From:	James Kim
Sent:	Wednesday, December 21, 2022 4:04 PM
To:	Thomas, Brian J.
Cc:	Montgomery, Richard; Wiwel, Michael; Hipo Gonzalez
Subject:	Final RAI regarding Salem Unit 2 Relief Request S2-I4R-211, Revision 0 (EPID: L-2022-LLR-0066)
Attachments:	Salem-2 RAI L-2022-LLR-0066 Coverage P (004).docx
Importance:	High

SUBJECT: Salem 1 and 2 - Final IOLB RAI for Salem Unit 2 Relief Request S2-I4R-211 (EPID

L-2022-LLR-0066)

Mr. Thomas,

By letter dated September 27, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession ML22270A326), PSEG Nuclear, LLC, (the licensee) requested relief in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(g)(5)(iii) from the requirement of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI. Relief request S2-I4R-211, Revision 0 pertains partially to the examination coverage of ASME Code Class 1 piping welds in the fourth 10-year inservice inspection (ISI) interval of the Salem Unit 2.

The NRC staff has determined that additional information is needed to complete its review of the request. On December 19, 2022, the NRC staff sent PSEG the draft Request for Additional Information (RAI) from the Piping and Head Penetration Branch (DNRL/NPHP). On December 21, 2022, the licensee informed that a clarification call was not required and PSEG agreed to provide the RAI responses within 45 days (February 6, 2023). A publicly available version of this final RAI (attached) will be placed in the NRC's ADAMS.

James Kim
Project Manager –Salem
NRR/DORL/LPL1
301-415-4125

Hearing Identifier: NRR_DRMA
Email Number: 1870

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Subject: Final RAI regarding Salem Unit 2 Relief Request S2-I4R-211, Revision 0 (EPID L-2022-LLR-0066)
Sent Date: 12/21/2022 4:03:50 PM
Received Date: 12/21/2022 4:03:00 PM
From: James Kim

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Recipients:
"Montgomery, Richard" <Richard.Montgomery@pseg.com>
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Tracking Status: None
"Thomas, Brian J." <Brian.Thomas@pseg.com>
Tracking Status: None

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MESSAGE	1305	12/21/2022 4:03:00 PM
Salem-2 RAI L-2022-LLR-0066 Coverage P (004).docx	72901	

Options
Priority: High
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:

REQUEST FOR ADDITIONAL INFORMATION
RELIEF REQUEST S2-I4R-211, REVISION 0, REGARDING WELD EXAMINATION COVERAGE
PSEG NUCLEAR, LLC
SALEM GENERATING STATION, UNIT 2
DOCKET NO. 50-311
EPID: L-2022-LLR-0066

By letter dated September 27, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession ML22270A326), PSEG Nuclear, LLC, (the licensee) requested relief in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(g)(5)(iii) from the requirement of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI. Relief request S2-I4R-211, Revision 0 pertains partially to the examination coverage of ASME Code Class 1 piping welds in the fourth 10-year inservice inspection (ISI) interval of the Salem Generating Station (Salem), Unit 2.

In the first and second periods of the fourth 10-year ISI interval, the licensee implemented an NRC authorized alternative risk-informed (RI)-ISI program in accordance with methodology of Electric Power Research Institute (EPRI) Topical Report (TR)-112657, Revision B-A, "Revised Risk-Informed Inservice Inspection Evaluation Procedure," (ADAMS Accession ML14153A146). In the third period of the fourth 10-year ISI interval, the licensee revised its RI-ISI program in accordance with ASME Code Case N-716-1, "Alternative Classification and Examination Requirements, Section XI." ASME Code Case N-716-1 has been incorporated by reference into 10 CFR 50.55a via inclusion in RG 1.147, Revision 20.

To complete its review, the NRC staff requests the following additional information.

REGULATORY BASIS

Pursuant to 10 CFR 50.55a(g)(5)(iii), if a licensee has determined that conformance with an ASME Code requirement is impractical for its facility, the licensee must notify the NRC and submit, as specified in Section 50.4, information to support the determinations. Determinations of impracticality in accordance with Section 50.55a must be based on the demonstrated limitations experienced when attempting to comply with the ASME Code requirements during the ISI interval for which the request is being submitted. Requests for relief made in accordance with Section 50.55a must be submitted to the NRC no later than 12 months after the expiration of the initial or subsequent 120-month inspection interval for which relief is sought.

Pursuant to 10 CFR 50.55a(g)(6)(i), the Commission will evaluate determinations under paragraph (g)(5) of Section 50.55a that ASME Code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines are authorized by law, will not endanger life or property or the common defense and security, and are otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

REQUEST FOR ADDITIONAL INFORMATION

1. For ASME Code Class 1 socket weld 2-CV-1275-44 (categorized as Item No R1.11 (i.e., subject to thermal fatigue)), the licensee obtained 35 percent coverage of the required examination volume. Given the susceptibility to thermal fatigue and the reduced

coverage obtained, and for assurance of structural integrity of the unexamined volume of the weld:

a. Provide the fatigue cumulative usage factor (CUF) at this weld.
b. Provide discussions on any supplemental examinations such as a visual examination and/or penetrant testing (PT) in accordance with ASME Code, Section V, “Nondestructive Examination,” performed to lend further support of limited coverage.

2. The NRC staff notes for several welds only 50 percent coverage is credited due to inspection limitations such as material (e.g., cast austenitic stainless steel) or part geometry from one side of the weld. For these weld locations, provide discussions on whether the license performed a “Best Effort” examination of the far-side weld volume, particularly the root of the weld and the heat affected zone (HAZ) of the base materials typically susceptible to high stresses and potential degradation to lend further support of limited coverage.