



A subsidiary of Pinnacle West Capital Corporation

Palo Verde Nuclear
Generating Station

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102-06201-DCM/RAS/RJR
May 27, 2010

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

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1
Docket No. STN 50-528
Response to Request for Additional Information
Relief Request No. 46**

By APS letter no. 102-06035, dated July 17, 2009, (Agencywide Document Access and Management System [ADAMS] Accession No. ML092160398), Arizona Public Service Company (APS), submitted Relief Request No. 46 to the NRC. The enclosure to this letter contains responses to questions relating to Relief Request No. 46 provided by the NRC Project Manager on March 12, 2010.

No commitments are being made to the NRC by this letter. Should you need further information regarding this response, please contact Russell A. Stroud, Licensing Section Leader, at (623) 393-5111.

Sincerely,

DCM//RAS/RJR/gat

Enclosure: Response to Request for Additional Information Relief Request No. 46

cc: E. E. Collins, Jr. NRC Region IV Regional Administrator
J. R. Hall NRC NRR Project Manager
L. K. Gibson NRC NRR Project Manager
R. I. Treadway NRC Senior Resident Inspector for PVNGS

A047
NRR

ENCLOSURE

**Response to Request for Additional Information
Relief Request No. 46**

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
RELIEF REQUEST No. 46

By letter dated July 17, 2009, Arizona Public Service Company (APS) submitted Relief Request No. 46 requesting relief from requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, *Rules for Inservice Inspection of Nuclear Power Plant Components* which were determined to be impractical for the Palo Verde Nuclear Generating Station (PVNGS), Unit 1. The request for relief applies to the second 10-year inservice inspection (ISI) interval in which PVNGS Unit 1 adopted the 1992 Edition through 1992 Addenda of ASME Section XI as the Code of record. On March 12, 2010, the Nuclear Regulatory Commission (NRC) requested the following additional information:

NRC Question 1

In part "A" of RR 46, the licensee indicated that the reactor vessel nozzle-to-vessel welds received volumetric examinations, with an overall combined examination volume that was limited to 82.5 percent of that required by the ASME Code, Section XI. Please discuss the results of these limited volumetric examinations, including whether any relevant indications were found during these examinations.

APS Response:

All B-D, B3.90 Reactor Vessel – Nozzle to Vessel examinations were acceptable with no relevant indications. However, during the course of the volumetric examinations for the reactor vessel nozzle-to-vessel weld 1-15, one indication was noted. The indication was determined to be Code acceptable in accordance with ASME Section XI, IWB 3512, Standards for Examination Category B-D, Full Penetration Welds of Nozzles in Vessels and therefore, determined not to be a relevant indication.

NRC Question 2

In part "B" of RR 46, the licensee indicated that the integrally welded attachments on the pressurizer received surface examinations of only the outside surface of the attachment weld, whereas the ASME Code, Section XI requires surface examinations of both the outside surface and inside surface of these welds. The licensee also indicated that supplemental volumetric examinations were performed by ultrasonic testing (UT). Please discuss the results of these outside surface examinations and supplemental UT examinations, including whether any relevant indications were found during these examinations.

APS Response:

The surface examinations on the pressurizer skirt weld number 5-1 found no relevant indications. During the supplemental ultrasonic examination, four indications were

noted. These indications were within acceptable limits of IWB-3516, Standards for Examination Category B-H, Integral Attachments for Vessels, and Examination Category B-K-1, Integral Attachments for Piping, Valves, and Pumps and therefore, determined not to be relevant indications. These indications were also identified during the first interval and no changes were noted.

NRC Question 3

In part "C" of RR 46, the licensee listed a number of ASME Code, Section XI, Examination Category B-J circumferential piping welds that were credited with receiving only single-sided volumetric examinations based on the ASME Code, Section XI, Appendix VIII Performance Demonstration Initiative (PDI) criteria. Please discuss the results of these single-sided volumetric examinations and surface examinations performed on these welds, including whether any relevant indications were found during these examinations.

