



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

July 12, 2022

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

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF  
AMENDMENT NOS. 357 AND 351 REGARDING REVISION TO TECHNICAL  
SPECIFICATION TABLE 3.3.1-1, "REACTOR TRIP SYSTEM  
INSTRUMENTATION" (EPID L-2021-LLA-0200)

Dear Mr. Barstow:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 357 to Renewed Facility Operating License No. DPR-77, and Amendment No. 351 to Renewed Facility Operating License No. DPR-79, for the Sequoyah Nuclear Plant, Units 1 and 2, respectively. These amendments are in response to your application dated October 29, 2021.

The amendments revise Technical Specification Table 3.3.1-1, "Reactor Trip System Instrumentation," to delete the Function 3.b requirements for the Power Range High Negative Flux Rate Trip function. A copy of our related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's monthly *Federal Register* notice.

Sincerely,

*/RA/*

Perry H. Buckberg, Senior Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosures:

1. Amendment No. 357 to DPR-77
2. Amendment No. 351 to DPR-79
3. Safety Evaluation

cc: Listserv



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 357  
Renewed License No. DPR-77

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Tennessee Valley Authority (the licensee) dated October 29, 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 Title 10 of the *Code of Federal Regulations* (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 Renewed Facility Operating License No. DPR-77 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 357 are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

David J. Wrona, Chief  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Renewed Facility Operating License  
and Technical Specifications

Date of Issuance: July 12, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 357

SEQUOYAH NUCLEAR PLANT, UNIT 1

RENEWED FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Replace page 3 of the Renewed Facility Operating License with the attached page 3.

Replace the following page of the Appendix A Technical Specifications with the attached page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove Page  
3.3.1-14

Insert Page  
3.3.1-14

- (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (4) 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 or instrument calibration or associated with radioactive apparatus or components; and
- (5) 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 Sequoyah and Watts Bar Unit 1 Nuclear Plants.

C. This renewed 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

The Tennessee Valley Authority is authorized to operate the facility at reactor core power levels not in excess of 3455 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 357 are hereby incorporated into the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Initial Test Program

The Tennessee Valley Authority shall conduct the post-fuel-loading initial test program (set forth in Section 14 of Tennessee Valley Authority's Final Safety Analysis Report, as amended), without making any major modifications of this program unless modifications have been identified and have received prior NRC approval. Major modifications are defined as:

- a. Elimination of any test identified in Section 14 of TVA's Final Safety Analysis Report as amended as being essential;
- b. Modification of test objectives, methods, or acceptance criteria for any test identified in Section 14 of TVA's Final Safety Analysis Report as amended as being essential;

Table 3.3.1-1 (page 1 of 9)  
Reactor Trip System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE	NOMINAL TRIP SETPOINT
1. Manual Reactor Trip	1,2	2	B	SR 3.3.1.12	NA	NA
	3 <sup>(a)</sup> , 4 <sup>(a)</sup> , 5 <sup>(a)</sup>	2	C	SR 3.3.1.12	NA	NA
2. Power Range Neutron Flux						
a. High	1,2	4	D	SR 3.3.1.1 SR 3.3.1.2 SR 3.3.1.7 <sup>(b)(c)</sup> SR 3.3.1.11 <sup>(b)(c)</sup> SR 3.3.1.14	≤ 111.4% RTP	109% RTP
b. Low	1 <sup>(d)</sup> , 2	4	E	SR 3.3.1.1 SR 3.3.1.8 <sup>(b)(c)</sup> SR 3.3.1.11 <sup>(b)(c)</sup> SR 3.3.1.14	≤ 27.4% RTP	25% RTP
3. Power Range Neutron Flux Rate High Positive Rate	1,2	4	E	SR 3.3.1.7 <sup>(b)(c)</sup> SR 3.3.1.11 <sup>(b)(c)</sup>	≤ 6.3% RTP with time constant ≥ 2 sec	5% RTP with time constant ≥ 2 sec

