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December 14, 2006

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

Subject: Duke Power Company LLC d/b/a Duke Energy Carolinas,  
LLC (Duke)  
Catawba Nuclear Station, Unit 1  
Docket Number 50-413  
Request for Relief Number 06-GO-001  
Alloy 600 Pressurizer Weld Overlays - Submittal of  
Committed Information

On July 27, 2006, as modified by letters dated September 11, 2006, September 27, 2006, and November 16, 2006, Duke submitted the subject request for relief regarding a proposed alternative approach to support application of full structural weld overlays on various pressurizer nozzle-to-safe end welds.

The September 27, 2006 letter contained the following two commitments:

1. The following information will be submitted to the NRC within fourteen days of completion of the final UT on each unit included in this relief request. Also included in the results will be a discussion of any repairs to the overlay material and/or base metal and the reason for the repair.
  - A listing of flaw indications detected
  - The disposition of all indications using the standards of ASME Section XI, IWB-3514-2 and/or IWB-3514-3 criteria and, if possible,
  - The type and nature of the indications

A047

U.S. Nuclear Regulatory Commission

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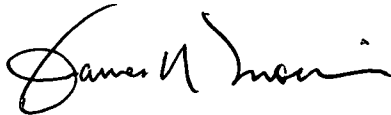
December 14, 2006

2. Prior to entry into Mode 4 from the Catawba Unit 1 outage in the Fall of 2006, a summary of the results of the stress analyses demonstrating that the preemptive full structural weld overlay will not hinder the components from performing their design function will be submitted to the NRC.

The information required by Item 1 above is included in the attachment. The inspections were performed using Performance Demonstration Initiative (PDI) qualified ultrasonic inspection procedure and inspectors. No flaw indications were detected in the overlays, and thus no disposition of indications was required. The information required by Item 2 above will be submitted under separate correspondence prior to entry into Mode 4.

If you have any questions concerning this information, please contact L.J. Rudy at (803) 831-3084.

Very truly yours,



James R. Morris

LJR/s

Attachment

U.S. Nuclear Regulatory Commission  
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December 14, 2006

xc (with attachment):

W.D. Travers, Administrator, Region II  
U.S. Nuclear Regulatory Commission  
Atlanta Federal Center  
61 Forsyth St., SW, Suite 23T85  
Atlanta, GA 30303-8931

J.F. Stang, Jr., NRC Senior Project Manager  
U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Mail Stop O-8 H4A  
Rockville, MD 20852-2738

A.T. Sabisch, NRC Senior Resident Inspector  
Catawba Nuclear Station

Attachment

Summary of Ultrasonic Examinations of Preemptive Weld Overlays  
for Pressurizer Nozzle Locations Containing Alloy 600 Materials



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December 13, 2006  
SIR-06-492, Rev. 0  
MJT-06-024

Mr. Mitch Hatley  
Duke Energy Corporation  
McGuire Nuclear Station, Mail Code MG05SE  
13225 Hagers Ferry Road  
Huntersville, NC 28078

**Subject:** Summary of Weld Overlay Ultrasonic Inspections for Pressurizer Surge, Spray and Safety/Relief Nozzle-to-Safe End Welds at Catawba Nuclear Station, Unit 1

**Reference:** Duke Energy Corporation, McGuire Nuclear Station Unit 2 and Catawba Nuclear Station Unit 1, Request for Alternative 06-GO-001, Revision 1, Sept. 27, 2006

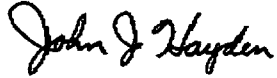
Dear Mr. Hatley:

The following attachment is transmitted in support of Duke Energy's response to commitments in the above-referenced request for alternative:

**Attachment:** A report summarizing the ultrasonic inspections performed on the Catawba Unit 1 weld overlays. The inspections were performed using SI's PDI qualified ultrasonic inspection procedure and inspectors. No flaw indications were detected in the overlays, and thus no disposition of indications was required.

If you have any questions or comments regarding this summary, please contact one of the undersigned.

Prepared by:




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John J. Hayden  
Senior Consultant, NDE  
Level 3

12/13/06

Date

Verified by:

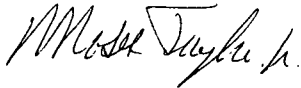


\_\_\_\_\_  
Michael S. Lashley  
Associate

12/13/06

Date

Approved by:



\_\_\_\_\_  
Moses Taylor, P.E.  
Associate

12/13/06

Date

jj  
Attachment  
cc: D. Llewellyn  
M. Ruis  
DUKE-42Q-406

Attachment

Summary of Ultrasonic Examinations of Preemptive Weld Overlays  
for Pressurizer Nozzle Locations Containing Alloy 600 Materials

## Catawba Unit 1 Summary Ultrasonic Examination Report

### Ultrasonic Examination Procedure

SI-UT-126, Revision 0, *Procedure for the Phased Array Ultrasonic Examination of Weld Overlaid 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.

### Relief Nozzle Weld Overlay Examination

Component Identification: PORV 1-PZR-W3SE

Examination Date: 12/02/06

Examination Regions: Weld Overlay Material, Outer 25% Dissimilar Metal Weld & Adjacent Base Material and Outer 25% Safe End-to-Elbow Weld & Adjacent Base Material

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.

### Safety Nozzle NC1 Weld Overlay Examination

Component Identification: 1NC1 1-PZR-W4CSE

Examination Date: 12/02/06

Examination Regions: Weld Overlay Material, Outer 25% Dissimilar Metal Weld & Adjacent Base Material and Outer 25% Safe End-to-Elbow Weld & Adjacent Base Material

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.



### **Safety Nozzle NC2 Weld Overlay Examination**

Component Identification: 1NC2 1-PZR-W4BSE

Examination Date: 12/01/06

Examination Regions: Weld Overlay Material, Outer 25% Dissimilar Metal Weld & Adjacent Base Material and Outer 25% Safe End-to-Elbow Weld & Adjacent Base Material

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.

### **Safety Nozzle NC3 Weld Overlay Examination**

Component Identification: 1NC3 1-PZR-W4ASE

Examination Date: 12/02/06

Examination Regions: Weld Overlay Material, Outer 25% Dissimilar Metal Weld & Adjacent Base Material and Outer 25% Safe End-to-Elbow Weld & Adjacent Base Material

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.

### **Spray Nozzle Weld Overlay Examination**

Component Identification: 1-PZR-W2SE

Examination Date: 12/01/06

Examination Regions: Weld Overlay Material, Outer 25% Dissimilar Metal Weld & Adjacent Base Material and Outer 25% Safe End-to-Elbow Weld & Adjacent Base Material

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.

## **Surge Nozzle Weld Overlay Examination**

Component Identification: 1-PZR-WISE

Examination Date: 11/26/06

Examination Regions: Weld Overlay Material, Outer 25% Dissimilar Metal Weld & Adjacent Base Material and Outer 25% Safe End-to-Pipe Weld & Adjacent Base Material

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.