



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

November 15, 2021

Mr. Eric Carr  
President and Chief Nuclear Officer  
PSEG Nuclear LLC - N09  
P.O. Box 236  
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2 – ISSUANCE OF AMENDMENT NOS. 340 AND 321 RE: REVISE TECHNICAL SPECIFICATIONS TO ADOPT TSTF-569, “REVISION OF RESPONSE TIME TESTING DEFINITIONS” (EPID L-2021-LLA-0017)

Dear Mr. Carr:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment Nos. 340 and 321 to Renewed Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Nuclear Generating Station, Unit Nos. 1 and 2, respectively. These amendments consist of changes to the technical specifications (TSs) in response to your application dated February 16, 2021.

The amendments adopt Technical Specifications Task Force (TSTF) Traveler TSTF–569, “Revise Response Time Testing Definition,” to revise the technical specification definitions for the engineered safety feature response time and reactor trip system response time.

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

Sincerely,

**/RA/**

James S. Kim, Project Manager  
Plant Licensing Branch I  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

Enclosures:

1. Amendment No. 340 to DPR-70
2. Amendment No. 321 to DPR-75
3. Safety Evaluation

cc: Listserv



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

PSEG NUCLEAR LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-272

SALEM NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 340  
Renewed License No. DPR-70

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by PSEG Nuclear LLC, acting on behalf of itself and Exelon Generation Company, LLC (the licensees), dated February 16, 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-70 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. 340, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications, and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

James G. Danna, Chief  
Plant Licensing Branch I  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to Renewed Facility Operating  
License and Technical Specifications

Date of Issuance: November 15, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 340  
SALEM NUCLEAR GENERATING STATION, UNIT NO. 1  
RENEWED FACILITY OPERATING LICENSE NO. DPR-70  
DOCKET NO. 50-272

Replace the following page of Renewed Facility Operating License No. DPR-70 with the attached revised page as indicated. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove  
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Insert  
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Replace the following pages of the Appendix A, Technical Specifications, with the attached revised pages as indicated. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove  
1-3  
1-6

Insert  
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1-6

instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- (5) PSEG Nuclear LLC, 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
- (6) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30 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 renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; 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

PSEG Nuclear LLC is authorized to operate the facility at a steady state reactor core power level not in excess of 3459 megawatts (one hundred percent of rated core power).

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 340, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Deleted Per Amendment 22, 11-20-79

(4) Less than Four Loop Operation

PSEG Nuclear LLC shall not operate the reactor at power levels above P-7 (as defined in Table 3.3-1 of Specification 3.3.1.1 of Appendix A to this renewed license) with less than four (4) reactor coolant loops in operation until safety analyses for less than four loop operation have been submitted by the licensees and approval for less than four loop operation at power levels above P-7 has been granted by the Commission by Amendment of this renewed license.

(5) PSEG Nuclear LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety

## DEFINITIONS

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### DOSE EQUIVALENT XE-133

1.11 DOSE EQUIVALENT XE-133 shall be that concentration of XE-133 (microcuries per gram) that alone would produce the same acute dose to the whole body as the combined activities of noble gas nuclides KR-85m, Kr-85, Kr-87, Kr-88, Xe-131m, Xe-133m, Xe-133, Xe-135m, Xe-135 and Xe-138 actually present. If a specific noble gas nuclide is not detected, it should be assumed to be present at a minimum detectable activity. The determination of DOSE EQUIVALENT XE-133 shall be performed using effective dose conversion factors for air submersion listed in Table III.1 of EPA Federal Guidance Report No. 12, 1993, "External Exposure to Radionuclides in Air, Water and Soil."

### ENGINEERED SAFETY FEATURE RESPONSE TIME

1.12 The ENGINEERED SAFETY FEATURE RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.

### FREQUENCY NOTATION

1.13 The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.2.

### FULLY WITHDRAWN

1.13a FULLY WITHDRAWN shall be the condition where control and/or shutdown banks are at a position which is within the interval of 222 to 230 steps withdrawn, inclusive. FULLY WITHDRAWN will be specified in the current reload analysis.

### GASEOUS RADWASTE TREATMENT SYSTEM

1.14 A GASEOUS RADWASTE TREATMENT SYSTEM is any system designed and installed to reduce radioactive gaseous effluents by collecting primary coolant system offgases from the primary system and providing for delay or holdup for the purpose of reducing the total radioactivity prior to release to the environment.

### IDENTIFIED LEAKAGE

1.15 IDENTIFIED LEAKAGE shall be:

- a. Leakage (except Reactor Coolant Pump Seal Water Injection) into closed systems, such as pump seal or valve packing leaks that are captured and conducted to a sump or collecting tank, or

## DEFINITIONS

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### REACTOR TRIP SYSTEM RESPONSE TIME

1.26 The REACTOR TRIP SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.

### REPORTABLE EVENT

1.27 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10CFR Part 50.