- (a) With Rod Control System capable of rod withdrawal or one or more rods not fully inserted.
- (b) If the as-found channel setpoint is outside its predefined as-found tolerance, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service.
- (c) The instrument channel setpoint shall be reset to a value that is within the as-left tolerance around the Nominal Trip Setpoint (NTSP) at the completion of the surveillance, otherwise, the channel shall be declared inoperable. Setpoints more conservative than the NTSP are acceptable provided that the as-found and as-left tolerances apply to the actual setpoint implemented in the Surveillance procedures (field setting) to confirm channel performance. The methodologies used to determine the as-found and as-left tolerances are specified in UFSAR Section 7.1.2.
- (d) Below the P-10 (Power Range Neutron Flux) interlocks.



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-328

SEQUOYAH NUCLEAR PLANT, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 351  
Renewed License No. DPR-79

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Tennessee Valley Authority (the licensee) dated October 29, 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 Renewed Facility Operating License No. DPR-79 is hereby amended to read as follows:

- (2) Technical Specifications

- The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 351 are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

David J. Wrona, Chief  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Renewed Facility Operating License  
and Technical Specifications

Date of Issuance: July 12, 2022



ATTACHMENT TO LICENSE AMENDMENT NO. 351

SEQUOYAH NUCLEAR PLANT, UNIT 2

RENEWED FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Replace page 3 of the Renewed Facility Operating License with the attached page 3.

Replace the following page of the Appendix A Technical Specifications with the attached page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove Page  
3.3.1-14

Insert Page  
3.3.1-14

- (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (4) 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 or instrument calibration or associated with radioactive apparatus or components; and
- (5) 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 Sequoyah and Watts Bar Unit 1 Nuclear Plants.

C. This renewed 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

The Tennessee Valley Authority is authorized to operate the facility at reactor core power levels not in excess of 3455 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 351 are hereby incorporated into the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Initial Test Program

The Tennessee Valley Authority shall conduct the post-fuel-loading initial test program (set forth in Section 14 of Tennessee Valley Authority's Final Safety Analysis Report, as amended), without making any major modifications of this program unless modifications have been identified and have received prior NRC approval. Major modifications are defined as:

- a. Elimination of any test identified in Section 14 of TVA's Final Safety Analysis Report as amended as being essential;

Table 3.3.1-1 (page 1 of 9)  
Reactor Trip System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE	NOMINAL TRIP SETPOINT
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	3 <sup>(a)</sup> , 4 <sup>(a)</sup> , 5 <sup>(a)</sup>	2	C	SR 3.3.1.12	NA	NA
2. Power Range Neutron Flux						
a. High	1,2	4	D	SR 3.3.1.1 SR 3.3.1.2 SR 3.3.1.7 <sup>(b)(c)</sup> SR 3.3.1.11 <sup>(b)(c)</sup> SR 3.3.1.14	≤ 111.4% RTP	109% RTP
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3. Power Range Neutron Flux Rate High Positive Rate	1,2	4	E	SR 3.3.1.7 <sup>(b)(c)</sup> SR 3.3.1.11 <sup>(b)(c)</sup>	≤ 6.3% RTP with time constant ≥ 2 sec	5% RTP with time constant ≥ 2 sec

- (a) With Rod Control System capable of rod withdrawal or one or more rods not fully inserted.
- (b) If the as-found channel setpoint is outside its predefined as-found tolerance, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service.
- (c) The instrument channel setpoint shall be reset to a value that is within the as-left tolerance around the Nominal Trip Setpoint (NTSP) at the completion of the surveillance, otherwise, the channel shall be declared inoperable. Setpoints more conservative than the NTSP are acceptable provided that the as-found and as-left tolerances apply to the actual setpoint implemented in the Surveillance procedures (field setting) to confirm channel performance. The methodologies used to determine the as-found and as-left tolerances are specified in UFSAR Section 7.1.2.
- (d) Below the P-10 (Power Range Neutron Flux) interlocks.



