

T. PRESTON GILLESPIE, Jr. Vice President Oconee Nuclear Station

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November 21, 2010

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

SUBJECT: Duke Energy Carolinas, LLC (Duke) Oconee Nuclear Station, Unit 3 Docket Number 50-287 Weld Overlay UT Results per Relief Request 09-ON-003

On March 20, 2009, Duke Energy submitted Relief Request 09-ON-003 (ADAMS ML090830726) pursuant to 10 CFR 50.55a(a)(3)(i), requesting Nuclear Regulatory Commission (NRC) approval to use alternatives to the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI inservice inspection (ISI) requirements for the Oconee Nuclear Station, Unit 1, 2, & 3. This alternative approach is to support application of full structural weld overlays on several welds in the Reactor Coolant System for all three Oconee units.

On October 16, 2009, the NRC granted verbal approval for the portion of Relief Request 09-ON-003 applicable to the Unit 1 Letdown nozzle welds. By letter dated March 31, 2010 (ADAMS ML100880286), the NRC provided written approval for all three Oconee Units. The request committed to provide a report to summarize the results of ultrasonic examinations of the weld overlays within 14 days of completion of those examinations. In accordance with that commitment, the summary report for Unit 3 is attached.

If you have any questions or require additional information, please contact Randy Todd at (864)-873-3418.

Sincerely,

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T. Preston Gillespie, Jr. Site Vice President Oconee Nuclear Station

Attachment

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XC with Attachment:

Luis Reyes Region II Administrator U.S. Nuclear Regulatory Commission Marquis One Tower 245 Peachtree Center Ave., NE, Suite 1200 Atlanta, GA 30303-1257

John Stang Project Manager (ONS) U. S. Nuclear Regulatory Commission Office of Nuclear Reactor Regulation Rockville, MD 20852-2738

XC w/o Attachment:

Andy Sabisch NRC Senior Resident Inspector Oconee Nuclear Station

Susan Jenkins, Section Manager, Division of Waste Management Bureau of Land and Waste Management SC Dept. of Health & Environmental Control 2600 Bull St. Columbia, SC 29201

Attachment

Summary of Weld Overlay Ultrasonic Examination for Letdown Line Drain Nozzle-to-Safe End and Safe End-to-Elbow Welds at Oconee Nuclear Station, Unit 3

Attachment to 1001180.401, Rev. 1

Structural Integrity Associates, Inc.

Ultrasonic Examination Procedure

SI-UT-145, Revision 0, *Procedure for Manual Phased Array Ultrasonic Examination of Weld Overlaid Similar and Dissimilar Metal Piping Welds*, *EPRI-WOL-PA-1*, was used for examination of the Letdown Line Drain Nozzle weld overlay (WOL). This procedure, and the examiner who applied the procedure, are qualified through the PDI Program at the EPRI NDE Center.

Letdown Drain Nozzle Weld Overlay Examination

Component Identification: Letdown Drain Weld Overlay 3-RC-0265-80V

Examination Date: 11/7/10

Examination Time: 1700 to 1720

Weld Overlay Regions Examined: Overlay, Nozzle-to-Safe End Dissimilar Metal (DM) Weld #3-PIB1-10 / Base Material (Outer 25%) and Safe End-to-Elbow Weld #3-RC-0265-79 / Base Material (Outer 25%)

Axial Examination Angles: 0° through 85°

Circumferential Examination Angles: 0° through 85°

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 examination coverage achieved of the Code-required volumes during the examinations is provided below:

- Coverage of Weld Overlay 3-RC-0265-80V Material: 100%
- Coverage of the outer 25% of Nozzle-to-Safe End DM Weld #3-PIB1-10 and adjacent base material: 100%
- Coverage of the outer 25% of Safe End-to-Elbow Weld #3-RC-0265-79 and adjacent base material: 80.3%

This coverage limitation for the Safe-End-to-Elbow weld was the result of limited scanning due to the short radius elbow geometry. The examination coverage is documented on the examination report. The susceptible material was fully interrogated in the axial direction by scanning from the safe end side and in both circumferential directions. Structural Integrity Associates concludes (and Duke concurs) that the examination coverage of the weld overlay provides reasonable assurance of structural integrity of this weld.

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