### SHUTDOWN MARGIN

1.28 SHUTDOWN MARGIN shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all full length rod cluster assemblies (shutdown and control) are fully inserted except for the single rod cluster assembly of highest reactivity worth which is assumed to be FULLY WITHDRAWN.

### SITE BOUNDARY

1.29 The SITE BOUNDARY shall be that line beyond which the land is not owned, leased, or otherwise controlled by the licensee, as shown in Figure 5.1-3, and which defines the exclusion area as shown in Figure 5.1-1.

### SOLIDIFICATION

1.30 Not Used

### SOURCE CHECK

1.31 SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to either (a) an external source of increased radioactivity, or (b) an internal source of radioactivity (keep-alive source), or (c) an equivalent electronic source check.

### STAGGERED TEST BASIS

1.32 A STAGGERED TEST BASIS shall consist of:

- a. A test schedule for (n) systems, subsystems, trains, or other designated components obtained by dividing the specified test interval into (n) equal subintervals.



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PSEG NUCLEAR LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-311

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 321  
Renewed License No. DPR-75

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by PSEG Nuclear LLC, acting on behalf of itself and Exelon Generation Company, LLC (the licensees), dated February 16, 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-75 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. 321, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

James G. Danna, Chief  
Plant Licensing Branch I  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to Renewed Facility Operating  
License and Technical Specifications

Date of Issuance: November 15, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 321  
SALEM NUCLEAR GENERATING STATION, UNIT NO. 2  
RENEWED FACILITY OPERATING LICENSE NO. DPR-75  
DOCKET NO. 50-311

Replace the following page of Renewed Facility Operating License No. DPR-75 with the attached revised page as indicated. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

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

Remove  
1-3  
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Insert  
1-3  
1-6

- (4) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use at any time any byproduct, source or 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;
  - (5) PSEG Nuclear LLC, 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
  - (6) PSEG Nuclear LLC, 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 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  

PSEG Nuclear LLC is authorized to operate the facility at steady state 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. 321, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

## DEFINITIONS

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### DOSE EQUIVALENT XE-133

1.11 DOSE EQUIVALENT XE-133 shall be that concentration of XE-133 (microcuries per gram) that alone would produce the same acute dose to the whole body as the combined activities of noble gas nuclides Kr-85m, Kr-85, Kr-87, Kr-88, Xe-131m, Xe-133m, Xe-133, Xe-135m, Xe-135 and Xe-138 actually present. If a specific noble gas nuclide is not detected, it should be assumed to be present at a minimum detectable activity. The determination of DOSE EQUIVALENT XE-133 shall be performed using effective dose conversion factors for air submersion listed in Table III.1 of EPA Federal Guidance Report No. 12, 1993, "External Exposure to Radionuclides in Air, Water and Soil."

### ENGINEERED SAFETY FEATURE RESPONSE TIME

1.12 The ENGINEERED SAFETY FEATURE RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.

### FREQUENCY NOTATION

1.13 The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.2.

### FULLY WITHDRAWN

1.13a FULLY WITHDRAWN shall be the condition where control and/or shutdown banks are at a position which is within the interval of 222 to 230 steps withdrawn, inclusive. FULLY WITHDRAWN will be specified in the current reload analysis.

### GASEOUS RADWASTE TREATMENT SYSTEM

1.14 A GASEOUS RADWASTE TREATMENT SYSTEM is any system designed and installed to reduce radioactive gaseous effluents by collecting primary coolant system offgases from the primary system and providing for delay or holdup for the purpose of reducing the total radioactivity prior to release to the environment.

### IDENTIFIED LEAKAGE

1.15 IDENTIFIED LEAKAGE shall be:

- a. Leakage (except Reactor Coolant Pump Seal Water Injection) into closed systems, such as pump seal or valve packing leaks that are captured and conducted to a sump or collecting tank, or

## DEFINITIONS

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### REACTOR TRIP SYSTEM RESPONSE TIME

1.26 The REACTOR TRIP SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.

### REPORTABLE EVENT

1.27 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10CFR Part 50.

### SHUTDOWN MARGIN

1.28 SHUTDOWN MARGIN shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all full length rod cluster assemblies (shutdown and control) are fully inserted except for the single rod cluster assembly of highest reactivity worth which is assumed to be FULLY WITHDRAWN.

### SITE BOUNDARY

1.29 The SITE BOUNDARY shall be that line beyond which the land is not owned, leased, or otherwise controlled by the licensee, as shown in Figure 5.1-3, and which defines the exclusion area as shown in Figure 5.1-1.

