HOLTEC
PALISADES

27780 Blue Star Highway, Covert, MI 49043

PNP 2025-078

10 CFR50.55a

October 22, 2025

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

Palisades Nuclear Plant
NRC Docket 50-255
Renewed Facility Operating License No. DPR-20

Subject: Response to Request for Additional Information Regarding Relief Request Number RR 5-10, *Proposed Alternative to ASME Section XI Code Requirements for Modification of Reactor Pressure Vessel Head Vent Line Penetration*

Pursuant to Title 10 of the Code of Federal Regulations (10 CFR) 50.55a, *Codes and standards*, Holtec Palisades hereby provides a response to Nuclear Regulatory Commission (NRC) Request for Additional Information (RAIs) dated October 3, 2025 (ADAMS Accession No. ML25280A013). This RAI is regarding the Palisades submittal of Relief Request Number RR 5-10 dated July 31, 2025 (Reference1).

Palisades Nuclear Plant (PNP) ceased operation in the Spring of 2022. Holtec Palisades is performing modifications to the PNP to support restart of plant operations. The Palisades Reactor Vessel Closure Head (RVCH) vent line penetration is constructed of materials that are susceptible to Primary Water Stress Corrosion Cracking (PWSCC). Modification to the Palisades RVCH vent line penetration (VHP) is being implemented to mitigate the PWSCC susceptible materials. However, during a conference call with the NRC, it was brought to Palisades attention that a Liquid Penetrant Test (PT) which has been performed on the Reactor Vessel Closure Head (RVCH) vent line weld satisfies the Preservice Inspection (PSI). This inspection was part of the request that Holtec Palisades was seeking relief from; therefore, Holtec Palisades is revising its previous relief request from the requirements of American Society of Mechanical Engineers (ASME) Code Section XI for Preservice and Inservice Inspections of the RVCH vent line weld, to only seeking relief from the ASME Section XI, Code requirements for the Inservice Inspection (ISI) for the RVCH vent line penetration. This relief from the ASME Code requirements will be needed during the first refueling outage following startup of PNP.

The provisions of this relief are applicable to the fifth ten-year ISI interval at PNP, which commenced on December 13, 2015, and is currently scheduled to end on December 12, 2025, as identified in the Fifth Interval ISI Plan, submitted to the NRC on December 09, 2015, (Reference 2).

The attachment to this letter provides Palisades' responses to the NRC RAIs.

This letter contains no new regulatory commitments.

Please refer any questions regarding this submittal to Kami Miller - Manager Emergency Preparedness and Regulatory Assurance, at (269) 764-2375.

Sincerely,

Jean A. Fleming

Digitally signed by Jean A. Fleming
DN: cn=Jean A. Fleming, c=US, o=Holtec Decommissioning International, LLC, ou=Regulatory and Environmental Affairs, email=J.Fleming@Holtec.com
Date: 2025.10.22 13:04:18 -04'00'

Jean A. Fleming
Vice President of Licensing and Regulatory Affairs
Holtec International

Attachment:

Response to NRC RAIs Regarding Relief Request RR-5-10, Modification of Reactor Vessel Closure Head Vent Line Penetration

References:

1. Relief Request Number RR 5-10, *Proposed Alternative to ASME Section XI Code Requirements for Modification of Reactor Pressure Vessel Head Vent Line Penetration,* dated July 31, 2025 (ADAMS Accession No. ML25212A032)

2. Entergy Nuclear Operations Inc. letter to NRC, "Inservice Inspection Master Program Fifth 10-year Interval", dated December 09, 2015 (ADAMS Accession No. ML15343A090)

cc: NRC Senior Resident Inspector, PNP
NRC Project Manager, PNP
NRC Region III Administrator

Palisades Nuclear Power Plant
Docket No. 50-255/Renewed License No. DPR-20

Response to Request for Additional Information (RAI) Regarding Relief Request RR-5-10, Modification of Reactor Vessel Closure Head Vent Line Penetration,

By letter dated July 31, 2025, Relief Request 5-10 (ADAMS Accession No. ML25212A032), Holtec Palisades requested relief from the requirements of the ASME Code for a 100% surface examination coverage of the modified reactor vessel closure head vent line penetration weld due to hardship under Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(z)(2). Below are the NRC request for additional information questions followed by the Palisades responses.