APS Response:

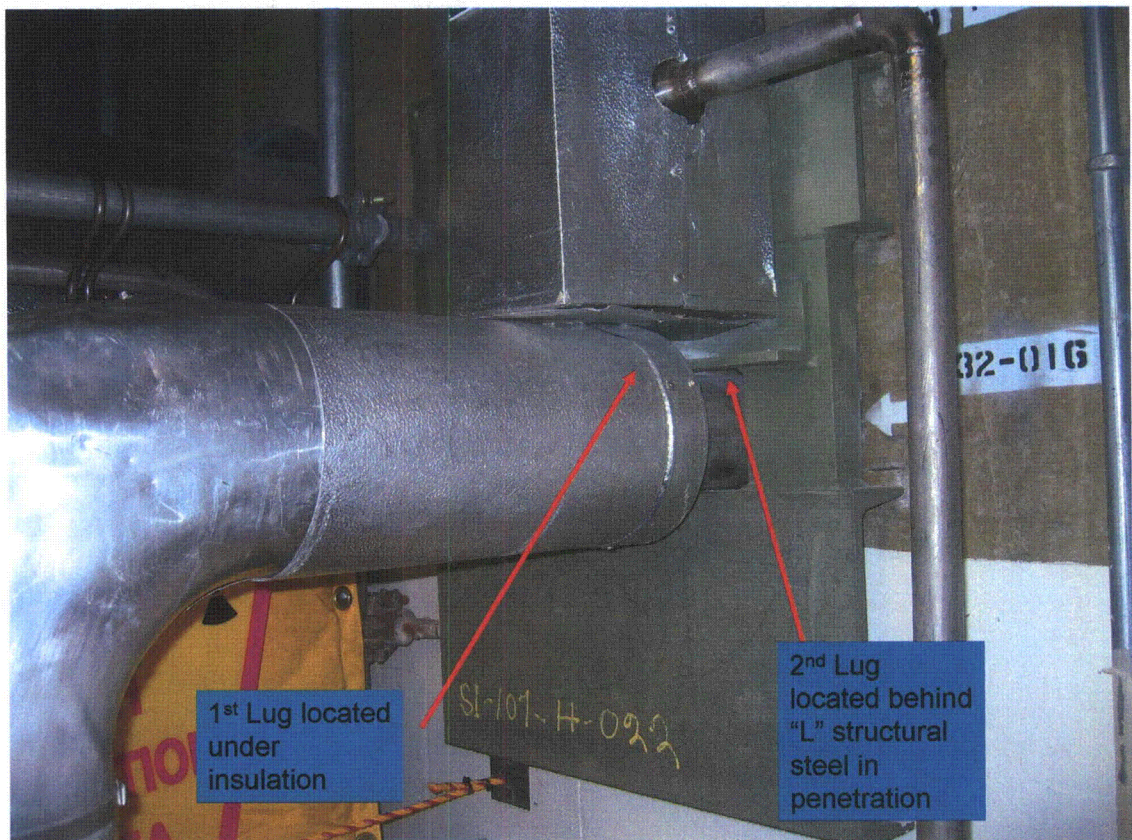
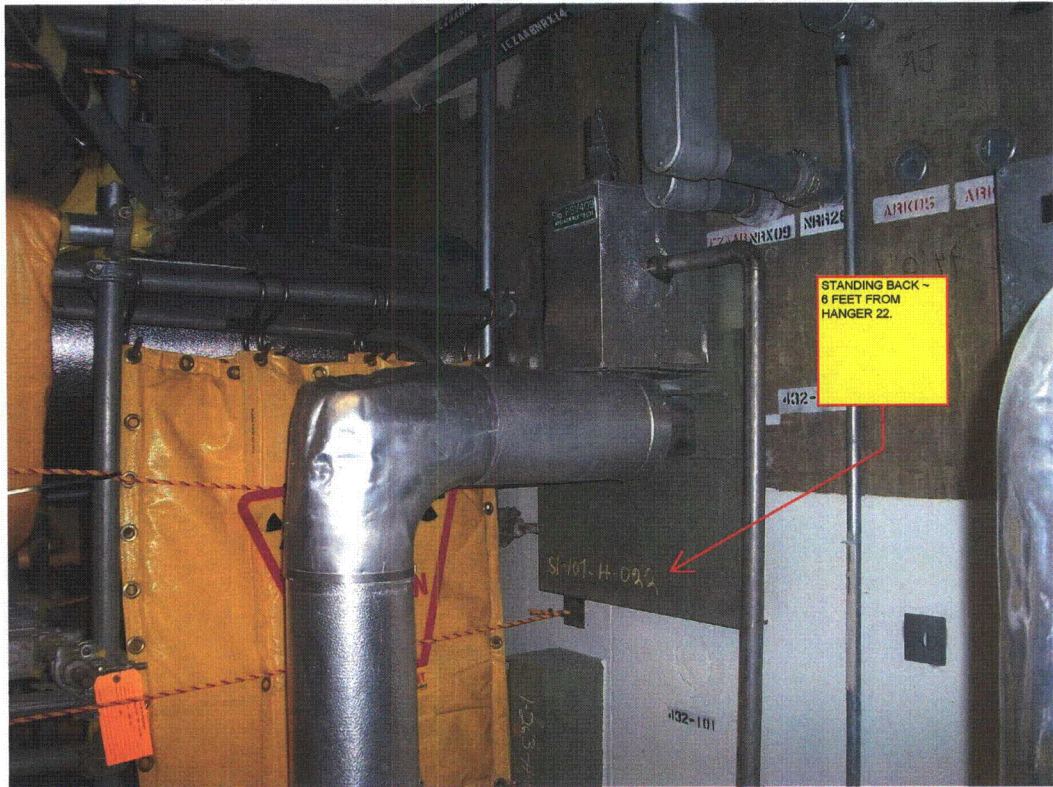
No relevant flaws indications were detected by volumetric or surface examinations that required supplemental examination, corrective measures, correction by repair/replacement activities, or analytical evaluation.

