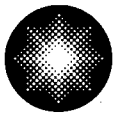


James A. Spina
Vice President

Calvert Cliffs Nuclear Power Plant, Inc.
1650 Calvert Cliffs Parkway
Lusby, Maryland 20657
410.495.4455
410.495.3500 Fax



Constellation Energy
Generation Group

February 23, 2006

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
Response to Request for Additional Information Regarding Relief Request to Use
Alternative Techniques for Repair of Welded Nozzles (TAC Nos. MC9583 and
MC9584)

REFERENCES:

- (a) Letter from Mr. P. D. Milano (NRC) to Mr. J. A. Spina (CCNPP), dated February 3, 2006, Request for Additional Information Regarding Relief Request to Use Alternative Techniques for Repair of Welded Nozzles (TAC Nos. MC9583 and MC9584)
- (b) Letter from Mr. G. Vanderheyden (CCNPP) to Document Control Desk (NRC), dated December 21, 2005, ASME Section XI Relief Request to Use Alternative Techniques for Repair and Examination of Unacceptable Indications in Welded Nozzles

By letter dated February 3, 2006 (Reference a), you requested additional information regarding Calvert Cliffs Nuclear Power Plant, Inc.'s relief request to use alternative techniques for repair and examination of unacceptable indications in welded nozzles (Reference b). Attachment (1) to this letter provides the requested information.

Should you have questions regarding this matter, please contact Mr. L. S. Larragoite at (410) 495-4922.

Very truly yours,

JAS/MJY/bjd

Attachment: (1) Response to NRC Request for Additional Information Regarding Relief Request to Use Alternative Techniques for Repair of Welded Nozzles

cc: P.D. Milano, NRC
S. J. Collins, NRC

Resident Inspector, NRC
R. I. McLean, DNR

A047

ATTACHMENT (1)

**RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
REGARDING RELIEF REQUEST TO USE ALTERNATIVE
TECHNIQUES FOR REPAIR OF WELDED NOZZLES**

ENCLOSURE

1. Framatome ANP Welding Procedure Specification 55-WP1/8/F6AW1-008

ATTACHMENT (1)

RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION REGARDING RELIEF REQUEST TO USE ALTERNATIVE TECHNIQUES FOR REPAIR OF WELDED NOZZLES

Requested Information 1

Submit a copy of the welding procedure specification(s) that will be used for weld buildup and attachment welds.

Calvert Cliffs Response

The Framatome ANP Welding Procedure Specification (WPS) that is used to weld the replacement nozzles to the Reactor Coolant System (RCS) Hot Leg Pipe is enclosed. This procedure is used to make the partial penetration weld of the Stainless Steel (P8) nozzle to the Carbon Steel (P1) pipe.

Requested Information 2

Submit a description, to the NRC staff, of any non-destructive examination that will be performed for final acceptance of each repaired instrument nozzle using the alternative technique.

Calvert Cliffs Response

The partial penetration welds attaching the replacement nozzles to the pipe will be 1/2 thickness and full thickness Liquid Penetrant tested. A VT-2 examination will also be conducted at operating pressure and temperature.

Enclosure (1)

FRAMATOME ANP WELDING PROCEDURE SPECIFICATION 55-WP1/8/F6AW1-008



WELDING PROCEDURE SPECIFICATION
55-WP1/8/F6AW1-008
Gas Tungsten-Arc Welding

WELDING PROCEDURE SPECIFICATION

WP1/8/F6AW1

Supporting Procedure Qualification Records:

PQR 7025 and PQR 7079

PREPARED BY: *Zach Taylor* *Zach Taylor* DATE: *2-15-06*
WELDING ENGINEER

REVIEWED BY: *Stanley V. Gorski* *Stanley V. Gorski* DATE: *2-15-06*
COGNIZANT ENGINEER

APPROVED BY: *Don Wood* *Don Wood For DE Whiskey* DATE: *2/15/06*
MANAGER, WELDING SERVICES



WELDING PROCEDURE SPECIFICATION
55-WP1/8/F6AW1-008
Gas Tungsten-Arc Welding

RECORD OF REVISIONS

REVISION	DATE	DESCRIPTION OF REVISION
00	July 2, 1996	Original issue
01	November 21, 1996	Revised scope statement and preheat
02	September 25, 2000	Revised preheat requirements
03	December 20, 2002	Revised amperage ranges
04	June 10, 2004	Updated logo Revised scope statement Addressed some base metal / filler metal issues (thickness, and material selection)
05	June 23, 2004	Changed scope statement Updated Section 2.0 to remove SPP-01 reference Returned to original base metal / filler metal thicknesses in Sections 3.0 and 4.0 and also added NF requirements Revised Section 6.0 to include NF preheat requirements Added a shielding gas specification to Section 8.0
006	December 16, 2005	Added NB preheat requirements for PWHT exemptions
007	February 3, 2006	Added vertical down progression in Section 5.0
008	February 15, 2006	Removed Proprietary classification Corrected typos



