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

November 22, 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: WATTS BAR NUCLEAR PLANT, UNIT 2 - ISSUANCE OF AMENDMENT NO. 57 TO REVISE TECHNICAL SPECIFICATIONS TO CHANGE THE STEAM GENERATOR SECONDARY SIDE WATER LEVEL (EPID L-2021-LLA-0032)

Dear Mr. Barstow:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 57 to Facility Operating License No. NPF-96 for the Watts Bar Nuclear Plant (Watts Bar), Unit 2. This amendment is in response to your application dated March 2, 2021.

The amendment revises Watts Bar, Unit 2, Technical Specification (TS) to change the steam generator (SG) water level requirement in the Watts Bar, Unit 2 TS Limiting Condition for Operation (LCO) 3.4.7.b, "RCS Loops – MODE 5, Loops Filled," and Watts Bar, Unit 2 Surveillance Requirements (SR) 3.4.5.2, "RCS Loops – MODE 3," SR 3.4.6.3, "RCS Loops – MODE 4," and SR 3.4.7.2 from greater than or equal to 6 percent (%) to greater than or equal to 32%. The proposed change is needed to support the Watts Bar, Unit 2 Replacement Steam Generator (RSG) project scheduled for the Watts Bar, Unit 2 Cycle 4 Refueling Outage (U2R4), which is scheduled to commence in spring 2022.

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

Sincerely,

***/RA/***

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

Docket No. 50-391

Enclosures:
1. Amendment No. 57 to NPF-96
2. Safety Evaluation

cc: Listserv

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. 57
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 March 2, 2021, 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. 57 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 prior to the completion of the Watts Bar, Unit 2, Cycle 4 Refueling Outage (U2R4).

FOR THE NUCLEAR REGULATORY COMMISSION

David J. Wrona

Digitally signed by David J. Wrona
Date: 2021.11.22 13:43:14 -05'00'

David J. Wrona, 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: November 22, 2021

ATTACHMENT TO AMENDMENT NO. 57

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. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number and contains marginal lines indicating the area of change.

| Remove Pages | Insert Pages |
|---|---|
| 3.4-8 | 3.4-8 |
| 3.4-11 | 3.4-11 |
| 3.4-12 | 3.4-12 |
| 3.4-13 | 3.4-13 |

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) Maximum Power Level

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. 57 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 until the WBN Unit 2 steam generators are replaced with steam generators equivalent to the existing steam generators at WBN Unit 1. FULL SPECTRUM LOCA Methodology shall be implemented when the WBN Unit 2 steam generators are replaced with steam generators equivalent to the existing steam generators at WBN Unit 1.

(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:

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | | COMPLETION TIME |
|---|---|---|---|
| C. One required RCS loop not in operation, and reactor trip breakers closed and Rod Control System capable of rod withdrawal. | C.1 | Restore required RCS loop to operation. | 1 hour |
| | OR | | |
| | C.2 | De-energize all control rod drive mechanisms (CRDMs). | 1 hour |
| D. All RCS loops inoperable. | D.1 | De-energize all CRDMs. | Immediately |
| OR | AND | | |
| No RCS loop in operation. | D.2 | Suspend all operations involving a reduction of RCS boron concentration. | Immediately |
| | AND | | |
| | D.3 | Initiate action to restore one RCS loop to OPERABLE status and operation. | Immediately |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | | FREQUENCY |
|---|---|---|
| SR 3.4.5.1 | Verify required RCS loops are in operation | In accordance with the Surveillance Frequency Control Program |
| SR 3.4.5.2 | Verify steam generator secondary side water levels are greater than or equal to 32% narrow range for required RCS loops. | In accordance with the Surveillance Frequency Control Program |

(continued)

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | | FREQUENCY |
|---|---|---|
| SR 3.4.6.1 | Verify two RCS loops are in operation when the rod control system is capable of rod withdrawal. | In accordance with the Surveillance Frequency Control Program |
| SR 3.4.6.2 | Verify one required RHR or RCS loop is in operation when the rod control system is not capable of rod withdrawal. | In accordance with the Surveillance Frequency Control Program |
| SR 3.4.6.3 | Verify SG secondary side water levels are greater than or equal to 32% narrow range for required RCS loops. | In accordance with the Surveillance Frequency Control Program |
| SR 3.4.6.4 | Verify correct breaker alignment and indicated power are available to the required pump that is not in operation. | In accordance with the Surveillance Frequency Control Program |

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 RCS Loops - MODE 5, Loops Filled

LCO 3.4.7 One residual heat removal (RHR) loop shall be OPERABLE and in operation, and either:

a. One additional RHR loop shall be OPERABLE; or

b. The secondary side water level of at least two steam generators (SGs) shall be greater than or equal to 32% narrow range.

