



10 CFR 50.90

LR-N21-0031
LAR S20-05

April 01, 2021

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

Salem Generating Station Unit1
Renewed Facility Operating License No. DPR-70
NRC Docket No. 50-272

Subject: Response to Request for Additional Information, Re: Revise and Relocate
Pressurizer Overpressure Protection System Limits to Pressure and
Temperature Limits Report

- References:
1. PSEG letter to NRC, "License Amendment Request to Amend the Salem Unit 1 Technical Specifications to Revise and Relocate the Reactor Coolant System Pressure and Temperature Limits and Pressurizer Overpressure Protection System Limits to a Pressure and Temperature Limits Report," dated December 06, 2020 (ADAMS Accession No. ML20343A128)
 2. NRC email to PSEG, "Salem Generating Station Unit 1 – Final RAI Re: Revise and Relocate Pressurizer Overpressure Protection System Limits to Pressure and Temperature Limits Report (EPID L-2020-LLA-0263)," dated March 09, 2021 (ADAMS Accession No. ML21068A414)

In the Reference 1 letter, PSEG Nuclear LLC (PSEG) submitted a license amendment request to change the Salem Generating Station Unit 1 Technical Specifications (TSs). The proposed TS change would revise the reactor coolant system pressure-temperature limits and the pressurizer overpressure protection system limits, and relocate them to a Pressure and Temperature Limits Report. In Reference 2, the Nuclear Regulatory Commission (NRC) requested PSEG to provide additional information in order to evaluate the proposed License Amendment Request.

Attachment 1 to this letter provides a restatement of the RAI question followed by our response. PSEG has determined that the information provided in this submittal does not alter the conclusions reached in the 10 CFR 50.92 no significant hazards determination previously submitted. In addition, the information provided in this submittal does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendment.

April 01, 2021
Page 2
LR-N21-0031

There are no regulatory commitments contained in this letter.

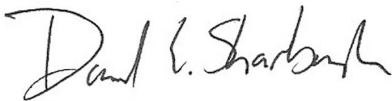
In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), PSEG is providing a copy of this response, with attachments, to the designated State of New Jersey Official.

Should you have any questions regarding this submittal, please contact Mr. Lee Marabella at 856-339-1208.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 4/1/21
(Date)

Sincerely,



David Sharbaugh
Site Vice President
Salem Generating Station

Attachment:

1. Response to Request for Additional Information - License Amendment Request to Amend the Salem Unit 1 Technical Specifications to Revise and Relocate the Reactor Coolant System Pressure and Temperature Limits and Pressurizer Overpressure Protection System Limits to a Pressure and Temperature Limits Report

cc: Administrator, Region I, NRC
Mr. J. Kim, Project Manager, NRC
NRC Senior Resident Inspector, Salem
Ms. A. Pfaff, Manager, NJBNE
Site Compliance Commitment Tracking Coordinator
Corporate Commitment Tracking Coordinator

Attachment 1

**Response to Request for Additional Information -
License Amendment Request to Amend the Salem Unit 1 Technical Specifications to
Revise and Relocate the Reactor Coolant System Pressure and Temperature Limits and
Pressurizer Overpressure Protection System Limits to a Pressure and Temperature
Limits Report**

By application dated December 06, 2020 (Agencywide Documents Access and Management System Accession No. ML20343A128), PSEG Nuclear LLC (PSEG) submitted a request for an amendment to the Technical Specifications (TS) for Salem Generating Station Unit 1 (Salem Unit 1)

Regulatory Basis

The 10 CFR 50 Appendix G specifies fracture toughness requirements for ferritic materials of pressure-retaining components of the reactor coolant pressure boundary to provide adequate margins of safety during any condition of normal operation, including anticipated operational occurrences and system hydrostatic tests, to which the pressure boundary may be subjected over its service lifetime.

Background for RAI

Safety evaluation of WCAP-14040-A stated that the applicant should meet the following technical requirement for low temperature overpressurization protection:

Requirement 7: Regarding the low temperature overpressure protection/cold overpressure mitigating system, the lift setting limits for the power operated relief valves should be developed using NRC-approved methodologies.

To meet this requirement, the staff's WCAP-14040 SE prescribed that the applicant should use the same specialized version of LOFTRAN, which was approved in WCAP-14040 Revision 2 for the mass and heat input transient analysis.

RAI: Use of LOFTRAN for Mass and Heat Input Transient Analysis

Please confirm that the specialized version of LOFTRAN, which was approved in WCAP-14040 Revision 2, had been used to perform the mass and heat input transient analysis as reported in the license amendment request and the report, LTR-SCS-20-28, "Salem Unit 1 Low Temperature Overpressure Protection System (LTOPS) / Pressurizer Overpressure Protection System (POPS) Analysis, Rev. 1," or provide justification if there exists deviation of using this specialized version of LOFTRAN.

RESPONSE TO RAI:

The POPS analysis performed in LTR-SCS-20-28 obtained the design basis Mass Injection (MI) and Heat Injection (HI) transient results from analyses that were performed using versions of the LOFTRAN code that contain the same special features for modeling Low Temperature Overpressure Protection (LTOP) events as the version referenced in WCAP-14040, Rev. 2. The NRC Safety Evaluation of the foundational LOFTRAN code is documented in WCAP-7907-A and the special versions referenced in WCAP-14040, Rev. 2 use the thermal hydraulic modeling from the LOFTRAN code, but added the features necessary to model the design basis low temperature overpressure transients, such as detailed relief valve modeling of the valve characteristics.

The LOFTRAN code and the special LTOP versions are maintained by Westinghouse following Quality Assurance procedures for software control, which include requirements for configuration control of changes, installation testing on applicable platforms or operating systems, and

software problem reporting and error correction. There have been various releases of the special LTOP versions since the WCAP-14040-NP-A, Rev. 2 Safety Evaluation for minor updates and to support running on different platforms and operating systems. The specialized LTOP versions of LOFTRAN have been used in numerous LTOP calculations, including several of the precedents listed in Section 4.2 of the Salem Unit 1 LAR.