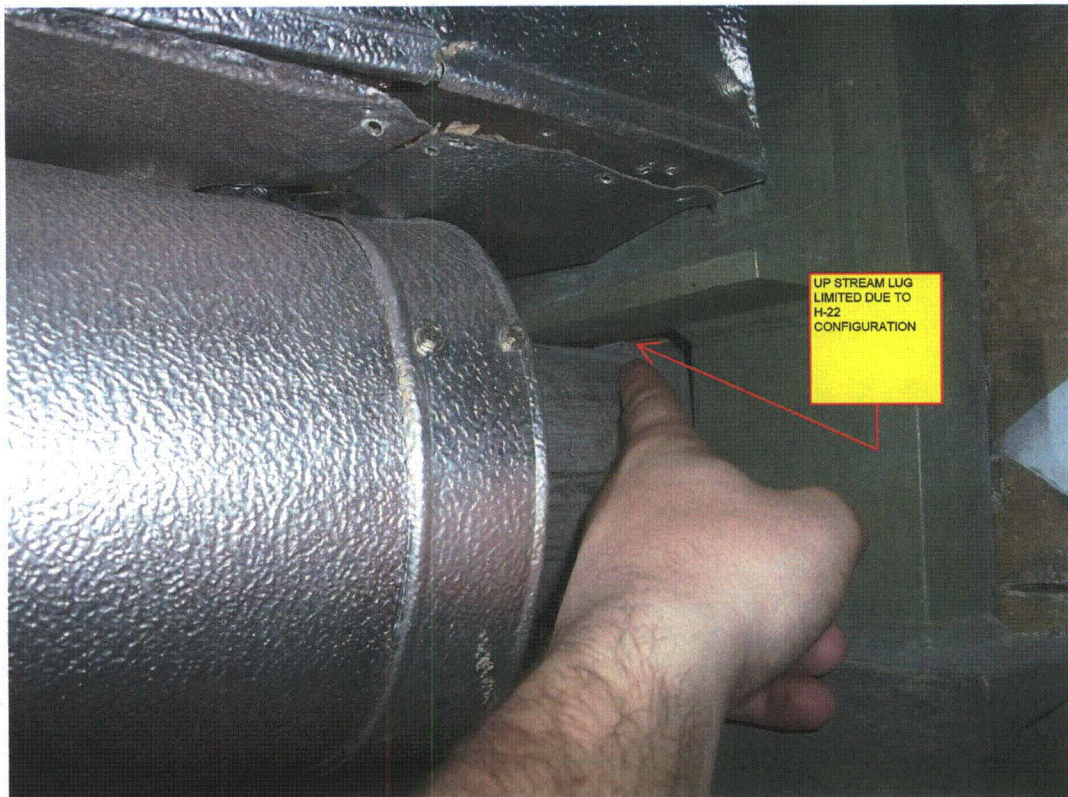
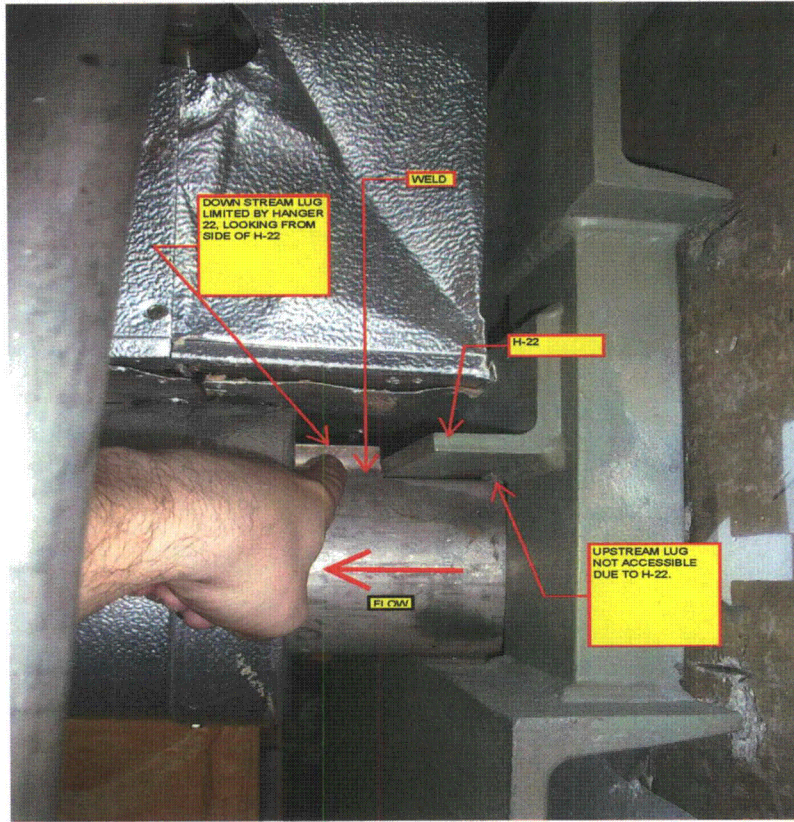
NRC Question 4