UNITED STATES  
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WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 357

TO RENEWED FACILITY OPERATING LICENSE NO. DPR-77

AND AMENDMENT NO. 351

TO RENEWED FACILITY OPERATING LICENSE NO. DPR-79

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

1.0 INTRODUCTION

By application dated October 29, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21302A238), Tennessee Valley Authority (TVA), the licensee for Sequoyah Nuclear Power Plant, Units 1 and 2 (SQN), submitted a license amendment request (LAR) for changes to Technical Specifications (TSs) for SQN. The proposed changes would delete the requirements for the Power Range High Negative Flux Rate Trip (HNFRT) Function, which is specified in the SQN TS Table 3.3.1-1, Reactor Trip System Instrumentation, as Function 3.b.

The licensee stated that the LAR is consistent with NRC-approved Westinghouse Electric Company (Westinghouse) topical report (TR) WCAP-11394-P-A, "Methodology for the Analysis of the Dropped Rod Event." The TR concludes that sufficient thermal margin exists for Westinghouse plant designs and fuel types to shut the reactor down, without crediting the HNFRT Function, regardless of the reactivity worth of the dropped rod cluster control assemblies (RCCAs) when confirmed on a plant-specific and a cycle-by-cycle basis. The Nuclear Regulatory Commission (NRC) staff's review of the application is discussed below.

2.0 REGULATORY EVALUATION

2.1 Reactor Trip System - HNFRT Function

There are four Power Range Neutron Flux – High Negative Rate channels as part of the Reactor Trip System. These channels are arranged in a two-out-of-four logic per unit. Limiting condition of operation (LCO) 3.3.1 requires all four of these channels to be operable in Mode 1 or 2, when there is potential for a multiple control rod drop accident to occur but does not

require these channels to be operable in Mode 3, 4, 5, or 6. A single dropped control rod will normally cause the High Negative Rate Trip to actuate and trip the reactor.

## 2.2 Proposed Changes

The LCO statement for TS 3.3.1, "Reactor Trip System (RTS) Instrumentation" states: "The RTS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE." Table 3.3.1-1 contains seven columns, one each for a function's name, applicable modes, number of required channels, conditions, Surveillance Requirements (SRs), allowable values and nominal trip setpoint, respectively. The LAR proposes to remove all information related to each column for Function 3b, "High Negative Rate" from the SQN TS Table 3.3.1-1, Function 3, "Power Range Neutron Flux Rate." As a result, a corresponding administrative change is proposed to Function 3a, "High Positive Rate" to remove the "a" designation since it would be the only remaining portion of Function 3.

## 2.3 Regulatory Requirements

Section 50.36, "Technical specifications," of Title 10 of the *Code of Federal Regulations* (10 CFR) establishes the regulatory requirements related to the content of TSs. Paragraph 50.36(a)(1) requires an application for an operating license to include proposed TSs. A summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the TSs.

Pursuant to 10 CFR 50.36, TSs for operating reactors are required to include items in the following five specific categories: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements; (4) design features; and (5) administrative controls.

The regulation at 10 CFR 50.36(c)(2) states, in part, that LCOs are the lowest functional capability or performance levels of equipment required for safe operation of the facility, and when an LCO is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the condition can be met.

10 CFR 50.36(c)(2)(ii) requires an LCO for any item meeting one or more of the following criteria:

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.

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.

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.

Criterion 4. A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

General Design Criterion (GDC) 10, "Reactor Design," in Appendix A to 10 CFR Part 50 requires that the reactor core and associated coolant, control, and protection systems be designed with appropriate margin to assure that specified acceptable fuel design limits (SAFDLs) are not exceeded during anticipated operational occurrences (AOOs). While the SQN construction permits, issued on May 27, 1970 (ML013240608), were based on the 1967 proposed GDCs (32 FR 10213), the SQN Updated Final Safety Analysis Report addresses the GDCs published in 1971 as Appendix A to 10 CFR Part 50 (36 FR 3255, as amended at 36 FR 12733).