----------NOTES----------

1. One required RHR loop may be inoperable for up to 2 hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation.

2. No reactor coolant pump shall be started with one or more RCS cold leg temperatures less than or equal to the COMS arming temperature specified in the PTLR unless the secondary side water temperature of each SG is $\leq$ 50°F above each of the RCS cold leg temperatures.

3. All RHR loops may be removed from operation during planned heatup to MODE 4 when at least one RCS loop is in operation.

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APPLICABILITY: MODE 5 with RCS loops filled.

ACTIONS

| CONDITION | REQUIRED ACTION | | COMPLETION TIME |
|---|---|---|---|
| A. One RHR loop inoperable.<br><br>AND<br><br>Required SGs secondary side water levels not within limits. | A.1 | Initiate action to restore a second RHR loop to OPERABLE status.<br><br>OR | Immediately |
| | A.2 | Initiate action to restore required SG secondary side water levels to within limits. | Immediately |

(continued)

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | | COMPLETION TIME |
|---|---|---|---|
| B. Required RHR loops inoperable.<br><br>OR<br><br>No RHR loop in operation. | B.1 | Suspend all operations involving a reduction of RCS boron concentration. | Immediately |
| | AND | | |
| | B.2 | Initiate action to restore one RHR loop to OPERABLE status and operation. | Immediately |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | | FREQUENCY |
|---|---|---|
| SR 3.4.7.1 | Verify one RHR loop is in operation. | In accordance with the Surveillance Frequency Control Program |
| SR 3.4.7.2 | Verify SG secondary side water level is greater than or equal to 32% narrow range in required SGs. | In accordance with the Surveillance Frequency Control Program |
| SR 3.4.7.3 | Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation. | In accordance with the Surveillance Frequency Control Program |

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# SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

# RELATED TO AMENDMENT NO. 57

# TO FACILITY OPERATING LICENSE NO. NPF-96

# TENNESSEE VALLEY AUTHORITY

# WATTS BAR NUCLEAR PLANT, UNIT 2

# DOCKET NO. 50-391

## 1.0 INTRODUCTION

By letter dated March 2, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21061A347), the Tennessee Valley Authority (TVA, the licensee), submitted a license amendment request (LAR) to Facility Operating License No. NPF-96 for the Watts Bar Nuclear Plant (WBN), Unit 2. The licensee requested to modify Technical Specifications (TS) to change the steam generator (SG) water level requirement in WBN Unit 2 TS Limiting Condition for Operation (LCO) 3.4.7.b, "RCS Loops – MODE 5, Loops Filled," and WBN Unit 2 Surveillance Requirements (SR) 3.4.5.2, "RCS Loops – MODE 3," SR 3.4.6.3, "RCS Loops – MODE 4," and SR 3.4.7.2 from greater than or equal to 6 percent (%) to greater than or equal to 32%. Due to differences in tube lengths and narrow range level tap locations between the original SG (OSG) and the Replacement SG (RSG), the proposed change is needed to support the WBN Unit 2 RSG project scheduled for the WBN Unit 2 Cycle 4 Refueling Outage (U2R4), which is scheduled to commence in spring 2022.

From June 1 to 3, 2021, the U.S. Nuclear Regulatory Commission (NRC, Commission) staff conducted an audit to support its review of the amendment request, as discussed in the NRC staff's audit plan dated May 24, 2021 (ADAMS Accession No. ML21144A074), and audit summary dated August 13, 2021 (ADAMS Accession No. ML21217A222).