In part "D" of RR 46, the licensee stated that the surface examinations of ASME Code, Section XI, Examination Category C-C piping support attachment welds could not achieve the ASME Code-required coverages. Please provide more detail on the extent of coverage that was obtained for each Category C-C weld identified in the submittal and discuss the results of these surface examinations, including whether any relevant indications were found during these examinations.

APS Response:

As shown in the following photographs, support SI-107-H22 contains two lugs welded to the 12 o'clock position on the piping. One lug (upstream lug) is completely inaccessible because it is located behind the structural member of the support. The inspection coverage on this lug was 0.0 percent. The downstream lug has one end butting up against the structural member making this end inaccessible. As a result, approximately 83 percent coverage was obtained on this lug for a total of 41.5 percent coverage on both lugs. No relevant indications were found during the examination.





NRC Question 5

In part "E" of RR 46, the licensee stated that the ASME Code, Section XI, Examination Category C-C pump attachment welds referenced in the request received an average overall surface examination coverage of 78%, with 100% coverage of the rear lug attachments, and coverage limited at the bottom side of the front lug attachment. Please specify the percentage surface examination coverage obtained for the front lug attachment welds, and discuss the results of the surface examinations for all four attachment welds (front and rear), including whether any relevant indications were found during these examinations.

APS Response:

The percentage surface examination coverage obtained for the front lug attachment welds are as follows 116-1A, 78%; 116-1D, 78%; 117-1A, 78%; 117-1D, 78%.

The results of the surface examinations for all four attachment welds (front and rear) are as follows:

Weld ID	Surface Exam Results
116-1A	Acceptable Small rounded indications
116-1B	Acceptable Small rounded indications
116-1C	Acceptable Small rounded indications
116-1D	Acceptable Small rounded indications

Weld ID	Surface Exam Results
117-1A	Acceptable No Indications
117-1B	Acceptable No Indications
117-1C	Acceptable No Indications
117-1D	Acceptable Small rounded indication

All indications recorded were within the acceptable limits of IWC-3512, Standards for Examination Category C-C, Integral Attachments for Vessels, Piping, Pumps, and Valves.

NRC Question 6

In part "F" of RR 46, the licensee listed a number of ASME Code, Section XI, Examination Category C-F-1 circumferential piping welds that were credited with receiving only single-sided volumetric examinations based on the ASME Code, Section XI, Appendix VIII PDI criteria. Please discuss the results of these single-sided volumetric examinations and surface examinations performed on these welds, including

whether any relevant indications were found during these examinations.

APS Response:

No relevant flaws indications were detected by volumetric or surface examinations that required supplemental examination, corrective measures, correction by repair/replacement activities, or analytical evaluation.