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January 30, 2007

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
Inspection and Mitigation of Alloy 600/82/182 Pressurizer Butt Welds

In October 2006, while performing inspections of its pressurizer Alloy 82/182 butt welds in accordance with Materials Reliability Program (MRP)-139, "Material Reliability Program: Primary System Piping Butt Weld Inspection and Evaluation Guideline", a pressurized water reactor licensee discovered several circumferential indications in its pressurizer surge, safety and relief nozzles. Because of the potential importance of this issue, Calvert Cliffs Nuclear Power Plant, Inc. (CCNPP) is submitting this letter to commit to the following actions taken or planned for inspecting or mitigating Alloy 600/82/182 butt welds on pressurizer spray, surge and relief lines.

All pressurizer Alloy 600/82/182 butt welds at CCNPP Unit 1 have been inspected and mitigated. Details concerning the locations inspected and mitigated are provided in the attached table (Attachment 1).

Inspection of all pressurizer Alloy 600/82/182 butt welds at CCNPP Unit 2 is not complete, but we intend to complete all our inspection and mitigation activities on these locations during the spring 2007 outage, scheduled to begin February 25, 2007. Details concerning the inspection and mitigation activities are provided in the attached table (Attachment 1). Future inspections of pressurizer butt welds at both CCNPP units will be performed in accordance with industry guidance (MRP-139). The results of future inspections or mitigations of Alloy 600/82/182 butt welds locations will be reported to the NRC within 60 days of startup from the outage during which they were performed.

Due to the short period of time between now and the Unit 2 refueling outage, enhanced guidance for monitoring primary system leakage will not be developed. Our existing guidance for monitoring primary system leakage requires a daily measurement of primary system leakage and has actions beginning at an unidentified leak rate of 0.15 gpm. This guidance provides adequate assurance that structural integrity is maintained and that any primary system pressure boundary leakage is discovered in a timely manner.

The Nuclear Regulatory Commission will be informed, as appropriate, if CCNPP Units 1 or 2 revises any of the information contained in this letter.

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Should you have questions regarding this matter, please contact Mr. Jay S. Gaines at (410) 495-5219.

Very truly yours,



JAS/PSF/bjd

Attachment: (1) Inspection and Mitigation Summary for Alloy 600/82/182 Pressurizer Butt Welds

cc: D. V. Pickett, NRC
S. J. Collins, NRC

Resident Inspector, NRC
R. I. McLean, DNR

ATTACHMENT (1)

INSPECTION AND MITIGATION SUMMARY FOR ALLOY 600/82/182

PRESSURIZER BUTT WELDS

ATTACHMENT (1)

INSPECTION AND MITIGATION SUMMARY FOR ALLOY 600/82/182 PRESSURIZER BUTT WELDS

Table 1 - Calvert Cliffs Unit 1

Nozzle		MRP-139 Volumetric Inspection Requirement Met or to be Met		Mitigation Completed or to be Completed	Comments
Function / Designation	Susceptible Material Description	Outage Designation	Start Date (MM/YYYY)	Outage Designation	
Spray	Nozzle-to-Safe End Weld Only	2006 RFO	02/2006	2006 RFO	Note 1, 2
Surge	Nozzle-to-Safe End Weld Only	2006 RFO	02/2006	2006 RFO	Note 2, 3
Safety/Relief to line no. 4CC10-1005	Nozzle-to-Safe End Weld Only	2006 RFO	02/2006	2006 RFO	Note 2, 3
Safety/Relief to line no. 4CC10-1006	Nozzle-to-Safe End Weld Only	2006 RFO	02/2006	2006 RFO	Note 2, 4

Note 1: Stress improvement mitigation was performed. Ultrasonic testing (UT) examinations meeting PDI qualification requirements were performed before and after stress improvement with no recordable indications. Coverage for UT examinations was 100% for axial scanning and 59% for circumferential scanning relative to the examination volume defined in MRP-139.

Note 2: Bare metal visual inspection performed during the spring 2004 refueling outage, finding no indications of leakage.

Note 3: Stress improvement mitigation was performed. Ultrasonic testing examinations meeting PDI qualification requirements were performed before and after stress improvement with no recordable indications. Coverage for UT examinations was 90% or greater of the examination volume defined in MRP-139.

Note 4: Stress improvement mitigation was performed. Ultrasonic testing examinations meeting PDI qualification requirements were performed before and after stress improvement. Axial indication found during pre-stress improvement UT exam and sized using PDI qualified sizing procedures. The indication was 0.1 inches in depth and 0.6 inches in length, and located at the inner diameter of the buttering, extending to the buttering/weld metal interface. The weld thickness is 1.3 inches. Examination results for welds having indications have been transmitted to NRC in References 1 and 2. Coverage for UT examinations was 90% or greater of the examination volume defined in MRP-139.

References:

- (1) Letter from Mr. J. A. Spina (CCNPP) to Document Control Desk (NRC), dated May 31, 2006, ASME Code Section XI Flaw Evaluation of Dissimilar Metal Weld Flaws Identified by Ultrasonic Testing
- (2) Letter from Mr. J. A. Spina (CCNPP) to Document Control Desk (NRC), dated December 22, 2006, Response to NRC Request for Additional Information

ATTACHMENT (1)

INSPECTION AND MITIGATION SUMMARY FOR ALLOY 600/82/182 PRESSURIZER BUTT WELDS

Table 2 - Calvert Cliffs Unit 2

Nozzle		MRP-139 Volumetric Inspection Requirement Met or to be Met		Mitigation Completed or to be Completed	Comments
Function / Designation	Susceptible Material Description	Outage Designation	Start Date (MM/YYYY)	Outage Designation	
Spray	Nozzle-to-Safe End Weld Only	2007 RFO	02/2007	2007 RFO	Note 1, 2, 3
Surge	Nozzle-to-Safe End Weld Only	2007 RFO	02/2007	2007 RFO	Note 1, 2
Safety/Relief to line no. 4CC10-2005	Nozzle-to-Safe End Weld Only	2007 RFO	02/2007	2007 RFO	Note 1, 2, 3
Safety/Relief to line no. 4CC10-2006	Nozzle-to-Safe End Weld Only	2007 RFO	02/2007	2007 RFO	Note 1, 2, 3

Note 1: Stress improvement mitigation is planned. Ultrasonic testing examinations meeting PDI qualification requirements will be performed before and after stress improvement. Full structural weld overlay will be performed if indications in excess of the stress improvement criteria are found in the pre-stress improvement UT examination.

Note 2: Bare metal visual inspection performed during the spring 2005 refueling outage, finding no indications of leakage.

Note 3: An ultrasonic examination meeting PDI qualification requirements was performed during 2RFO15 in Spring 2005, finding no recordable indications. Coverage for UT examinations was 90% or greater of the examination volume defined in MRP-139.