## 2.0 REGULATORY EVALUATION

### 2.1 System Description

As stated by the licensee in Section 3.1 of the Enclosure to the LAR, "[t]he WBN Unit 2 RSGs are essentially the same as the WBN Unit 1 RSGs as described in Section 3.1 [of TVA letter to NRC, CNL-20-053, "Application to Revise Watts Bar Nuclear Plant (WBN), Unit 1 Technical Specifications for Steam Generator Tube Inspection Frequency and to Adopt [Technical Specification Task Force] TSTF-510, 'Revision to Steam Generator Program Inspection Frequencies and Tube Sample Selection,' (WBN-390-TS-20-012)," dated July 17, 2020 (ADAMS Accession No. ML20199M346)]. As stated in letter CNL-20-053, the licensee

described the RSGs as follows:

> The WBN Unit 1 RSGs have a vertical shell and U-tube evaporator with integral moisture separating equipment. The reactor coolant flows through the inverted U-tubes, entering and leaving through the nozzles located in the hemispherical bottom head of the SG. The head is divided into inlet and outlet chambers by a vertical partition plate extending from the head to the tubesheet. Steam is generated on the shell side and flows upward through the moisture separators to the outlet nozzle at the top of the vessel. Details of the WBN, Unit 1 RSGs are described in the Updated Final Safety Analysis Report (UFSAR) Section 5.5.2, "Steam Generator." Materials of construction for the WBN, Unit 1 RSGs are provided in UFSAR Table 5.2-8, "Reactor Coolant Pressure Boundary Materials Class 1 Primary Components." Materials are selected and fabricated in accordance with the requirements of the American Society of Mechanical Engineers (ASME) Code Sections III.
>
> The WBN Unit 1 SGs were replaced during the WBN U1R7 outage in Fall 2006. WBN Unit 1 is a four-loop plant with recirculating Westinghouse Model 68AXP RSGs equipped with 5,128 Alloy 690 thermally treated (Alloy 690TT) tubes arranged in a triangular pitch forming a U-tube bundle. The tubes have an outer diameter of 0.75 inches with a 0.043-inch nominal wall thickness. The tube plugging limit at WBN, Unit 1 is 12% or 615 tubes per RSG. The tubesheet base metal is clad with Alloy 690 material. Tube rows 1 through 38 received a supplemental heat treat stress relief following bending. Each tube is hydraulically expanded into the tubesheet and welded to the clad at the primary face of the tubesheet. There are twelve advanced tube support grids (ATSG) consisting of a grid of slotted bars, which provide horizontal support to the straight leg of every tube. The tubes are supported in the U-bend region by ventilated flat bar support trees with varying numbers of vertical and diagonal support elements depending on the tube location.

2.2 Description of Proposed Changes

The proposed amendment would revise the WBN Unit 2 TS as follows:

- The SG secondary side water levels in TS LCO 3.4.7.b, SRs 3.4.5.2, 3.4.6.3, and 3.4.7.2 are revised from greater than or equal to 6% to greater than or equal to 32%.
- In SR 3.4.5.2, the greater than or equal to symbol, ≥, is being spelled out as an administrative change for consistency with TS LCO 3.4.7.b and SRs 3.4.6.3 and 3.4.7.2.

The licensee proposed to revise WBN Unit 2 TS as follows:

LCO 3.4.7.b currently states:

> The secondary side water level of at least two steam generators (SGs) shall be greater than or equal to 6% narrow range.

LCO 3.4.7.b will state:

> The secondary side water level of at least two steam generators (SGs) shall be greater than or equal to 32% narrow range.

SR 3.4.5.2, currently states:

> Verify steam generator secondary side water levels are ≥ 6% narrow range for required RCS loops.

SR 3.4.5.2, will state:

> Verify steam generator secondary side water levels are greater than or equal to 32% narrow range for required RCS loops.

SR 3.4.6.3, currently states:

> Verify SG secondary side water levels are greater than or equal to 6% narrow range for required RCS loops.

SR 3.4.6.3, will state:

> Verify SG secondary side water levels are greater than or equal to 32% narrow range for required RCS loops.

SR 3.4.7.2, currently states:

> Verify SG secondary side water level is greater than or equal to 6% narrow range in required SGs.

SR 3.4.7.2, will state:

> Verify SG secondary side water level is greater than or equal to 32% narrow range in required SGs.

2.3 Applicable Regulatory Requirements

The NRC staff's evaluation is based upon the following regulations:

Section 182.a of the Atomic Energy Act of 1954, as amended, requires nuclear power plant operating licenses to include TSs as part of any license. The regulation, Title 10 of the *Code of Federal Regulations* (10 CFR) section 50.36(a)(1), requires an applicant for an operating license to submit proposed TSs in accordance with the requirements of 10 CFR 50.36 and include a "summary statement of the bases or reasons for such specifications, other than those covering administrative controls." However, per 10 CFR 50.36(a)(1), these TS bases "shall not become part of the technical specifications."

Section 50.36(b) of 10 CFR requires that each license authorizing reactor operation include TSs derived from the analyses and evaluation included in the safety analysis report and amendments thereto.

