer switches are located in the auxiliary control room. Some controls and transfer switches will have to be operated locally at the switchgear, motor control panels, or other local stations. Some instrumentation serves a dual purpose in providing information to the operator. This instrumentation includes the pressurizer pressure indicator, which can be used to indicate pressurizer pressure and Reactor Coolant System (RCS) wide range pressure, and the steam generator (SG) pressure indicators, which can be used to indicate SG pressure and SG saturation temperature. Additionally, controls for the RCS power operated relief valves can be used for both RCS pressure and inventory control. The unit automatically reaches Mode 3

following a unit shutdown and can be maintained safely in Mode 3 for an extended period of time.

2.2 Proposed Changes

The proposed change is based upon TSTF-266-A as incorporated into NUREG-1431.

TS LCO 3.3.4 currently states:

The Remote Shutdown System Functions in Table 3.3.4-1 shall be OPERABLE.

TS Table 3.3.4-1, "Remote Shutdown System Instrumentation and Controls" lists "FUNCTION/INSTRUMENT OR CONTROL PARAMETER" and "REQUIRED NUMBER OF FUNCTIONS" (saying, for example, that there is one source range neutron flux required).

The licensee proposes to delete Table 3.3.4-1 from the LCO, such that the revised TS LCO 3.3.4 would state:

The Remote Shutdown System Functions shall be OPERABLE.

Upon the deletion of TS Table 3.3.4-1, the licensee will place the content of this table in licensee-controlled documentation.

The term "OPERABLE" is defined (as part of the definition of "OPERABLE-OPERABILITY") in the Watts Bar TS as:

A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).

Therefore, the practical effect of the requested amendment, which deletes from the LCO the table of required instrumentation and controls, is to provide the licensee discretion to determine which RSS Functions "necessary attendant instrumentation [and] controls" or otherwise meet the definition of "OPERABLE-OPERABILITY" as applied to the RSS Functions.

2.3 Applicable Regulatory Requirements

Under 10 CFR 50.90, whenever a holder of a license wishes to amend the license, including TSs in the license, an application for amendment must be filed, fully describing the changes desired. Under 10 CFR 50.92(a), determinations on whether to grant an applied-for license amendment are to be guided by the considerations that govern the issuance of initial licenses or construction permits to the extent applicable and appropriate. Both the common standards for licenses and construction permits in 10 CFR 50.40(a), and those specifically for issuance of operating licenses in 10 CFR 50.57(a)(3), provide that there must be reasonable assurance that the activities at issue will not endanger the health and safety of the public.

The NRC staff identified the following regulatory requirements and guidance as applicable to the proposed amendment:

Per 10 CFR 50.36(c)(2), technical specifications will include items in, among other categories, LCOs. As described in 10 CFR 50.36(c)(2)(i), LCOs "are the lowest functional capability or performance levels of equipment required for safe operation of the facility."

Section 50.36(c)(2)(ii) of 10 CFR states that:

(ii) A technical specification limiting condition for operation of a nuclear reactor must be established for each item meeting one or more of the following criteria:

- (A) Criterion 1. Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
- (B) Criterion 2. A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- (C) Criterion 3. A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- (D) Criterion 4. A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

Section 50.36(c)(3) of 10 CFR requires, in part, that the TSs include surveillance requirements (SRs) to assure that the LCOs will be met.

Watts Bar was designed to meet the intent of the "Proposed General Design Criteria for Nuclear Power Plant Construction Permits," published in July 1967. The Watts Bar construction permit was issued in January 1973. The Watts Bar Updated Final Safety Analysis Report (UFSAR) (ADAMS Package Accession No. ML19039A208), however, addresses the General Design Criteria (GDC) published as Appendix A to 10 CFR Part 50 in July 1971, including Criterion 4, as amended October 27, 1987. Based on this information, the NRC staff considered the following GDC for this review:

Criterion 19, Control Room, which requires, in part, that:

Equipment at appropriate locations outside the control room shall be provided (1) with a design capability for prompt hot shutdown of the reactor, including necessary instrumentation and controls to maintain the unit in a safe condition during hot shutdown, and (2) with a potential capability for subsequent cold shutdown of the reactor through the use of suitable procedures.

3.0 TECHNICAL EVALUATION

To review the LAR, the NRC staff considered whether the level of detail presently in the LCO (i.e., the detailed information on instruments and controls, etc. in Table 3.3.4-1) is required by the Commission's regulations, particularly by 10 CFR 50.36(c)(2)(ii). In determining if the amendment will be issued, the staff was also guided by consideration of whether the amended TSs would provide reasonable assurance that the health and safety of the public will not be endangered. The staff also compared TVA's plant-specific request with NUREG-1431, "Standard Technical Specifications Westinghouse Plants," Revision 4.0, Volume 1, "Specifications," and Volume 2, "Bases," which incorporate TSTF-266-A, Revision 3, "Eliminate the Remote Shutdown System Table of Instrumentation and Controls." Through this comparison, the staff observed that the licensee was following the guidance in TSTF-266-A, with the exception of the variation identified in the LAR.

3.1 Evaluation of Compliance with 10 CFR Part 50, Appendix A, GDC 19

Watts Bar UFSAR Section 3.1.2 discusses compliance with GDC 19, and states:

In the unlikely event that control room occupancy becomes impossible, provisions have been made to bring the reactor units to, and maintain them in, a hot shutdown condition, from a location external to the main control room.

