



102-07929-MLL/MDD
June 14, 2019

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

MARIA L. LACAL
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**Palo Verde
Nuclear Generating Station**
P.O. Box 52034
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Dear Sirs:

Subject: **Palo Verde Nuclear Generating Station Unit 3
Docket No. STN 50-530
Renewed Operating License No. NPF-74
Response to Request for Additional Information - Relief Request 63 -
Unit 3 Impractical Examinations for the Third 10-Year Inservice
Inspection Interval**

By letter number 102-07851, dated January 10, 2019 (Agencywide Documents Access and Management System Accession No. ML19010A307), Arizona Public Service Company (APS) submitted relief request 63 in accordance with 10 CFR 50.55a(g)(5)(iii). Certain ultrasonic examinations of welds identified in letter 102-07851 required by Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, sub-articles IWB-2500 and IWC-2500 have been determined to be impractical for Unit 3 third 10-Year inservice inspection interval.

The Nuclear Regulatory Commission (NRC) staff has requested additional information (RAI) to complete their review with regard to ASME Code class 2 components. A clarifying phone call was held between NRC and APS on April 4, 2019, to discuss the additional information needed. The APS response to the request for additional information is provided in the enclosure to this letter. The response due date was June 7, 2019. APS has granted a week extension to June 14, 2019 for the response during a call with the NRC project manager on June 5, 2019.

No new commitments are being made in this submittal. If you have any questions about this request, please contact Michael D. DiLorenzo, Department Leader of Nuclear Regulatory Affairs, at (623) 393-3945.

Sincerely,

A handwritten signature in blue ink that reads "Maria L. Local".

MLL/MDD

Enclosure: Response to Request for Additional Information - Relief Request 63, Unit 3
Impractical Examinations for the Third 10-Year Inservice Inspection Interval

cc: S. A. Morris NRC Region IV Regional Administrator
S. P. Lingam NRC NRR Project Manager for PVNGS
C. A. Peabody NRC Senior Resident Inspector for PVNGS

Enclosure

Response to Request for Additional Information

Relief Request 63

**Unit 3 Impractical Examinations for the Third 10-Year
Inservice Inspection Interval**

Enclosure

**Response to Request for Additional Information - Relief Request 63 - Unit 3
Impractical Examinations for the Third 10-Year Inservice Inspection Interval**

**10 CFR 50.55a Request Number 63
Response to Request for Additional Information
Unit 3 Inservice Inspection Impracticality
Third 10-Year Inservice Inspection Interval**

By letter number 102-07851, dated January 10, 2019, Agencywide Documents Access and Management System Accession No. ML 19010A307, Arizona Public Service Company (APS) submitted relief request 63 in accordance with 10 CFR 50.55a(g)(5)(iii). Certain ultrasonic examinations of welds identified in letter 102-07851 required by Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, sub-articles IWB-2500 and IWC-2500 have been determined to be impractical for Unit 3 third 10-Year inservice inspection interval (ISI).

The Nuclear Regulatory Commission (NRC) staff has reviewed RR 63 and requested additional information in order to complete the review with regard to ASME Code Class 2 components. A clarifying phone call was held between NRC and APS on April 4, 2019, to discuss the additional information needed. The APS response is provided after each NRC request for additional information.

NRC MPH-B-RAI-1:

Please discuss whether, as a substitute, examinations were performed on similar welds in the same piping systems that essentially 100 percent coverage could be achieved.

APS Response:

There are no examinations that can formally be credited in place of the limited examinations identified in Tables 2 and 3 of Relief Request 63. However, other ultrasonic (UT) examinations were completed on similar welds of the same piping systems, often on the same lines, that have essentially 100 percent coverage and no rejectable indications. Those completed UT examinations which correspond to the limited examinations within the same piping systems are referenced in Tables 2A and 3A.

NRC MPH-B-RAI-2:

One of the notes associated with Tables 2 and 3 of the relief request states that "...All piping material for C-F-1 welds in the Table above are Austenitic Stainless Steel..." Please discuss the exact weld metal (material specification) used in the welds of Tables 2 and 3

APS Response:

Tables 2B and 3B have been provided as supplemental information to Tables 2 and 3 that were originally submitted as part of Relief Request 63. Tables 2B and 3B provide two weld material specifications for each weld. Specification "SFA-5.9 / ER316 / F6 / GTAW" was used for the initial passes (root) of each weld. The balance of each weld was completed using either SFA-5.9 / ER316 / F6 / GTAW or SFA-5.4 / ER316 / F5 / SMAW.