### SOLIDIFICATION

1.30 Not Used

### SOURCE CHECK

1.31 SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to either (a) an external source of increased radioactivity, or (b) an internal source of radioactivity (keep-alive source), or (c) an equivalent electronic source check.

### STAGGERED TEST BASIS

1.32 A STAGGERED TEST BASIS shall consist of:

- a. A test schedule for (n) systems, subsystems, trains, or other designated components obtained by dividing the specified test interval into (n) equal subintervals.



UNITED STATES  
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WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 340 AND 321 TO

RENEWED FACILITY OPERATING LICENSE NOS. DPR-70 AND DPR-75

PSEG NUCLEAR LLC

EXELON GENERATION COMPANY, LLC

SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-272 AND 50-311

1.0 INTRODUCTION

By application dated February 16, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21047A238), PSEG Nuclear LLC (PSEG) (the licensee) submitted a license amendment request (LAR) for the Salem Generating Station (Salem), Units 1 and 2. The amendments would revise technical specification (TS) definitions for engineered safety feature (ESF) response time and reactor trip system (RTS) response time that are referenced in surveillance requirements (SRs), hereafter, referred to as response time testing (RTT).

The proposed changes are based on Technical Specifications Task Force (TSTF) traveler TSTF-569, Revision 2, "Revise Response Time Testing Definition," dated June 25, 2019 (ADAMS Accession No. ML19176A034). The U.S. Nuclear Regulatory Commission (NRC or the Commission) issued a final safety evaluation (SE) approving TSTF-569, Revision 2, on August 14, 2019 (ADAMS Accession No. ML19176A191). The description of the generic changes and their justification are contained in these two documents.

2.0 REGULATORY EVALUATION

2.1 Description of Response Time Testing

The RTS for Salem initiates a unit shutdown, based on the values of selected unit parameters, to protect against violating the core fuel design limits and the reactor coolant system (RCS) pressure boundary during anticipated operational occurrences and to assist the engineering safety feature actuation system (ESFAS) in mitigating accidents. The ESFAS initiates necessary safety systems, based on the values of selected unit parameters, to protect against violating core design limits and the RCS pressure boundary and to mitigate accidents.

The RTT verifies that the individual channel or train actuation response times are less than or equal to the maximum values assumed in the accident analyses. The RTT acceptance criteria

are under licensee control. Individual component response times are not modeled in the accident analyses. The analyses model the overall or total elapsed time, from the point at which the parameter exceeds the trip setpoint value at the sensor to the point at which the equipment reaches the required functional state (e.g., control and shutdown rods fully inserted in the reactor core).

## 2.2 Proposed Changes to the Technical Specifications

Salem Limiting Condition for Operation (LCO) 3.3.2.1 requires the ESFAS instrumentation for each Function in TS Table 3.3.-3 "Engineered Safety Feature Actuation System Instrumentation" to be OPERABLE. To assure the LCO is met, SR 4.3.2.1.3 requires the licensee to verify that ESF Response Times are within limits. Similarly, Salem LCO 3.3.3.1 requires the RTS instrumentation for each Function in TS Table 3.3-1 "Reactor Trip System Instrumentation" to be OPERABLE, and SR 4.3.1.1.3 requires the licensee to verify that RTS Response Times are within limits. The licensee proposed to add a statement to Section 1.0 of the TS definitions for ESF Response Time and RTS Response Time, which states acceptable means to measure each response time, and provide an alternative that may be used "[i]n lieu of measurement."

In its application, the licensee stated that it requests adoption of NRC-approved TSTF-569, "Revise Response Time Testing Definition." The only revision of TSTF-569 that is NRC approved is Revision 2. As described in Section 1, "Summary Description," of Revision 2 of TSTF-569:

The proposed change revises the definitions to eliminate the requirement for prior NRC review and approval of the response time verification of similar components, while retaining the requirement for the verification to be performed using the methodology contained in Attachment 1, titled, "Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing." The proposed change will permit licensees to verify the response time of similar component types using the methodology contained in Attachment 1, without obtaining prior NRC approval for each component.

Accordingly, as shown in the LAR, the request would add an additional "in lieu of measurement" alternative to measuring ESF Response Time and RTS Response Time. The additional alternative for ESF Response Time would be "[i]n lieu of measurement, response time may be verified for selected components provided ... the components have been evaluated in accordance with an NRC approved methodology." Similarly, for RTS Response Time, "[i]n lieu of measurement, response time may be verified for selected components provided that ... the components have been evaluated in accordance with an NRC approved methodology."

The application stated that the licensee concluded that the justifications presented in TSTF-569 and the safety evaluation prepared by the NRC staff are applicable to Salem and provide the justification for the amendment request. The application identified the requested variations (e.g., identifying the site-specific TS numbers).