Section 50.36(c) of 10 CFR requires that TSs include certain items. Section 50.36(c)(2)(i) of 10 CFR requires that TSs must include LCOs, which are the lowest functional capability or performance levels of equipment required for safe operation of the facility. That provision also requires that when an LCO of a nuclear reactor is not met, the licensee must shut down the reactor or follow any remedial action permitted by the TSs until the condition is met.

Section 50.36(c)(3) of 10 CFR requires that TSs include SRs, which are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met.

## 3.0 TECHNICAL EVALUATION

### 3.1 Background

In determining whether an amendment to a license will be issued, the Commission is guided by the considerations that govern the issuance of initial licenses to the extent applicable and appropriate. The NRC staff evaluated the licensee's application to determine if the proposed changes are consistent with the regulations, guidance, and licensing and design basis information discussed in Section 2.3 of this safety evaluation. The NRC staff reviewed the licensee's statements in the LAR and the relevant sections of the licensee's UFSAR and TS Bases to determine if the proposed changes are acceptable.

The WBN Unit 2 is a Westinghouse four-loop pressurized water reactor. The reactor coolant is circulated through four reactor coolant system (RCS) loops, connected in parallel to the reactor vessel, each containing an SG and a reactor coolant pump (RCP). The RCPs circulate the water through the reactor vessel to the SGs at a sufficient rate to ensure proper heat transfer to prevent fuel damage. The function of the SGs is to transfer heat produced in the reactor core to the secondary side of the plant. The changes proposed by the licensee are applicable to operating Modes 3 (hot standby), 4 (hot shutdown), and 5 (cold shutdown). To assure that the SGs are able to perform this function, the water level on the secondary side of the SGs is maintained above the top of SG tubes. In addition to decay heat removal, the SGs are needed to remove heat in the event of any potential power excursions. As stated in the WBN Unit 2 TS Bases, whenever the reactor trip breakers are in the closed position and the control rod drive mechanisms are energized, an inadvertent rod withdrawal from subcritical, resulting in a power excursion, is possible. The specific operating mode, along with other considerations as noted in the associated LCOs determines the number of SGs required to be operable. In all cases, the required SGs need to have the water level above the top of the tubes to be operable. The proposed changes include LCOs or SRs in TS 3.4.5, "RCS Loops – MODE 3," TS 3.4.6, "RCS Loops – MODE 4," and TS 3.4.7, "RCS Loops – MODE 5, Loops Filled."

### 3.2 Steam Generator Narrow Range Level

As stated by the licensee in the LAR, the external envelope and interfaces with existing piping and support structures for the RSGs are the same as for the OSGs, except that the elevation of several RSG flow and level instrument taps (upper taps and lower narrow range taps) will increase by approximately 5 feet. Due to these differences, the narrow range measured water level point at which the SG tubes are covered differs between the OSGs and RSGs.

The SG narrow range level instrumentation uses the differential pressure between two points to determine level. This type of instrumentation is subject to errors due to density changes in the SG fluid. As stated by the licensee, the two main sources of error are 1) pressure and temperature changes in the vessel resulting in a change in the differential pressure across the vessel and 2) a temperature change in the environment around the reference leg.

To determine the narrow range level where the SG tubes are covered, the licensee performed a demonstrated accuracy calculation applicable to each SG narrow range water level indication

instrument loop. The demonstrated accuracy calculation summarizes the design inputs and uncertainty analyses used to establish the 32% of span value as the measured secondary side narrow range water level needed to cover the tubes for the RSGs during Modes 3, 4, and 5.

To quantify the effects of process pressure variations from nominal calibrated conditions, the uncertainty as a percentage of the RSG narrow range level span was evaluated by the licensee for the full range of reference leg temperatures and secondary side pressures. The RSG narrow range level channel uncertainty was determined by the licensee by combining the uncertainty associated with the various temperature components (e.g., sensor drift, sensor temperature, indicator drift, indicator calibration accuracy) using the square root of the sum of the squares methodology.

The licensee computed the minimum required RSG narrow range level without uncertainties, as a percentage of span, based on the physical geometry of the RSG, including the locations of the level taps and top of the SG tubes. To determine the TS minimum required narrow range level, the process pressure uncertainty and narrow range level channel uncertainty were added to the minimum narrow range level without uncertainties. The minimum required narrow range level surveillance requirement (including instrument uncertainties) was calculated by the licensee to be 31.28%. The licensee rounded up to 32% to define an easily readable value on the indicator and add some additional conservatism. During the regulatory audit, the NRC staff reviewed the demonstrated accuracy calculation and found that the calculation to be performed appropriately.