The licensee has not proposed changes to this position. The change to be accomplished via the amendment is that, in place of being bound by a TS table specifying the required RSS functions, the proposed amendment would eliminate the specifics in the table. The RSS Functions are still required to meet the applicable definition of "OPERABLE-OPERABILITY" in TS Section 1.1, meaning that, among other things, the RSS Functions must be capable of performing their specified safety functions, and all necessary attendant instrumentation, controls, and normal or emergency electrical power must be capable of performing their support functions. Thus, TS LCO 3.3.4 would continue to provide reasonable assurance of protection of public health and safety. Both under the existing TS and under the proposed TS, the RSS Functions must be OPERABLE; the revised LCO 3.3.4 will, therefore, still satisfy the applicable requirements of GDC 19.

3.2 Evaluation of Compliance with 10 CFR Part 50.36

The NRC staff applied the four criteria in 10 CFR 50.36(c)(2)(ii)(A)-(D) to the proposed change to LCO 3.3.4. In the LAR, the licensee states that the specifics within the RSS instrument table itself do not meet any of the four criteria of 10 CFR 50.36(c)(2)(ii). The staff's analysis of that statement follows.

Criterion 1 requires establishing an LCO for "Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary." Because the RSS Functions do not involve indications in the control room, Criterion 1 is not applicable to the proposed change.

Criterion 2 requires establishing an LCO for "A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier." The RSS has not been identified as an initial condition of a design basis accident or transient

analysis that challenges the integrity of a fission product barrier. The purpose of the RSS at Watts Bar is to enable a normal shutdown of the plant from outside the control room in the event the control room becomes inhabitable. Therefore, Criterion 2 is not applicable to the proposed change.

Criterion 3 requires establishing an LCO for "A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier." The RSS is not part of the primary success path designated to mitigate design basis accidents or transients that challenges the integrity of a fission product barrier. The purpose of the RSS at Watts Bar is to enable a normal shutdown of the plant from outside the control room in the event the control room becomes inhabitable. Therefore, Criterion 3 is not applicable to the proposed change.

Criterion 4 requires establishing an LCO for "A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety." As stated in the Watts Bar and STS TS 3.3.4 Bases, the RSS is considered an important contributor to the reduction of unit risk to accidents. The LCO will still require the RSS Functions to meet the applicable definition of "OPERABLE-OPERABILITY," meaning that, among other things, the RSS Functions must be capable of performing their specified safety functions, and all necessary attendant instrumentation, controls, and normal or emergency electrical power must be capable of performing their support functions. The definition of "OPERABLE-OPERABILITY" in TS Section 1.1 and the RSS TS LCO 3.3.4 will continue to provide reasonable assurance of protection of the public health and safety. Therefore, the proposed change does not affect Criterion 4.

As discussed above, the LCO, as modified by the proposed change to delete Table 3.3.4-1, will continue to require the operability of the RSS Functions. The required RSS instrumentation and control functions will be specified in licensee-controlled design basis documentation, as discussed in Watts Bar UFSAR Section 7.4, "Systems Required for Safe Shutdown." The staff evaluated the current TS 3.3.4 SRs and confirmed that, with the proposed change, the SRs will continue to assure that the design basis-required supporting instrumentation and controls will be capable of performing their support functions. Therefore, the SRs will continue to assure that the LCO will be met.

3.3 Evaluation of Variation from TSTF-266-A

In Section 2.3 of the LAR, the licensee identified a variation from TSTF-266-A for Table 3.3.4-1. As stated in the NRC-approved TSTF-266-A as a Reviewer's Note, Table 3.3.4-1 is provided for illustrative purposes only and does not attempt to encompass every Function at every unit, but does contain the types of Functions commonly found. The Watts Bar Units 1 and 2 TS Table 3.3.4-1 uses a different terminology, which is specific to these units, than the terminology used in the TSTF. This site-specific variation is appropriate and expected; therefore, the staff finds the variation from TSTF-266-A acceptable.

4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION

The NRC's regulation in 10 CFR 50.92(c) states that the NRC may make a final determination, under the procedures in 10 CFR 50.91, that a license amendment involves no significant hazards consideration if operation of the facility, in accordance with the amendment, would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. An evaluation of the issue of no significant hazards consideration is presented below.

1. Does the proposed amendment involve a significant increase in the probability or consequence of an accident previously evaluated?

Response: No.

The proposed change removes the list of Remote Shutdown System (RSS) instrumentation and controls from the TS. The TS continue to require that the instrumentation and controls be operable. The location of the list of Remote Shutdown System instrumentation and controls is not an initiator to any accident previously evaluated. The proposed change will have no effect on the mitigation of any accident previously evaluated because the instrumentation and controls continue to be required to be operable.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of any accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change does not involve a physical alteration to the plant (i.e., no new or different type of equipment will be installed) or a change to the methods governing normal plant operation. The changes do not alter the assumptions made in the safety analysis.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed change removes the list of RSS instrumentation and controls from the TS. No changes to required RSS instrumentation and control functions are proposed. The TSs will continue to require that the RSS be maintained operable. The continued requirement for operability of the RSS will ensure the capability to bring the reactor units to, and maintain them in, a hot shutdown condition, from a location external to the main control room. The change does not alter any design basis or safety limit.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above evaluation, the NRC staff concludes that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff has made a final determination that no significant hazards consideration is involved for the proposed amendment and that the amendment should be issued as allowed by the criteria contained in 10 CFR 50.91.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Tennessee State official was notified of the proposed issuance of the amendments on March 7, 2019. The State official had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding published in the *Federal Register* on February 12, 2019 (84 FR 3510). The Commission has made a final finding that the amendments involve no significant hazards consideration. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

7.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Calvin Cheung

Date: March 18, 2019

SUBJECT: WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2 – ISSUANCE OF AMENDMENT NOS. 124 AND 25 RE: APPLICATION TO REVISE TECHNICAL SPECIFICATIONS TO ADOPT TSTF-266-A, REVISION 3 (EPID L-2018-LLA-0209) DATED MARCH 18, 2019

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