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May 29, 2007

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: Duke Power Company LLC, d/b/a Duke Energy Carolinas,
LLC
Oconee Nuclear Station, Unit 2
Docket No. 50-270
Summary Ultrasonic Examination Results of Completed
Alloy 82/182 Weld Overlays

By letters dated January 31, 2007 and February 22, 2007, Duke Power Company LLC, d/b/a Duke Energy Carolinas, LLC (Duke) committed to a mitigation schedule regarding Alloy 82/182 butt welds on Pressurizer piping. The NRC Confirmatory Action Letter (CAL) of March 27, 2007 regarding Alloy 82/182 butt welds requires a report within 60 days of unit restart of any mitigative actions taken on the subject welds.

In order to support these mitigative actions, on March 12, 2007 Duke submitted Relief Request 07-ON-001 pursuant to 10 CFR 50.55a(a)(3)(i) for approval to use alternatives to the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI Inservice Inspection (ISI) alternative requirements for the Oconee Nuclear Station, Units 2 and 3 to support application of full structural weld overlays on various pressurizer nozzle to flange, nozzle-to-safe end, and surge line welds. NRC verbally approved this request on May 17, 2007. In our request we committed to providing a report summarizing the results of the ultrasonic (UT) examinations of the weld overlay within 14 days of completion of the UT examinations.

This letter is to inform you of the completion of the mitigative repairs for Unit 2 as listed on Enclosure 3 of our January 31, 2007 letter. These actions were completed during 2EOC22 refueling outage and complete the actions related to Unit 2 to

satisfy the CAL. Enhanced leakage detection requirements committed to in our February 22, 2007 letter are no longer required on Unit 2 due to the completion of mitigation of the subject welds.

Attachment 1 provides a report summarizing the results of the Unit 2 UT examinations of the weld overlay (completed May 15, 2007), per the commitment contained in the relief request. This letter and attachment provide the required responses for the relief request commitment and the CAL.

Our staff is available to meet with the NRC to discuss any of the information contained in this letter. If there are any questions, please contact Randy Todd at (864) 885-3418.

Very truly yours,

A handwritten signature in black ink that reads "Bruce Hamilton". The signature is written in a cursive, flowing style.

B.H. Hamilton, Vice President
Oconee Nuclear Site

Attachment

U. S. Nuclear Regulatory Commission
May 29, 2007

cc: Mr. L. N. Olshan, Project Manager
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U.S. Nuclear Regulatory Commission
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Washington, D.C. 20555

Dr. W. D. Travers, Regional Administrator
U.S. Nuclear Regulatory Commission - Region II
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Mr. D. W. Rich
Senior Resident Inspector
Oconee Nuclear Station

Mr. Henry Porter, Director
Division of Radioactive Waste Management
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2600 Bull Street
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U. S. Nuclear Regulatory Commission
May 29, 2007

bxc w/att:

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ISI Relief Request File
NRIA File/ELL EC050
Document Control

Attachment

Summary of Ultrasonic Examinations of Preemptive Weld
Overlays for Surge, Hot Leg Surge, Spray, and
Safety/Relief Valve Nozzle-to-Safe-End Welds at Oconee
Nuclear Station, Unit 2



Ultrasonic Examination Procedure

SI-UT-126 Revision 3, *Procedure for the Phased Array Ultrasonic Examination of Weld Overlayed Similar and Dissimilar Metal Welds*, was used during the examinations. This procedure, and the examiners who applied the procedure, are qualified through the PDI Program at the EPRI NDE Center.

Pressurizer Surge Nozzle Weld Overlay Examination

Component Identification: 2-PZR-WP23

Examination Date: 05/15/07 Examination Time: 02:00 – 03:15

Weld Overlay Regions: Overlay, Weld and Base Material (Outer 25%) Dissimilar Metal Weld

Axial Examination Angles: 0° through 83° (Except Zone 1 WOL axial examination angles 0° through 81°) - Circumferential Examination Angles: 0° through 65°

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. 100% coverage of the Code-required volume was achieved during the examinations.

Hot Leg Surge Nozzle Weld Overlay Examination

Component Identification: 2-PSL-10

Examination Date: 05/15/07 Examination Time: 17:24 – 18:40

Weld Overlay Regions: Overlay, Weld and Base Material (Outer 25%) Dissimilar Metal Weld

Axial Examination Angles: 0° through 83° (Except Zone 1 WOL axial examination angles 0° through 81°) - Circumferential Examination Angles: 0° through 65°

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. 100% coverage of the Code-required volume was achieved during the examinations.

Spray Nozzle Weld Overlay Examination

Component Identification: 2-PZR-WP-45 and 2-PSP-1

Examination Date: 05/13/07 Examination Time: 22:50 – 23:35

Weld Overlay Regions: Overlay, Weld and Base Material (Outer 25%) Dissimilar Metal Weld

Axial Examination Angles: 0° through 83°; Circumferential Examination Angles: 0° through 63°

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. 100% coverage of the Code-required volume was achieved during the examinations.

Relief Valve Nozzle Weld Overlay Examination

Component Identification: 2-PZR-WP91-1

Examination Date: 05/13/07 Examination Time: 21:55 - 22:40

Weld Overlay Regions: Overlay, Weld and Base Material (Outer 25%) Dissimilar Metal Weld

Axial Examination Angles: 0° through 83°; Circumferential Examination Angles: 0° through 65°

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. 100% coverage of the Code-required volume was achieved during the examinations.

Safety Valve Nozzle Weld Overlay Examination

Component Identification: 2-PZR-WP91-2

Examination Date: 05/14/07 Examination Time: 17:43 – 18:16

Overlay, Weld and Base Material (Outer 25%) Dissimilar Metal Weld

Axial Examination Angles: 0° through 83°; Circumferential Examination Angles: 0° through 65°

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. 100% coverage of the Code-required volume was achieved during the examinations.

Safety Valve Nozzle Weld Overlay Examination

Component Identification: 2-PZR-WP91-3

Examination Date: 05/14/07 Examination Time: 19:56 – 20:42

Overlay, Weld and Base Material (Outer 25%) Dissimilar Metal Weld

Axial Examination Angles: 0° through 83°; Circumferential Examination Angles: 0° through 65°

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. 100% coverage of the Code-required volume was achieved during the examinations.