From:	Justin Poole
To:	Kami Miller; Kyle Steffic; Salena Long
Cc:	Marlayna Doell; Ilka Berrios; Michael Schultheis
Subject:	Request for Additional Information Re: Relief Request Number 5-11 - RCS Piping Nozzle Dissimilar Metal Welds-L-2025-LLR-0079
Date:	Monday, December 1, 2025 2:43:00 PM
Attachments:	RAI Palisades RR-5-11 - Branch Connection Welds.pdf

Kami,

By letter dated August 20, 2025 (Agencywide Documents Access and Management System (ADAMS) Accession ML25232A168), Holtec Palisades, LLC requested alternative RR 5-11 to American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Case N-853-1, “PWR Class 1 Primary Piping Alloy 600 Full Penetration Branch Connection Weld Metal Buildup for Material Susceptible to Primary Water Stress Corrosion Cracking, Section XI, Division 1,” requirements under Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(z)(1). The licensee requested the proposed alternative in accordance with 10 CFR 50.55(z)(1) based on its determination that the proposed alternative provides the acceptable level of quality and safety.

On October 24, 2025, the NRC staff sent the licensee DRAFT RAIs to ensure that the questions are understandable, the regulatory basis is clear, there is no proprietary information contained in the RAIs, and to determine if the information was previously docketed. On November 24, 2025, the NRC and the licensee held a clarification call to discuss the DRAFT RAIs. Based on a follow-up discussion with you, the NRC staff understands that the licensee intends to provide a response by December 19, 2025. The attached is the final version of the RAIs. These RAIs will be put in ADAMS as a publicly available document.

Justin C. Poole
Project Manager
Palisades, TMI, Duane Arnold Restart
NRR/DORL/LPL 3
U.S. Nuclear Regulatory Commission
(301)415-2048

REQUEST FOR ADDITIONAL INFORMATION

ALTERNATIVE RR 5-11 REGARDING PROACTIVE MITIGATATION OF

PRIMARY COOLANT SYSTEM PIPING BRANCH CONNECTION

HOLTEC PALISADES, LLC

PALISADES NUCLEAR PLANT

DOCKET NUMBER 50-255

EPID: L-2025-LLR-0079

By letter dated August 20, 2025 (Agencywide Documents Access and Management System (ADAMS) Accession ML25232A168), Holtec Palisades, LLC (the licensee) requested Alternative RR 5-11 to American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Case N-853-1, "PWR Class 1 Primary Piping Alloy 600 Full Penetration Branch Connection Weld Metal Buildup for Material Susceptible to Primary Water Stress Corrosion Cracking, Section XI, Division 1," requirements. ASME Code Case N-853-1 has been incorporated by reference into 10 CFR 50.55a via inclusion in Regulatory Guide (RG) 1.147, Revision 21, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1," without conditions.

Regulatory Basis

10 CFR 50.55a(z) Alternatives to codes and standards requirements

10 CFR 50.55a(g)(6)(ii)(F) Augmented Inservice Inspection (ISI) requirements for ASME Code Class 1 piping and nozzle dissimilar metal welds

Background

The U.S. Nuclear Regulatory Commission (NRC) staff notes that the licensee described its proposed alternative pre-service inspection (PSI) and ISI for the mitigated primary coolant system piping hot leg and cold leg branch connections in RR 5-11, Section 5, "Proposed Alternative and Basis for Use," Subsections E and F.

Questions

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

RCI-1 Confirm that the licensee will implement the volumetric examination and acceptance criteria for PSI and ISI of inspection item C-1 of Table 1 of ASME Code Case N-770-7 as mandated by 10 CFR 50.55a(g)(6)(ii)(F).

RCI-2 Confirm that for the scope of ASME Code Case N-770-7 for categorization of the Branch Connection Weld Metal Buildup as inspection item C-1, the size of the weld will be based on the dissimilar metal butt-weld in the main coolant piping versus the first branch connection weld size.

RAI-1 Section 5, “Proposed Alternative and Basis for Use,” Subsection E states, in part, “The examination volume A-B-C-D shown in Figure 8-5 will be ultrasonically examined.”

The NRC staff note that the examination volume of A-B-C-D of Figure 8-5 of RR 5-11 includes the partial penetration weld and replacement nozzle material and any potential volumetric examination limitations they create. Is the licensee intending to exempt either of these materials from the essentially 100% examination volume requirement of A-B-C-D of Figure 8-5 for PSI and ISI examination?

RAI-2 Section 5, “Proposed Alternative and Basis for Use,” Subsection F is not clear.

a. While the licensee states that inspection item C-1 of Table 1 of N-770-7 applies for PSI and states that it applies for ISI in Section 4, “Reason for Request,” that statement is not included in Section 5.F, and therefore not in the licensee’s proposed alternative. The NRC staff request the licensee clarify the requirements for the volumetric examination and examination frequency of the examination volume of A-B-C-D for Figure 8-5 for ISI.

b. The first paragraph states the visual examination requirement of ASME Code Case N-853-1 for ISI. The second paragraph then states that the examination volume in Figure 8-5 will be volumetrically examined. Is it the licensee’s proposed alternative that the Figure 8-5 volume will be volumetrically examined for each weld at the frequency of the first paragraph, during the first or second refueling outage following implementation?

RAI-3 ASME Code Section XI Code Case N-770-7 requires examination procedures, personnel and equipment to meet the requirements of ASME Code Section XI Appendix VIII. Section 5.E of RR 5-11, for PSI, states the licensee will use an examination technique “using the manual phased array ultrasonic examination technique.” Section 5.F, for ISI, states the licensee will ultrasonically examine the volume in Figure 8-5. Section 5.D, for the acceptance exam, described a manual phased array examination technique that “will employ technical elements of the Performance Demonstration Initiative (PDI) qualified Supplement 11 procedures, which will be implemented by PDI-qualified Supplement 11 weld overlay examiners.”

Is the manual phased array examination technique described in Section 5.E and 5.F the same as Section 5.D?

a. Describe the ASME Code Section V demonstration requirements (ASME Code Section V, Article 14 medium rigor, low rigor, etc.) used to qualify the procedure.

b. If the procedure is qualified using ASME Code Section V, Article 14 low rigor, please provide the Technical Justification Report used to qualify the procedure.

c. Describe the differences between the examination procedure and equipment from a qualified Appendix VIII Supplement 11 examination procedure and equipment.