



A subsidiary of Pinnacle West Capital Corporation

Palo Verde Nuclear
Generating Station

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102-06246-DCM/RAB/CJS
August 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 3
Docket No. STN 50-530
Response to Request for Additional Information
Relief Request No. 47**

By letter no. 102-06110, dated December 21, 2009 [Agencywide Document Access and Management System (ADAMS) Accession no. ML100040068], Arizona Public Service Company (APS), submitted Relief Request No. 47 to the NRC for the second 10-year inservice inspection (ISI) interval for Palo Verde Nuclear Generating Station Unit 3, pursuant to paragraph 50.55a(g)(5)(iii) of Title 10 of *The Code of Federal Regulations* (10 CFR). On May 6, 2010, the NRC requested additional information (RAI) regarding the relief request. The enclosure to this letter contains the APS response to the questions in the RAI.

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,

FOR D.C. MIMS

DCM//RAS/CJS/gat

Enclosure: Response to Request for Additional Information Relief Request No. 47

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

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ENCLOSURE

**Response to Request for Additional Information
Relief Request No. 47**

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
RELIEF REQUEST No. 47

By letter dated December 21, 2009, Arizona Public Service Company (the licensee), submitted Relief Request No. 47 (RR 47), for the second 10-year inservice inspection (ISI) interval for Palo Verde Nuclear Generating Station Unit 3, pursuant to paragraph 50.55a(g)(5)(iii) of Title 10 of *The Code of Federal Regulations* (10 CFR).

On May 6, 2010, the Nuclear Regulatory Commission (NRC) requested the following additional information:

NRC Question 1

List the specific nozzle numbers and weld numbers for each reactor vessel nozzle-to-vessel weld for which relief is being requested in Relief Request No. 47.

APS Response:

Relief Request 47 is asking for relief on weld 1-15 on hot leg nozzle A and weld 1-18 on hot leg nozzle B. The weld locations are illustrated in Figure 1 of the original request.

NRC Question 2

Identify the diameter and wall thickness of each nozzle and weld identified in response to Question 1.

APS Response:

The maximum nozzle outside diameter is 65.06 inches and the nozzle wall thickness, depending on where measured, ranges from 9.97 to 11.53 inches. Nozzle dimensions are illustrated in Figure 2 of the original request. Weld thicknesses correspond to the thickness of the reactor pressure vessel, which is approximately 11 inches.

NRC Question 3

Identify the materials of construction of each nozzle and weld identified in Question 1

APS Response:

The hot leg nozzle is constructed of SA 508, Class 3. The welds are carbon steel to carbon steel (i.e., P3 to P3).

NRC Question 4

Identify all the nondestructive examination (NDE), including visual examinations, performed on each nozzle and weld identified in response to Question 1 during the unit's Second Inservice Inspection Interval. Identify the specific American Society of Mechanical Engineers Boiler and Pressure Vessel Code Sections and Appendices that each of the NDE tests were performed in accordance with and discuss when Performance Demonstration Initiative qualified techniques were used.

Include the results of all the NDE (i.e., whether any indication(s) of degradation were found) that was performed on each nozzle and weld and, with regard to ultrasonic inspections, identify the percent volume examined for each nozzle-to-vessel weld identified in response to Question 1 in each ultrasonic scan direction.

APS Response:

Ultrasonic examinations were conducted on welds 1-15 and 1-18 during the Second ISI Interval. Both welds were inspected to ASME Section XI, IWB-3512, Standards for Examination Category B-D, Full Penetration Welds of Nozzles in Vessels. Performance Demonstration Initiative (PDI) qualified techniques were not used in the Second Interval Reactor Vessel Exams. These exams were conducted in 1998 before PDI qualified techniques were required (Federal Register Notice (64FR51370) dated September 22, 1999). The NDE procedures and personnel used to conduct these examinations were qualified in accordance with ASME Section XI, 1992 Edition, 1992 Addenda.

There were no indications recorded during the ultrasonic inspections of welds 1-15 and 1-18. The inspections of both welds were limited due to the saddle geometry/nozzle boss. The examination coverage was 98 percent for the Bore Exams and 67 percent for the Tangential Exams. The total volume inspected was 82.5 percent.