WELDING PROCEDURE SPECIFICATION
55-WP1/8/F6AW1-008
Gas Tungsten-Arc Welding

1.0 SCOPE

This welding procedure provides instructions for manual gas tungsten arc welding of P-No. 1 carbon steel base materials to P-No. 8 stainless steel base materials. This welding procedure does not support applications having impact requirements. This WPS shall be used in conjunction with GENERAL WELDING PROCEDURE-1 (GWP-1). Additional ASME Section III NB and NF requirements are addressed at the end of each section, if necessary.

2.0 JOINTS (QW-402)

Groove Design	V & U grooves with single, double or compound bevels, fillets and repairs.	
Backing	Rings:	1/8" to 1/4" inclusive
	Materials:	P-No. 1 or P-No. 8
Root Spacing	Open:	See project drawings
	Consumable inserts:	See project drawings
Retainers	Non-metallic retainers or non-fusing retainers shall not be used unless authorized by Welding Engineering.	
Details	Contract/project drawings shall take precedence on all weld joint details.	

3.0 BASE MATERIALS (QW-403)

P-No's qualified: All P-No. 1 to P-No. 8 materials.

Base material / weld deposit thickness range:	Groove welds:	3/16" to 8"
	Fillet welds:	All

The P-No. qualifies the equivalent S-No.

For ASME Section III NF applications, base metal thicknesses are limited to 1.5" or less. If the base metal is greater than 1.5" then the deposited weld thickness may not exceed 3/4".



WELDING PROCEDURE SPECIFICATION
55-WP1/8/F6AW1-008
Gas Tungsten-Arc Welding

4.0 FILLER MATERIALS (QW-404)

Diameter: 1/16", 3/32", and 1/8"

F-No. 6, A-No. 8, SFA-5.9, AWS Classification ER309 and/or ER308

Note: ER309 must be used when welding over P-No. 1 base materials.

Note: "L" grades may also be used.

Filler material must be added on each pass.

Consumable insert: F-No. 6, A-No. 8, SFA 5.30, IN 309, Class 1, 2, 3, or 5

Filler material product form: Bare (solid) or metal cored

Maximum qualified deposited weld thickness: 8"

Maximum layer thickness: 1/4"

5.0 POSITIONS (QW-405)

Groove, fillet and repair welds:	All
Vertical weld progression:	Uphill or downhill

6.0 PREHEAT (QW-406)

Preheat temperature: 50 °F minimum

Interpass temperature: 350 °F maximum

For ASME Section III with NB applications, when the material thickness is greater than 3/4", a 200 °F minimum preheat is required.

For ASME Section III with NF applications, when the material thickness is greater than 3/4", a 200 °F minimum preheat is required.

7.0 POSTWELD HEAT TREATMENT (QW-407)

None

8.0 SHIELDING GAS (QW-408)

Shielding Gas:	Argon	Flow Rate:	10-30 CFH
Purge Gas:	Argon	Flow Rate:	3-15 CFH
Trailing Gas:	None	Flow Rate:	N/A
Gas Composition:	SG-A per SFA-5.32		



WELDING PROCEDURE SPECIFICATION
55-WP1/8/F6AW1-008
Gas Tungsten-Arc Welding

9.0 ELECTRICAL CHARACTERISTICS (QW-409)

Current-Polarity:	DC-SP (DCEN)
Pulsed Current:	No
Electrode:	SFA-5.12, EWTh-2
	Diameter: 1/16", 3/32", or 1/8"

<u>Filler Metal Diameter</u>	<u>Amps</u>
1/16"	50 - 100
3/32"	50 - 125
1/8"	80 - 150

10.0 TECHNIQUE (QW-410)

String or weave:	Both
Gas cup size:	#4 through #12
Method of cleaning:	Wire brushing, grinding, filling or machining.
Method of backgouging:	Mechanical or thermal
Passes per side:	Single or multiple
Chamber:	Out of chamber
Peening:	Not permitted unless authorized by Welding Engineering