The licensee proposed to delete the HNFRT Function from the SQN TSs. The NRC staff's criteria for evaluation of the TS deletion were based on the continued compliance with the GDC 10 requirements and the criteria specified in 10 CFR 50.36(c)(2)(ii).

### 3.0 TECHNICAL EVALUATION

The NRC staff evaluated the licensee's application to determine if the proposed changes are consistent with the regulations and plant-specific design and licensing basis information discussed in Section 2.3 of this safety evaluation.

#### 3.1 High Negative Flux Rate Trip (HNFRT) and the Analysis of the Dropped RCCAs Event

The reactor protection system (RPS) assures that required safety limits are not exceeded during AOOs. The power range HNFRT function was designed as part of the RPS to mitigate the consequences of a multiple control rod drop event. The control rod drop event is caused by a single electric or mechanical failure that results in a number and combination of RCCAs from the same group of a given bank to drop to the bottom of the core. The resulting negative reactivity insertion causes nuclear power to quickly decrease and core radial peaking factor to increase. The reduced power and continued steam supply to the turbine cause the reactor coolant temperature to decrease. In the manual control mode, the positive reactivity feedback causes the reactor power to increase to initial power level at a reduced reactor vessel inlet temperature without power overshoot. In the automatic control mode, the plant control system detects the reduction in core power and initiates control bank withdrawal in order to restore core power. As a result, power overshoot occurs, resulting in lower calculated departure from nucleate boiling ratios (DNBR). At higher power levels, in the event of a dropped RCCAs event, the RPS will detect the rapidly decreasing neutron flux due to the dropped RCCAs and trips the reactor based on the HNFRT function, thus ending the transient and assuring that the DNBR safety limit is met. The analysis must demonstrate GDC-10 requirements for fuel design limits, including DNBR safety limits, continue to be met for the combination of high nuclear power, high radial peaking factor, and other system conditions that exist following the dropped RCCAs event.

#### 3.2 The Methodologies for the Analysis of the Dropped RCCAs Event

In TR WCAP-10297-P-A, "Dropped Rod Methodology for Negative Flux Rate Trip Plants," Westinghouse documented a methodology for the analysis of the dropped RCCAs event and concluded that the HNFRT was required for the dropped RCCAs event only when a dropped RCCAs event exceeded the threshold value of reactivity worth (ADAMS Accession No. ML20073D680 (package)). Any dropped RCCAs event having a worth below the threshold value would not require an automatic reactor trip to meet the DNBR safety limit.

Subsequent to the approval of WCAP-10297-P-A, Westinghouse Owners Group (WOG) submitted TR WCAP-11394-P, "Methodology for the Analysis of the Dropped Rod Events" (ADAMS Accession No. ML20215E107). This TR provides a methodology that can be used to demonstrate that the DNBR limits are met during a dropped RCCA transient. The analysis using this methodology took no credit for any direct trip due to the dropped RCCAs and assumed that no automatic power reduction features are actuated by the dropped RCCAs event. The WOG TR concluded that sufficient reactivity margin is available in all Westinghouse core design and fuel types, such that the HNFRT was not required, regardless of the worth of the dropped RCCA (or bank), subject to a plant cycle-specific analysis. The NRC staff reviewed the WOG TR and concluded that the approach in WCAP-11394-P was acceptable for analyzing the dropped RCCAs event for which no credit is taken for any direct trip or automatic power reduction features (ADAMS Accession No. ML19324B155 (non-publicly available)). In the approval, the NRC noted that further review by the NRC staff for each cycle is not necessary, subject to licensee verification that the analysis described in WCAP-11394-P-A has been performed, and the comparison specified in the TR has been made and favorable results were obtained. When the WOG submitted the "-A" version of the TR, it also corrected a minor typographical error (ADAMS Accession No. ML20042F684).

