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Dale E. James
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2CAN040803

April 11, 2008

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

SUBJECT: Summary of Weld Overlay Ultrasonic Examinations for Hot Leg Surge, Shutdown Cooling, and Drain Nozzle-to-Safe End Welds at ANO-2
Arkansas Nuclear One, Unit 2
Docket No. 50-368
License No. NPF-6

REFERENCE: NRC Letter to Entergy dated March 17, 2008, Approval of Relief Request for Alternative ANO2-R&R-005 to Install Weld Overlays on Hot Leg Dissimilar Metal Welds (2CNA030805)

Dear Sir or Madam:

By the reference letter dated March 17, 2008, the NRC approved the request by Entergy Operations, Inc (Entergy) for inservice inspection (ISI) program to the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI. The requested relief was for the installation of preemptive full structural weld overlays on dissimilar metal welds of the hot leg “A” to the drain line nozzle, hot leg “A” to the surge line nozzle, and hot leg “B” to the shutdown cooling line nozzle at Arkansas Nuclear One, Unit 2 (ANO-2).

As part of the request and repeated in the reference letter, Entergy committed to submit the following information to the NRC within 14 days following completion of final Ultrasonic (UT) examinations of the weld overlays:

(a) weld overlay examination results including a listing of indications detected and coverage limitations,

(b) disposition of all indications using the standards of ASME Code, Section XI, IWB-3514-2 and/or IWB-3514-3 criteria and, if possible, the type and nature of the indications, and

(c) a discussion of any repairs to the weld overlay material and/or base metal and the reason for the repairs.

This information is provided in the attachment to this letter. The final UT examination of the weld overlays was completed on April 1, 2008.

This letter contains no new commitments.

If you have any questions or require additional information, please contact Dale James at 479-858-4619.

Sincerely,

DEJ/dbb

Attachment: Summary of Weld Overlay Ultrasonic Examinations of Hot Leg Surge, Shutdown Cooling and Drain Nozzle-to-Safe End Welds
Arkansas Nuclear One, Unit 2

cc: Mr. Elmo E. Collins
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ATTACHMENT

2CAN040803

SUMMARY OF WELD OVERLAY ULTRASONIC EXAMINATIONS OF HOT LEG SURGE, SHUTDOWN COOLING AND DRAIN NOZZLE-TO SAFE-END WELDS ARKANSAS NUCLEAR ONE, UNIT 2

Summary of Weld Overlay Ultrasonic Examinations of Hot Leg Surge, Shutdown Cooling and Drain Nozzle-to-Safe End Welds
Arkansas Nuclear One, Unit 2

This report summarizes the ultrasonic examinations performed on the Arkansas Nuclear One, Unit 2 (ANO-2) weld overlays. The examinations were performed using Structural Integrity's PDI qualified ultrasonic examination procedures and examiners. No flaw indications were detected in the overlays, and thus no disposition of indications was required.

Ultrasonic Examination Procedure

SI-UT-126, Revision 3, *Procedure for the Phased Array Ultrasonic Examination of Weld Overlaid Similar and Dissimilar Metal Welds*, was used for examinations of the Hot Leg Shutdown Cooling and Surge nozzle weld overlays (WOL). SI-UT-128, Revision 1, *Manual Conventional Ultrasonic Examination of Weld Overlaid Similar and Dissimilar Metal Welds*, was used for examinations of the Hot Leg Drain nozzle WOL. These procedures, and the examiners who applied the procedure, are qualified through the PDI Program at the EPRI NDE Center.

Hot Leg Shutdown Cooling Nozzle Weld Overlay Examination

Component Identification: Hot Leg Shutdown Cooling Nozzle Weld Overlay (Welds 25-001 and 25-002)

Examination Date: 3/30/08

Examination Time: 07:30 – 08:07

Weld Overlay Regions Examined: Overlay, Weld and Base Material (Outer 25%) Dissimilar Metal (DM) Weld and Adjacent Stainless Steel (SS) Weld

Axial Examination Angles: 0° through 83°

Circumferential Examination Angles: 0° through 70°

Examination Summary:

No suspected flaw indications were observed during the examinations. The examination gain was adjusted to maintain the procedure-specified baseline noise level from 5% to 20% of full screen height. The lower range of examination angles detected responses from the inside surface of the component which were useful for monitoring search unit contact / coupling effectiveness during the examination. During the course of the examinations, 100% coverage of the weld overlay material was achieved, 91.3% coverage of the Code-required volume (CRV) for the DM weld was achieved and 93.55% coverage of the CRV for the SS weld was achieved.

Hot Leg Surge Nozzle Weld Overlay Examination

Component Identification: Hot Leg Surge Nozzle Weld Overlay (Welds 16-001 and 16-002)

Examination Date: 4/1/08

Examination Time: 16:20 – 17:35

Weld Overlay Regions Examined: Overlay, Weld and Base Material (Outer 25%) Dissimilar Metal Weld and Adjacent Stainless Steel Weld

Axial Examination Angles: 0° through 83°

Circumferential Examination Angles: 0° through 70°

Examination Summary:

No suspected flaw indications were observed during the examinations. The examination gain was adjusted to maintain the procedure-specified baseline noise level from 5% to 20% of full screen height. The lower range of examination angles detected responses from the inside surface of the component which were useful for monitoring search unit contact / coupling effectiveness during the examination. During the course of the examinations, 100% coverage of the weld overlay material was achieved, 92.6% coverage of the Code-required volume (CRV) for the DM weld was achieved and 94.8% coverage of the CRV for the SS weld was achieved.

Hot Leg Drain Nozzle Weld Overlay Examination

Component Identification: Hot Leg Drain Nozzle Weld Overlay (Welds 35-001 and 35-002)

Examination Date: 3/28/08

Examination Time: 19:01 to 22:39

Weld Overlay Regions Examined: Overlay, Weld and Base Material (Outer 25%) DM Weld and Adjacent SS Weld

Axial Examination Angles: 0°, 45°, 60°, 70° and ODCR (Outer Diameter Creeping wave)

Circumferential Examination Angles: 0°, 31°, 36°, 45°, and ODCR

Examination Summary:

No suspected flaw indications were observed during the examinations. The examination gain was adjusted to maintain the procedure-specified baseline noise level from 5% to 20% of full screen height. During the course of the examinations, 100% coverage of the weld overlay material was achieved, 99.3% coverage of the CRV for the DM weld was achieved and 78.8% coverage of the CRV for the SS weld was achieved.