



A subsidiary of Pinnacle West Capital Corporation

Palo Verde Nuclear
Generating Station

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102-06063-DCM/RJR
September 17, 2009

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

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 3
Docket No. STN 50-530
Response to Request for Additional Information
Relief Request No. 43

By APS letter no. 102-05948, dated January 12, 2009 (Agencywide Document Access and Management System [ADAMS] Accession No. ML090280369), Arizona Public Service Company (APS), submitted Relief Request No. 43 to the NRC. The enclosure to this letter contains responses to the questions provided to APS by the NRC Project Manager on July 15, 2009.

No commitments are being made to the NRC by this letter. Should you need further information regarding this relief request, 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. 43

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

AOLIT
NRR

ENCLOSURE

**Response to Request for Additional Information
Relief Request No. 43**

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
RELIEF REQUEST No. 43

By letter dated January 12, 2009, Arizona Public Service Company (APS) submitted Relief Request No. 43 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 3. The request for relief applies to the second 10-year inservice inspection (ISI) interval in which PVNGS Unit 3 adopted the 1992 Edition through 1992 Addenda of ASME Section XI as the code of record. On July 15, 2009, the Nuclear Regulatory Commission (NRC) requested the following additional information:

Request for Relief 43, Parts A through E, ASME Code, Section XI, Examination Categories B-H, B-J, C-C, C-F-1, and C-H

NRC Question 1

For each of the components listed in the ASME Code, Section XI, Examination Categories included in the licensee's submittal, state whether any recordable indications were observed, and describe the acceptability and disposition of these indications, if any.

APS Response:

| <u>Category</u> | <u>Description</u> |
|------------------------|---|
| B-H | Pressurizer - Integrally Welded Attachment |

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|----------|---|
| Weld 5-1 | The surface magnetic particle (MT) examination revealed no recordable indications. However, the 45-degree and 60-degree shear wave (SW) ultrasonic (UT) examinations identified one indication that was seen throughout the exam area at varying amplitudes. This indication was classified as a subsurface planar flaw which was evaluated acceptable in accordance with IWB-3520.1, <i>Allowable Planar Flaws</i> . |
|----------|---|

| | |
|------------|---|
| C-C | Pump - Integrally Welded Attachments |
|------------|---|

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|-------------|--|
| Weld 116-1A | The liquid penetrant (PT) examination identified one 1/8-inch round indication and one 3/16-inch round indication. |
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| Weld 116-1D | The PT examination identified one 1/8-inch round indication. |
|-------------|--|

The size of these indications did not exceed the allowable flaw standards for the applicable supported pressure-retaining component to which the attachment is welded and were determined to be acceptable

Response to RAI Relief Request No. 43

in accordance with IWC-3512, *Standards for Examination Category C-C, Integral Attachments for Vessels, Piping, Pumps, and Valves.*

C-F-1 Piping Welds > 3/8-inch Nominal Wall Thickness for Piping > NPS 4 inches - Circumferential Welds

Piping Welds > 1/5-inch Nominal Wall Thickness for Piping \geq NPS 2 inches and \leq 4 inches - Circumferential Welds

- Weld 63-4 The PT examination revealed no recordable indications. The 45-degree SW UT examination revealed no recordable indications. The 60-degree refracted longitudinal wave (RL) identified one indication. This indication was classified as a geometric indication and was the result of a counterbore discontinuity which was determined to be acceptable in accordance with Appendix I – *Mandatory, Supplement 11 – Geometric Indications.*
- Weld 77-16 The PT examination revealed no recordable indications. Both the 45-degree SW and the 60-degree RL UT examinations revealed the same indication. This indication was classified as a geometric indication and was the result of a counterbore discontinuity which was determined to be acceptable in accordance with Appendix I – *Mandatory, Supplement 11 – Geometric Indications.*
- Weld 85-46 The PT examination revealed no recordable indications. A 45-degree SW examination and a supplemental 45-degree RL UT examination were performed which revealed no recordable indications. The 70-degree SW UT examination identified one indication. This indication was classified as a geometric indication and was the result of root geometry which was determined to be acceptable in accordance with Appendix I – *Mandatory, Supplement 11 – Geometric Indications.*
- Weld 106-21 The PT examination revealed no recordable indications. The 45-degree SW UT examination revealed no recordable indications. The 70-degree SW UT examination identified one indication. This indication was classified as a geometric indication and was the result of root geometry which was determined to be acceptable in accordance with Appendix I – *Mandatory, Supplement 11 – Geometric Indications.*