### 3.3 SQN Analysis of the Dropped RCCAs Event

The proposed deletion of the HNFRT function in the SQN TSs is based on analyses performed using the NRC-approved methodology documented in WCAP-11394-P-A, which assumes no direct reactor trip or automatic power reduction to mitigate the consequences of the dropped RCCA(s). The dropped RCCA analyses for SQN were performed as part of the transition from Framatome fuel to Westinghouse RFA-2 fuel and the results confirmed that the related safety DNBR limits are met. The NRC has approved (ML21245A267) this fuel transition and the use of related methodologies, including the methodology documented in WCAP-11394-P-A. The licensee confirmed that no other safety analyses would be impacted by this TS change, since no other safety analyses credited the HNFRT function. In addition, the plant-specific reload process will be performed for each cycle fuel to confirm that the dropped RCCA analysis is analyzed using the WCAP-11394-P-A methodology without crediting HNFRT function and the results meets the safety DNBR limits.

Based on the review of the licensee's evaluation discussed above, the NRC staff concludes that the licensee's analysis of the dropped RCCA event for the transition from Framatome fuel to Westinghouse RFA-2 fuel and the reload process is within the NRC approval of the WCAP-11394-P-A methodology. Therefore, the NRC staff finds that reasonable assurance is provided to ensure that the proposed deletion of the HNFRT function from the TSs and the corresponding administrative change to rename Function 3.a to Function 3 would not violate the safety DNBR limits, thereby continue meeting the GDC 10 requirements, insofar as they are related to the fuel integrity criteria.

### 3.4 Criteria for LCOs in 10 CFR 50.36(c)(2)(ii)

The NRC staff finds that based on the licensee's analysis of the dropped RCCA event discussed above in Section 3.3, the HNFRT function would no longer meet the criteria specified in 10 CFR 50.36(c)(2)(ii)(A) - (D), since the subject trip function is:

- A. Not an installed instrumentation used to detect and indicate a significant abnormal degradation of the RCPB (Criterion 1);

- B. Not a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient analysis (Criterion 2);
- C. Not an SSC that is part of the primary success path and which functions or actuates to mitigate a DBA or transient (Criterion 3);
- D. Not an SSC which operating experience or probabilistic risk assessment has shown to be significant to public health and safety (Criterion 4).

Therefore, the NRC staff concludes that the proposed TS changes to delete the HNFRT function (Function 3.b) from TS Table 3.3.1-1, are acceptable for SQN, Units 1 and 2.

#### 4.0 Technical Conclusion

Based on its review discussed in Section 3.0 above, the NRC staff concludes that the deletion of the HNFRT function from the TSs for SQN, Unit 1 and 2, and the corresponding administrative change to rename Function 3.a to Function 3, is acceptable, because (1) the analysis of the dropped RCCAs event was performed at SQN for the NRC-approved fuel transition using the NRC-approved methodology in WCAP 11394-P-A without crediting the HNFRT Function and results met the required safety DNBR limits, (2) the proposed TS changes would not impact the safety analyses of other events, (3) the reload process for each cycle fuel would confirm that the dropped RCCA analysis is analyzed using the WCAP-11394-P-A methodology without crediting HNFRT function and the results meets the safety DNBR limits, and (4) the HNFRT function no longer meets the criteria specified in 10 CFR 50.36(c)(2)(ii) for TS LCOs.

#### 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 June 13, 2022. The State official had no comments.

#### 6.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component 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 December 28, 2021 (86 FR 73820). 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 Contributors: S. Sun, NRR  
M. Hamm, NRR

Dated: July 12, 2022

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENT NOS. 357 AND 351 REARDIGNG REVISION TO TECHNICAL SPECIFICATION TABLE 3.3.1-1, "REACTOR TRIP SYSTEM INSTRUMENTATION" (EPID L-2021-LLA-0200) DATED JULY 12, 2022

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