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NRC MPHB-RAI-3:

Tables 2 and 3 of the relief request show that welds are located in various zones. Please describe the location of these zones (inside or outside of the containment), how the zones are designated, operational leakage monitoring and radiation dose, if any, in these zones.

APS Response:

The location of the applicable zones are provided in Tables 2B and 3B. The ISI program is subdivided into zones for convenience of program management. Each zone may represent a room within the plant or a portion of a system separated by building penetrations, code classification boundaries, or otherwise. The Unit 3 Inservice Inspection program currently defines zones 1 through 6, and zones 16 through 129. Zones 7 through 15 are not currently used as zone designations within the program. The physical locations of each weld have been provided in Tables 2B and 3B, however the piping/line description resides in Tables 2 and 3 of Relief Request 63. Leak detection/monitoring is provided for the areas and/or rooms and includes control room indication. Dose rates for each room have been provided in Tables 2B and 3B as averages during the previous 5 years.

NRC MPHB-RAI-4:

Please discuss the design and operating conditions (e.g., temperature and pressure) of the welds in Tables 2 and 3 of the relief request.

APS Response:

Design and operating conditions (e.g., temperature and pressure) of the welds identified in Tables 2 and 3 have been provided in Tables 2B and 3B.

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**Response to Request for Additional Information - Relief Request 63 - Unit 3 Impractical Examinations for the Third
10-Year Inservice Inspection Interval**

Table 2A - Supplemental Information for Category C-F-1, Item C5.11 Welds							
ISI Zone No.	Limited Exam Weld Information			Similar Code Required Volume Weld Information			Comments
	Weld No.	Pipe Diam. (inches)	Weld Configuration	Weld No.(s) Credited with Code Required Volume	Pipe Diam. (inches)	Weld Configuration (in direction of flow)	
83	74-105	14	sweepolet to pipe	74-115	14	pipe to elbow	Same line
90	85-9	24	flange to pipe	85-29	24	pipe to elbow	Same line
90	85-11	24	pipe to valve	85-29	24	pipe to elbow	Same line
91	76-7	12	orifice to pipe	76-8, 76-2	12	pipe to elbow (76-8), reducer to pipe (76-2)	Same line
91	77-7	12	orifice to pipe	77-8	12	pipe to elbow	Same line
91	77-14	12	pipe to valve	77-8	12	pipe to elbow	Same line
91	77-16	12	valve to pipe	77-8	12	pipe to elbow	Same line
98	78-47	12	pipe to valve	78-45, 78-44, 78-43	12	elbow to pipe (78-45), pipe to elbow (78-44), elbow to pipe (78-43)	Same line
101	71-123	16	valve to pipe	22-21, 22-17, 22-14	16	pipe to elbow (22-21), pipe to elbow (22-17), pipe to elbow (22-14)	Same line
104	85-46	20	pipe to valve	85-44	20	elbow to pipe	Same line
104	85-47	20	valve to pipe	85-44	20	elbow to pipe	Same line

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Response to Request for Additional Information - Relief Request 63 - Unit 3 Impractical Examinations for the Third 10-Year Inservice Inspection Interval

Table 3A - Supplemental Information for Category C-F-1, Item C5.21 Welds							
ISI Zone No.	Limited Exam Weld Information			Similar Code Required Volume Weld Information			Comments
	Weld No.	Pipe Diam. (inches)	Weld Configuration	Weld No.(s) Credited with Code Required Volume	Pipe Diam. (inches)	Weld Configuration (in direction of flow)	
110	110-17	2	pipe to valve	110-25, 110-33, 110-34	4	tee to pipe (110-25), orifice to pipe (110-33), pipe to elbow (110-34)	This line changes line number and size, but runs continuous with the line of the three welds identified as similar welds
110	110-52	2	pipe to tee	110-25, 110-33, 110-34	4	tee to pipe (110-25), orifice to pipe (110-33), pipe to elbow (110-34)	This line changes line number and size, but runs continuous with the line of the three welds identified as similar welds
111	111-34	4	pipe to orifice	111-21	2	pipe to elbow	This line changes line number and size, but runs continuous with the line of the weld identified as a similar weld
113	113-28	2	valve to pipe	113-2, 113-9	4 (113-2), 2 (113-9)	elbow to pipe (113-2), elbow to pipe (113-9)	This line changes line number and size, but runs continuous with the line of the two welds identified as similar welds
118	118-46	3	penetration to pipe	118-47, 118-48	3	Pipe to elbow (118-47), elbow to pipe (118-48)	Same line
118	118-49	3	pipe to valve	118-47, 118-48	3	Pipe to elbow (118-47), elbow to pipe (118-48)	Same line
119	119-52	3	pipe to valve	119-26	3	tee to pipe	Same line
119	119-53	2	valve to pipe	119-26	3	tee to pipe	This line changes line number and size, but runs continuous with the line of the weld identified as a similar weld

