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10 CFR 50.55a

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

Prairie Island Nuclear Generating Plant Unit 2
Docket 50-306
License No. DPR-60

Summary of Preemptive Structural Weld Overlay Ultrasonic Examinations for the Unit 2 Pressurizer Surge Nozzle (TAC No. MD5868)

References:

- 1) Letter from NMC to NRC Document Control Desk, L-PI-07-054, "10 CFR 50.55a Request: Proposed Alternatives for Application of Structural Weld Overlay to the Prairie Island Nuclear Generating Plant Unit 2 Pressurizer Surge Nozzle Weld (2-RR-4-8)," dated June 25, 2007 (ML071760332)
- 2) Letter from NMC to NRC Document Control Desk, L-PI-08-003, "Response to Request for Additional Information Regarding 10 CFR 50.55a Request for Relief from ASME Section XI Repair and Replacement Requirements: Proposed Alternatives for Application of Structural Weld Overlay to the Prairie Island Nuclear Generating Plant Unit 2 Pressurizer Surge Nozzle Weld (2-RR-4-8) (TAC MD5868)," dated January 15, 2008 (ML081510906)
- 3) Letter from NMC to NRC Document Control Desk, L-PI-08-041, "Additional Commitment Regarding 10 CFR 50.55a Request: Proposed Alternatives for Application of Structural Weld Overlay to the Prairie Island Nuclear Generating Plant Unit 2 Pressurizer Surge Nozzle Weld (2-RR-4-8) (TAC MD5868)," dated May 7, 2008 (ML081280890)
- 4) Letter from NRC to NMC, "Prairie Island Nuclear Generating Plant, Unit 2 - Alternative to ASME Code, Section XI, Structural Weld Overlay of Pressurizer Surge Nozzle Weld, Alternative Request No. 2-RR-4-8, Revision 1 (TAC NO. MD5868)" dated June 15, 2008 (ML081360646)

By letter dated June 25, 2007 (Reference 1), and pursuant to 10 CFR 50.55a(a)(3), Nuclear Management Company, LLC, (NMC) requested U.S. Nuclear Regulatory (NRC) approval of 10 CFR 50.55a Request 2-RR-4-8, Revision 0, for the Prairie Island Nuclear Generating Plant (PINGP). Relief was requested to support the PINGP's installation of a preemptive full structural weld overlay on the pressurizer surge line nozzle-to-safe end dissimilar metal and safe end-to-reducer stainless steel butt welds during the Unit 2 refueling outage (2R25). The original 10 CFR 50.55a request was revised (2-RR-4-8, Revision 1) and supplemented with responses to NRC requests for additional information (RAI) on January 15, 2008 (Reference 2). An additional commitment regarding the inservice inspection requirements in the 10 CFR 50.55a request was submitted May 7, 2008 (Reference 3). The NRC authorized the use of 2-RR-4-8, Revision 1 on June 15, 2008 (Reference 4).

As part of the 10 CFR 50.55a request, NMC committed to submit the following information to the NRC within 14 days following completion of the final PINGP Unit 2 pressurizer surge nozzle full structural weld overlay ultrasonic examination:

- Weld overlay examination results including a list of indications detected.
- Disposition of the indications using the standards of ASME Section XI, Nonmandatory Appendix Q.
- The type and, if possible, nature of the indications.
- A discussion of any repairs to the weld overlay material and/or base metal and the reason for repairs.

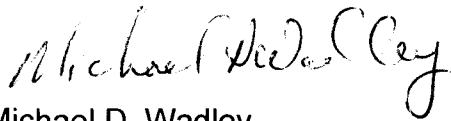
The enclosure to this letter contains the required weld overlay examinations summary information. With submittal of this information by Northern States Power Company - Minnesota, commitment number 1 of the Reference 1 letter has been fulfilled.

The structural weld overlay was completed satisfactorily during the PINGP Unit 2 refueling outage (2R25). During installation of the weld overlay, a review of weld control records identified an error in the recorded travel speeds. Further evaluation determined that actual travel speeds did not result in heat inputs outside the acceptable range. The review also identified that the first layer temperbead parameters were not used on a small area of the nozzle material nearest to the dissimilar metal weld. This was not in conformance with the American Society of Mechanical Engineers (ASME) code and resulted in the removal and rewelding of the affected area.

Summary of Commitments

This letter contains no new commitments. This letter closes out one commitment (commitment 1) made to support the 10 CFR 50.55a request 2-RR-4-8, Revision 1. This commitment was:

1. NMC commits to providing the following information within fourteen days of completion of the final PINGP Unit 2 Pressurizer Surge Nozzle full structural weld overlay ultrasonic examination:
 - Weld overlay examination results including a list of indications detected.
 - Disposition of the indications using the standards of ASME Section XI, Nonmandatory Appendix Q.
 - The type and, if possible, nature of the indications.
 - A discussion of any repairs to the weld overlay material and/or base metal and the reason for repairs.



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Enclosure

cc: Regional Administrator, Region III, USNRC
Project Manager, Prairie Island Nuclear Generating Plant, USNRC
Resident Inspector, Prairie Island Nuclear Generating Plant, USNRC
Chief Boiler Inspector, State of Minnesota

Enclosure to L-PI-08-091

**Summary of Preemptive Weld Overlay Ultrasonic
Examination for the Unit 2 Pressurizer Surge Nozzle**

(1 page)

Summary of Preemptive Weld Overlay Ultrasonic Examinations for the Unit 2 Pressurizer Surge Nozzle

This report summarizes the ultrasonic examinations (UT) performed for the Prairie Island Nuclear Generating Station (PINGP) Unit 2 pressurizer surge nozzle weld overlay. The examinations were performed using AREVA Procedure number 54-ISI-838, Revision 09, "Manual Ultrasonic Examination of Weld Overlaid Similar and Dissimilar Metal Welds" This procedure and the personnel performing the examinations are Performance Demonstration Initiative (PDI) qualified. No indications were detected in the overlay, therefore; no disposition of indications was required.

Component Identification: Nozzle-to-safe end dissimilar metal (DM) Alloy 82/182 butt weld (W-17), safe end-to-reducer stainless steel (SST) butt weld (W-16) on surge line connection to the pressurizer and the new overlay weld (W-18).

Examination Date: October 8, 2008

Examination Time: 17:06 to 20:03

Examination Region: Weld overlay material, outer 25% dissimilar metal weld and adjacent base material as per Non-Mandatory Appendix Q.

Examination Coverage: 100 percent of the Code required volume was achieved during the examinations.

Axial Examination Angles: 0, 45, 60, 70, and ODCR (Outside Diameter Creeping Wave), all longitudinal waves

Circumferential Examination Angles: 45, 60, 70, and ODCR, all longitudinal waves

Examination Summary: The UT volumetric examinations resulted in no recordable indications.

Disposition of Indications: None

Nature of Indications: None

Description of Repairs to the Weld Overlay Material and/or Base Metal:

During installation of the weld overlay, a review of weld control records identified an error in the recorded travel speeds. Further evaluation determined that actual travel speeds did not result in heat inputs outside the acceptable range. The review also identified that the first layer temperbead parameters were not used on a small area of the nozzle material nearest to the dissimilar metal weld. This was not in conformance with the American Society of Mechanical Engineers (ASME) code and resulted in the removal and rewelding of the affected area. Surface exam of excavated weld area showed no indications. Surface exam of final repair weld showed no indications.