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Indiana Michigan Power
Cook Nuclear Plant
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Bridgman, MI 49106
AEP.com

November 6, 2006

AEP:NRC:6055-20
10 CFR 50.55a

Docket No.: 50-315

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant Unit 1
AMERICAN SOCIETY OF MECHANICAL ENGINEERS CODE,
SECTION XI REPAIR REQUIREMENTS
PREEMPTIVE WELD OVERLAY – ULTRASONIC EXAMINATION RESULTS

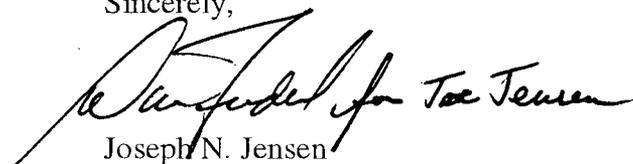
Reference: Letter from Mark A. Peifer, Indiana Michigan Power Company, to Nuclear Regulatory Commission Document Control Desk, "Donald C. Cook Nuclear Plant Unit 1, Supplement to Proposed Alternative to the American Society Of Mechanical Engineers Code, Section XI Repair Requirements," AEP:NRC:6055-17, Accession Number ML062780203, dated September 26, 2006.

In the referenced letter, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant Unit 1, proposed an alternative to the repair requirements of the American Society of Mechanical Engineers Code, Section XI. Approval of the proposed alternative was requested to allow I&M to apply full structural preemptive weld overlays (PWOLs) on pressurizer nozzle safe-end-to-nozzle welds where NiCrFe Alloy 82/182 was originally used to weld the safe ends thereto. In requesting approval of the proposed alternative, I&M committed to providing the Nuclear Regulatory Commission with the results of the ultrasonic (UT) examinations that were performed following the application of the PWOLs. The attachment to this letter provides the results of the UT examinations.

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This letter contains no new commitments. Should you have any questions, please contact Ms. Susan D. Simpson, Regulatory Affairs Manager, at (269) 466-2428.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Jensen". The signature is written in a cursive style and is positioned above the printed name.

Joseph N. Jensen
Site Support Services Vice President

RGV/jen

Attachment: Preemptive Weld Overlay Ultrasonic Examination Results

- c: R. Aben – Department of Labor and Economic Growth
- J. L. Caldwell – NRC Region III
- K. D. Curry – AEP Ft. Wayne, w/o attachment
- J. T. King – MPSC, w/o attachment
- MDEQ – WHMD/RPMWS, w/o attachment
- NRC Resident Inspector
- P. S. Tam – NRC Washington DC

Weld 1-PRZ-21 Overlay

Indications Found: No reportable indications were identified during the UT. However, one lack-of-bond indication was recorded at the weld overlay to nozzle material interface. The following table provides the indication parameters.

1-PRZ-21 PWOL Indication Parameters							
Indication Length, inches	Allowable Length, inches*	Indication Area, square inches	Allowable Area, square inches**	Weld Surface Area Percentage	Allowable Weld Surface Area Percentage*	Coverage Reduction due to Laminar Flaw, Percent	Allowable Coverage Reduction due to Laminar Flaw, percent*
0.60	3.0	0.06					
		0.06 Total	7.5 Total	0.02	10.0	0.0	10.0

* I&M Proposed Alternative Criteria

** Table IWB-3514-3 Criteria

Disposition of Indication: The indication is within the acceptance criteria of Table IWB-3514-3 and I&M's proposed alternative.

Repairs: No repairs were performed.

Weld 1-PRZ-22 Overlay

Indications Found: No reportable indications were identified during the UT. However, one indication was noted outside of the required examination volume and was recorded for future reference. The indication is an original construction weld flaw.

Disposition of Indication: The indication is an original construction flaw that was covered by the overlay and is outside of the required examination volume. The acceptance is based on IWB-3112 (b), "Components whose volumetric or surface examination (IWB-2200) detects flaws that meet the non-destructive examination requirements of NB-2500 and

NB-5300, as documented in the Quality Assurance Records, shall be acceptable.” The Code Data Report, which was prepared during the fabrication of the pressurizer, documents that the pressurizer met the Code acceptance criteria.

Repairs: No repairs were performed.

Weld 1-PRZ-23 Overlay (Reexamination)

Indications Found: This weld was applied during the U1C20 outage and was re-examined after one cycle of operation. No reportable indications were identified during the UT. However, one indication was noted outside of the required examination volume. The indication was recorded during U1C20 with no changes observed during the U1C21 examination.

Disposition of Indication: The indication was determined to be acceptable following the U1C20 examination.

Repairs: No repairs were performed.

Weld 1-PRZ-24 Overlay

Indications Found: No recordable indications were identified during the UT. However, four indications were noted outside of the required examination volume and were recorded for future reference. The indications are original construction flaws.

Disposition of Indications: The indications are original construction flaws that are covered by the overlay and were outside of the required examination volume. The acceptance is based on IWB-3112 (b), “Components whose volumetric or surface examination (IWB-2200) detects flaws that meet the non-destructive examination requirements of NB-2500 and NB-5300, as documented in the Quality Assurance Records, shall be acceptable.” The Code Data Report, which was prepared during the fabrication of the pressurizer, documents that the pressurizer met the Code acceptance criteria.

Repairs: No repairs were performed.

Weld 1-PRZ-25 Overlay

Indications Found: No reportable indications were identified during the UT. However, seven lack-of-bond indications were recorded between the original nozzle surface and the overlay weld. The following table provides the indication parameters.

1-PRZ-25 PWOL Indication Parameters							
Indication Length, inches	Allowable Length, inches*	Indication Area, square inches	Allowable Area, square inches**	Weld Surface Area Percentage	Allowable Weld Surface Area Percentage*	Coverage Reduction due to Laminar Flaw, percent	Allowable Coverage Reduction due to Laminar Flaw, percent*
0.66	3.0	0.132					
0.60	3.0	0.120					
1.09	3.0	0.218					
2.02	3.0	0.404					
2.14	3.0	0.428					
0.91	3.0	0.182					
0.55	3.0	0.110					
		1.594 Total	7.5 Total	0.296	10.0	0.0	10.0

* I&M Proposed Alternative Criteria

** Table IWB-3514-3 Criteria

Disposition of Indications: The indications are within the acceptance criteria of Table IWB-3514-3 and I&M's proposed alternative.

Repairs: No repairs were performed.

Reference

Letter from Mark A. Peifer, Indiana Michigan Power Company, to Nuclear Regulatory Commission Document Control Desk, "Donald C. Cook Nuclear Plant Unit 1, Supplement to Proposed Alternative to the American Society Of Mechanical Engineers Code, Section XI Repair Requirements," AEP:NRC:6055-17, Accession Number ML062780203, dated September 26, 2006.