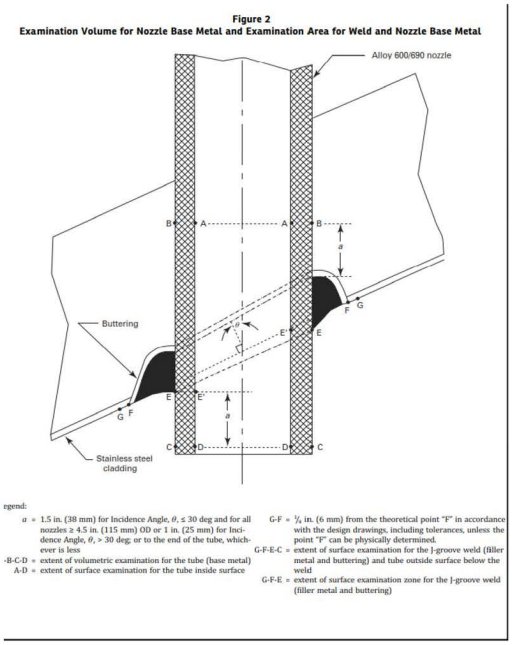
1. **NRC Question 1** – Confirm that the licensee's proposed alternative in RR 5-10 is for the preservice and inservice surface examination coverage requirements to be changed from being, required to examine ¼-inch beyond the Alloy 52M/152 weld-to-cladding interface shown in Figure 2 of ASME Code Case N-729-6, to instead only extend to point "c" of Figure 2 of RR 5-10.

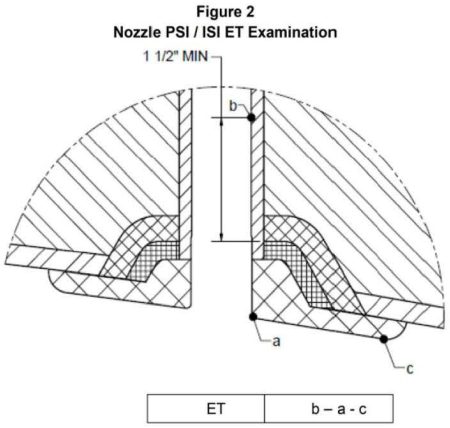
    a. Verify that the proposed alternative preservice and inservice surface examination coverage to point "c" of Figure 2 of RR 5-10 would bound the original Alloy 182/82 weld-to-cladding "G-F" dimension of Figure 2 of ASME Code Case N-729-6.

Palisades Response – As stated in the submittal letter this relief request is being revised to request relief for the Inservice Inspection (ISI) because the Preservice Inspection was satisfied by the Liquid Penetrant (PT) test which has been performed. Relief is only being requested from the ISI requirement to examine 1/4-inch beyond the Alloy 52M/152 weld-to-cladding interface shown in Figure 2 of Code Case N-729-6. Requested examination coverage on the outer face of the weld extends from point "a" to point "c" as shown in Figure 2 of the submittal.

    a. The alternative surface examination coverage bounds the 1/4-inch "G-F" dimension provided in Figure 2 of ASME Code Case N-729-6.