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- Weld 107-42 The PT examination revealed no recordable indications. The 45-degree SW UT examination revealed no recordable indications. The 70-degree SW UT examination identified one indication. This indication was classified as a geometric indication and was the result of root geometry which was determined to be acceptable in accordance with Appendix I – *Mandatory, Supplement 11 – Geometric Indications*.
- Weld 112-45 The PT examination revealed no recordable indications. The 45-degree SW UT examination revealed no recordable indications. The 70-degree SW UT examination identified one indication. This indication was classified as a geometric indication and was the result of root geometry which was determined to be acceptable in accordance with Appendix I – *Mandatory, Supplement 11 – Geometric Indications*.
- Weld 113-21 The PT examination revealed no recordable indications. The 45-degree SW UT examination revealed no recordable indications. The 70-degree SW, 60-degree SW and 60-degree RL UT examinations all identified the same single indication. This indication was classified as a geometric indication and was the result of root geometry which was determined to be acceptable in accordance with Appendix I – *Mandatory, Supplement 11 – Geometric Indications*.
- Weld 115-13 The PT examination revealed no recordable indications. The 45-degree SW UT examination revealed no recordable indications. The 70-degree SW UT examination identified one indication. This indication was classified as a geometric indication and was the result of root geometry which was determined to be acceptable in accordance with Appendix I – *Mandatory, Supplement 11 – Geometric Indications*.

For the remaining components listed in the ASME Code, Section XI, Examination Categories included in the January 12, 2009, submittal, no recordable indications were observed.

Request for Relief 43, Part B, ASME Code, Section XI, Examination Category B-J, Items B9.11, Pressure Retaining Welds in Piping

NRC Question 2

Confirm that the body of the valve on pipe-to-valve Weld 23-4 is fabricated of cast stainless steel.

APS Response:

The body of the valve on pipe-to-valve Weld 23-4 is SA 351 GR CF8M, Austenitic Steel Casting for High Temperature Service (stainless steel).

Request for Relief 43, Part D, ASME Code, Section XI, Examination Category C-F-1, Items C5.11 and Item C5.21, Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping

NRC Question 3

Confirm that full ASME Code-required surface examinations were completed for each of the welds included in ASME Code, Section XI, Examination Category C-F-1.

APS Response:

APS has confirmed that full surface examinations were completed for each of the welds included in ASME Code, Section XI, Examination Category C-F-1.

Request for Relief 43, Part E, ASME Code, Section XI, Examination Category C-H, Items C7.30 and C7.40, All Pressure Retaining Components

NRC Question 4

The licensee has stated that support clips and other attachments on nitrogen supply lines in the chemical and volume control system limit the leakage test (performed by the "snoop" or bubble test method). The photographs included in the licensee's submittal confirm the type of support clip being used on these lines. Describe the percentage of supply line surface available for bubble testing. Alternately, describe the percentage of limited surface due to the support clips. Confirm that all available surfaces of these lines have been examined.

APS Response:

The nitrogen supply lines in question are approximately 40 feet in length. Each supply line has 30 of the clips installed. Each clip is approximately ½-inch wide. Thirty clips are approximately equal to 1.25 linear feet of nitrogen supply lines. This number represents approximately 3 percent of the linear footage that was inaccessible for examination, or conversely approximately 97 percent of the lines were accessible for examination. All accessible portions of these lines have been examined.