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Table 2B - Supplemental Information for Category C-F-1, Item C5.11 Welds

ISI Zone No.	Weld No.	Pipe Diam. (inches)	Filler Material Specifications ASME / AWS / F No. / Process	Plant Location	Typical Area Dose Rates (mR/hr)	Leakage Monitoring	Design Conditions		Operating Conditions	
							Pressure (psi)	Temp. (Deg. F)	Pressure (psi)	Temp. (Deg. F)
83	74-105	14	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg. - Shutdown Cooling HTX 'A' Room	0.3 - 9.0	Yes	650	400	370	350
90	85-9	24	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - East Mechanical Penetration Room	0.2 - 22.0	Yes	100	350	100	120
90	85-11	24	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - East Mechanical Penetration Room	0.2 - 22.0	Yes	100	350	100	120
91	76-7	12	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - West Mechanical Penetration Room	0.2 - 11.0	Yes	650	550	370	350
91	77-7	12	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - West Mechanical Penetration Room	0.2 - 11.0	Yes	650	550	370	350
91	77-14	12	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - West Mechanical Penetration Room	0.2 - 11.0	Yes	650	550	370	350
91	77-16	12	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - West Mechanical Penetration Room	0.2 - 11.0	Yes	2485	650	370	350
98	78-47	12	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Containment - 103' el. Outside Bio-Shield	<0.2	Yes	2485	650	370	350
101	71-123	16	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Containment - 90' el. Outside Bio-Shield	0.5 - 4.0	Yes	485	400	370	350
104	85-46	20	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - Low Pressure Safety Injection Pump Room 42' el.	0.4 - 33.0	Yes	100	350	100	120
104	85-47	20	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - Low Pressure Safety Injection Pump Room 42' el.	0.4 - 33.0	Yes	100	350	100	120

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**Response to Request for Additional Information - Relief Request 63 - Unit 3 Impractical Examinations for the Third
10-Year Inservice Inspection Interval**

Table 3B - Supplemental Information for Category C-F-1, Item C5.21 Welds

ISI Zone No.	Weld No.	Pipe Diam. (inches)	Filler Material Specifications ASME / AWS / F No. / Process	Plant Location	Typical Area Dose Rates (mR/hr)	Leakage Monitoring	Design Conditions		Operating Conditions	
							Pressure (psi)	Temp. (Deg. F)	Pressure (psi)	Temp. (Deg. F)
110	110-17	2	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - West Mechanical Penetration Room	0.2 - 11.0	Yes	2050	350	1822	350
110	110-52	2	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - West Mechanical Penetration Room	0.2 - 11.0	Yes	2485	650	1822	350
111	111-34	4	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - West Mechanical Penetration Room	0.2 - 11.0	Yes	2485	650	1822	350
113	113-28	2	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - East Mechanical Penetration Room	0.2 - 22	Yes	2485	650	1822	350
118	118-46	3	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Containment - 90' el. Outside Bio-Shield	0.5 - 4.0	Yes	2485	650	1822	350
118	118-49	3	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Containment - 90' el. Outside Bio-Shield	0.5 - 4.0	Yes	2485	650	1822	350
119	119-52	3	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Containment - 90' el. Outside Bio-Shield	0.5 - 4.0	Yes	2485	650	1822	350
119	119-53	2	SFA-5.9 / ER316 / F6 / GTAW SFA-5.4 / ER316 / F5 / SMAW	Auxiliary Bldg - CH Pump Valve Gallery 100' el.	0.2 - 2.0	Yes	2485	650	1822	350