### 2.2.1 Variations

The licensee proposed to add the NUREG-1431 text, "The response time may be measured by means of any series of sequential, overlapping, or total steps," to the Salem TS definition in addition to the change associated with implementing TSTF-569.

### 2.3 Applicable Regulatory Requirements and Guidance

Under Title 10 of *Code of Federal Regulations* (10 CFR) 50.90, whenever a holder of a license wishes to amend the license, including technical specifications 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 to the extent applicable and appropriate. Both the common standards for licenses 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 and that the applicant will comply with the Commission's regulations.

The licensee's request involves adding an option used to satisfy surveillance requirements. As described in 10 CFR 50.36(c)(3):

Surveillance requirements 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 limiting conditions for operation will be met.

### 3.0 TECHNICAL EVALUATION

The NRC staff reviewed the request by comparing the licensee's proposal against the changes described in TSTF-569, Revision 2. The NRC staff compared Salem's design and existing TS with the design and TS presumed in TSTF-569. As explained below, the NRC staff concluded that the design and licenses (including TS) were sufficient to justify the licensee's reliance on the staff's safety evaluation of TSTF-569 as justification for adopting TSTF-569 in the Salem licenses.

TSTF-569 is designed to make changes to NUREG-1431, Revision 4.0, "Standard Technical Specifications, Westinghouse Plants," April 2012, Volume 1, "Specifications" (ADAMS Accession No. ML12100A222), and Volume 2, "Bases" (ADAMS Accession No. ML12100A228). The staff compared the technical specifications assumed in TSTF-569 with the current technical specifications for Salem. The staff did not identify any material differences in the relevant technical specifications.

The licensee is relying on the previous analyses of TSTF-569. For the reasons stated in the NRC staff's SE for TSTF-569, the staff found that the methodology contained in TSTF-569, Rev. 2, Attachment 1, "Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing" provides a consistent, clear, and concise framework for determining that replacement components will operate at a level equivalent to that of the components being replaced. As such, using that methodology will assure that the necessary quality of the components is maintained and that the limiting conditions for operation will be met. Accordingly, approving the incorporation of that methodology into the licensing basis, and amending the TS to allow usage of the approved methodology, coupled with



approving the aspect of the license amendment request to use the methodology in TSTF-569, Rev. 2, Attachment 1, results in TS that meet 10 CFR 50.36(c)(3) by assuring that performing SR 4.3.1.1.3 and 4.3.2.1.3 while using the new "[i]n lieu of" option, will assure that associated aspects of LCO 3.3.1.1 and 3.3.2.1 will be met.

### 3.1 Variations

The licensee proposed to add the NUREG-1431 text, "The response time may be measured by means of any series of sequential, overlapping, or total steps," to the Salem TS definition in addition to the change associated with implementing TSTF-569.

The licensee stated that Inclusion of the additional NUREG-1431 DEFINITION text for the ESF and RTS Response Time aligns the Salem TS DEFINITION with the Salem Licensing Basis relative to the TS response time surveillance for RTS (SR 4.3.1.1.3) and ESF (SR 4.3.2.1.3). The allowance to demonstrate response time by any series of sequential, overlapping or total channel test measurements was provided in the initial TS Bases issued with Salem Facility Operating Licenses. The SRs, and the associated TS Bases, were changed per Amendments 260 and 241 for Salem, Units 1 and 2, respectively (ADAMS Accession No. ML033010379) to allow verification of response time in lieu of demonstration through physical testing.

The NRC staff reviewed the proposed change and compared Salem's design and exiting TS with the design and TS presumed in NUREG-1431. The NRC staff confirmed that Salem's design currently allows for response time to be demonstrated by any series of sequential, overlapping, or total channel test measurements and is consistent with the rationale provided in WCAP-13632-P-A, Revision 2, that allows the licensee to verify the component response times by using an approved methodology instead of performing an actual RTT. The proposed wording continues to meet the requirements of 10 CFR 50.36(c)(3) and assuring that the associated aspects of LCO 3.3.1.1 and 3.3.2.1 are met. Therefore, the NRC staff finds the proposed wording for the Salem TS DEFINITIONS of ESF and RTS acceptable.

### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State official was notified of the proposed issuance of the amendments on May 14, 2021. The State official had no comments.

### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and change 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 has previously issued a proposed finding that the amendments involve NSHC, published in the *Federal Register* on March 23, 2021 (86 FR 15506), 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: T. Sweat

Date: November 15, 2021

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2 – ISSUANCE OF AMENDMENT NOS. 340 AND 321 RE: REVISE TECHNICAL SPECIFICATIONS TO ADOPT TSTF-569, “REVISION OF RESPONSE TIME TESTING DEFINITIONS” (EPID L-2021-LLA-0017) DATED NOVEMBER 15, 2021

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