Drawings added for reviewer info only



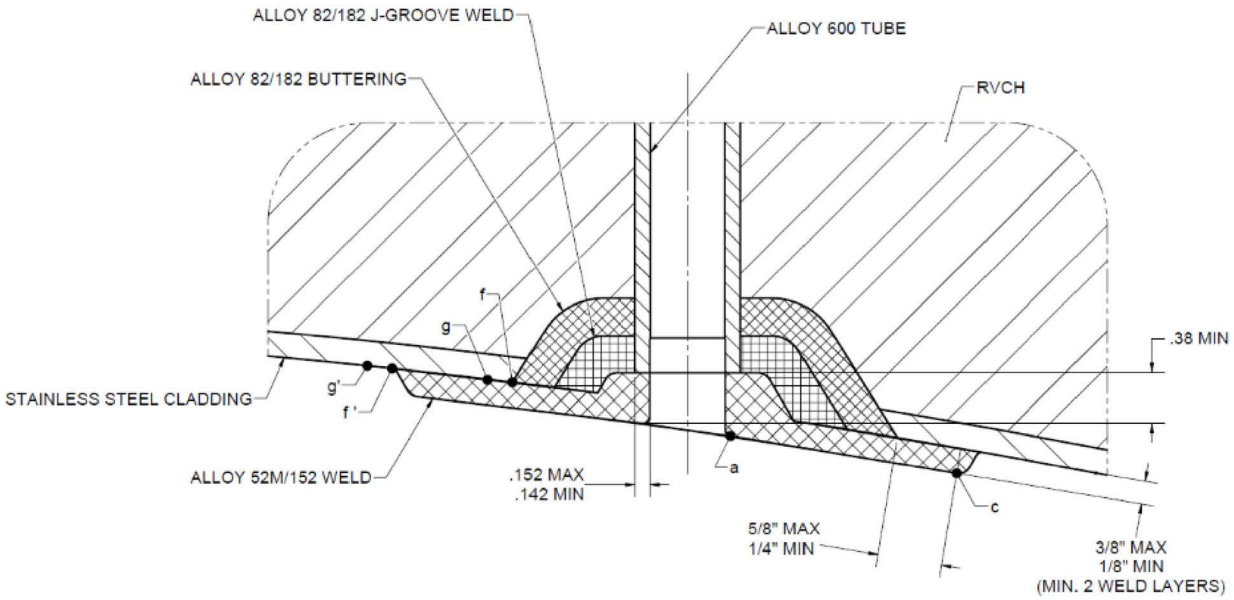


ET	b – a - c

Note: Extent of examination above the original J-groove weld is 1-1/2". The extent of examination on the surface of the new weld covers the ground face of the pad, excluding the blended radius between the new weld and the RVCH cladding.

2. **NRC Question 2** - Figures 1 and 2 of RR 5-10 lack detailed dimensions of the modification. Provide a drawing of the modification including Alloy 52 weld metal deposit thickness ranges and coverage lengths over the Alloy 600 tube, Alloy 182/82 weld metal, and stainless steel cladding

Palisades Response – See below:



3. **NRC Question 3 -** Provide the following information regarding the non-destructive examinations performed on the weld and nozzle.

   a. In accordance with the requirements of the 2019 Edition of the ASME Code, Section III, NB 5140, was the adjacent base material for at least ½ in. (13 mm) on each side of the weld included in the examination?

   b. Did the Section III acceptance examination cover the 1/4-inch surface area beyond the Alloy 52M/152 weld-to-cladding interface?

   c. What is the current access restriction for performing a liquid dye penetrant examination to cover the surface from point "c" of Figure 2 of RR 5-10 through the 1/4-inch surface area beyond the Alloy 52M/152 weld-to-cladding interface (i.e., the "G-F" dimension provided in the Legend of Figure 2 of ASME Code Case N-729-6)?

Palisades Response –

   a. The adjacent base material for at least 1/2-inch on the cladding side of the weld was surface examined. Due to the limitations of the nozzle inner diameter, a surface examination was performed to the extent practical.

   b. The Section III acceptance PT examination covered at least 1/4-inch beyond the Alloy 52M/152 weld-to-cladding interface.

   c. As stated in the submittal letter this relief request is being revised to only request relief from the ISI for the weld because a liquid dye penetrant test was performed that covered the area of concern and satisfied the PSI requirement.