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November 10, 2009

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

SUBJECT: Duke Energy Carolinas, LLC (Duke)  
Oconee Nuclear Station, Unit 1, 2, and 3  
Docket Number 50-269  
Relief Request 09-ON-003

On March 20, 2009 Duke submitted Relief Request 09-ON-003 pursuant to 10 CFR 50.55a(a)(3)(i), requesting 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. 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 is enclosed.

If you have any questions or require additional information, please contact Randy Todd at (864)-885-3418.

Sincerely,

Dave Baxter  
Site Vice President  
Oconee Nuclear Station

Enclosure

Nuclear Regulatory Commission  
November 10, 2009  
Page 2

XC with Enclosure:

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**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 1**

## 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 1-51A-0007-115V

**Examination Date:** 10/27/09

**Examination Time:** 1548 to 1623

**Weld Overlay Regions Examined:** Overlay, Nozzle-to-Safe End Dissimilar Metal (DM) Weld / Base Material (Outer 25%) and Safe End-to-Elbow Weld / 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 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. The examination coverage achieved of the Code-required volumes during the examinations is provided below:

- Coverage of Weld Overlay Material: 100%
- Coverage of Outer 25% of Nozzle-to-Safe End DM Weld & Adjacent Base Material: 100%
- Coverage of Safe End-to-Elbow Weld & Outer 25% Adjacent Base Material: 93.1%