The proposed change in the required percentage of the SG narrow range level from greater than or equal to 6% to greater than or equal to 32% ensures that the RSGs are operable and available to act as a heat sink for both normal operations and anticipated operational occurrences. This change does not affect whether the instrumentation used to monitor SG level will be available, nor does it affect the transmission of the level signal to the reactor protection circuitry. Therefore, the NRC staff finds the proposed change does not affect the ability of the protection system to mitigate accident and transient consequences.

3.3 Other uses of SG narrow range level in TS

In addition to the changes proposed by the licensee, NRC staff notes that the SG narrow range level is used as part of the Reactor Trip System Instrumentation (Function 13 in Table 3.3.1-1 of TS, with a nominal trip setpoint of 17% narrow range span) and Engineered Safety Feature Actuation System Instrumentation (Function 6.b in Table 3.3.2-1 of TS, with a nominal trip setpoint of 17%). Given the change from 6% (with the OSGs) to 32% (with the RSGs) of narrow range level necessary to keep the SG tubes covered, the NRC staff asked the licensee during the regulatory audit why the reactor trip on SG water level low-low setpoint isn't being changed. The licensee pointed out that the transients that credit a reactor trip on the steam generator water level low-low setpoint assume a conservatively low setpoint of 0% narrow range span as noted in UFSAR Table 15.1-3. Table 7.2-4 of the WBN Unit 2 UFSAR references the Chapter 15 accident analysis in which the low-low SG water level trip may be utilized, either as a primary or backup trip. These include Loss of Normal Feedwater (15.2.8), Loss of Offsite Power to the Station Auxiliaries (LOOP) (15.2.9), Major Rupture of a Main Feedwater Pipe (15.4.2.2), and Loss of External Electrical Load and/or Turbine Trip (15.2.7).

NRC staff reviewed the appropriate sections of the UFSAR and confirmed that the licensee used a setpoint of 0% narrow range. The NRC staff finds it conservative to perform analysis with a reactor trip setpoint of 0% narrow range level while the actual setpoint in TS is 17%. The licensee also stated during the regulatory audit that these events were either evaluated or

reanalyzed for the RSGs with acceptable results. The NRC staff did not pursue this further as it does not affect the proposed changes in the LAR.

### 3.4 Summary and Technical Conclusion

Based on physical differences between the OSGs and the RSGs, the measured narrow range water level where the RSG tubes are covered differs from that in the current WBN Unit 2 TS (with the OSGs). The licensee performed calculations and analyses to determine the appropriate required narrow range level, including instrument uncertainty, for the RSGs. The NRC staff finds the licensee appropriately calculated the RSG narrow range level at the top of the tubes, including uncertainty, to demonstrate operability (i.e., water level in the RSGs cover the tubes) of the RSGs to transfer heat produced in the core to the secondary side of the plant. Therefore, the NRC staff concludes that the proposed changes are acceptable, and that the TSs, as revised, will continue to meet the requirements of 10 CFR 50.36(c)(2)(i) and 10 CFR 50.36(c)(3).

## 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Tennessee State official was notified of the proposed issuance of the amendment on September 9, 2021. The Tennessee State official had no comments.

## 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes SRs. 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 previously issued a proposed finding that the amendment involves no significant hazards consideration as published in the *Federal Register* on June 15, 2021 (86 FR 31738), and there has been no public comment on such finding. 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.

## 6.0 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: R. Beaton, NRR

Date: November 22, 2021

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 - ISSUANCE OF AMENDMENT NO. 57 TO REVISE TECHNICAL SPECIFICATIONS TO CHANGE THE STEAM GENERATOR SECONDARY SIDE WATER LEVEL (EPID L-2021-LLA-0032) DATED NOVEMBER 22, 2021

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**ADAMS Accession No.: ML21260A210** ***By Memo**

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|---|---|---|---|---|
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| DATE | 09/17/2021 | 09/24/2021 | 08/17/2021 | 09/22/2021 |
| OFFICE | NRR/DEX/EICB/BC | OGC – NLO | NRR/DORL/LPL2-2/BC | NRR/DORL/LPL2-2/PM |
| NAME | RStattel for MWaters | MWright | DWrona | MMahoney |
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