Southern Nuclear
Operating Company, Inc.
Post Office Box 1295
Birmingham, Alabama 35201-1295

Tel 205.992.5000

SOUTHERN COMPANY
Energy to Serve Your World℠

April 13, 2007

Docket No.: 50-425

NL-07-0803

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

Vogtle Electric Generating Plant – Unit 2
Pressurizer Nozzle Full Structural Weld Overlay
Nondestructive Examination Results Spring 2007 Outage (2R12)

Ladies and Gentlemen:

Southern Nuclear Operating Company (SNC) completed the last performance demonstration initiative (PDI) qualified ultrasonic examination (UT) of Vogtle Electric Generating Plant (VEGP) Unit 2 pressurizer nozzle full structural weld overlays (FSWOLs) on April 1, 2007. This activity was accomplished in accordance with SNC's alternative ISI-GEN-ALT-06-03, Rev. 2, which was approved per NRC safety evaluation report (SER) (TAC Nos. MD2794, MD2795, MD2796 AND MD2797). Page 18 of the SER includes the following statement:

> "the Licensee will provide the NRC, within 14 days after the completion of the ultrasonic examination of the weld overlay installations, (1) the examination results of the weld overlays, (2) a discussion of any repairs to the overlay material and/or base metal and the reason for repair, and (3) will perform the subsequent ISI in accordance with Q-4300 of Appendix Q to the ASME Code, Section XI."

Enclosure 1 contains the requested examination and repair information. Enclosure 2 contains the SNC commitment to perform subsequent ISI on the pressurizer FSWOLs, in accordance with Q-4300 of Appendix Q to the 2004 Edition of Section XI with Addenda through 2005.

This letter contains one NRC commitment. If you have any questions, please advise.

Sincerely,

B. J. George
Manager, Nuclear Licensing

A047

BJG/DRG/daj

Enclosures: 1. Vogtle Unit No. 2 Weld Overlay Examination Results and Repairs Table
2. Regulatory Commitment List

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
T. E. Tynan, Vice President – Vogtle
Mr. D. H. Jones, Vice President – Engineering
RType: CVC7000

U. S. Nuclear Regulatory Commission
Dr. W. D. Travers, Regional Administrator
Mr. B. K. Singal, NRR Project Manager – Vogtle
Mr. G. J. McCoy, Senior Resident Inspector – Vogtle

Enclosure 1

Vogtle Electric Generating Plant Unit 2
Pressurizer Nozzle Full Structural Weld Overlay
Nondestructive Examination Results Spring 2007 Outage (2R12)

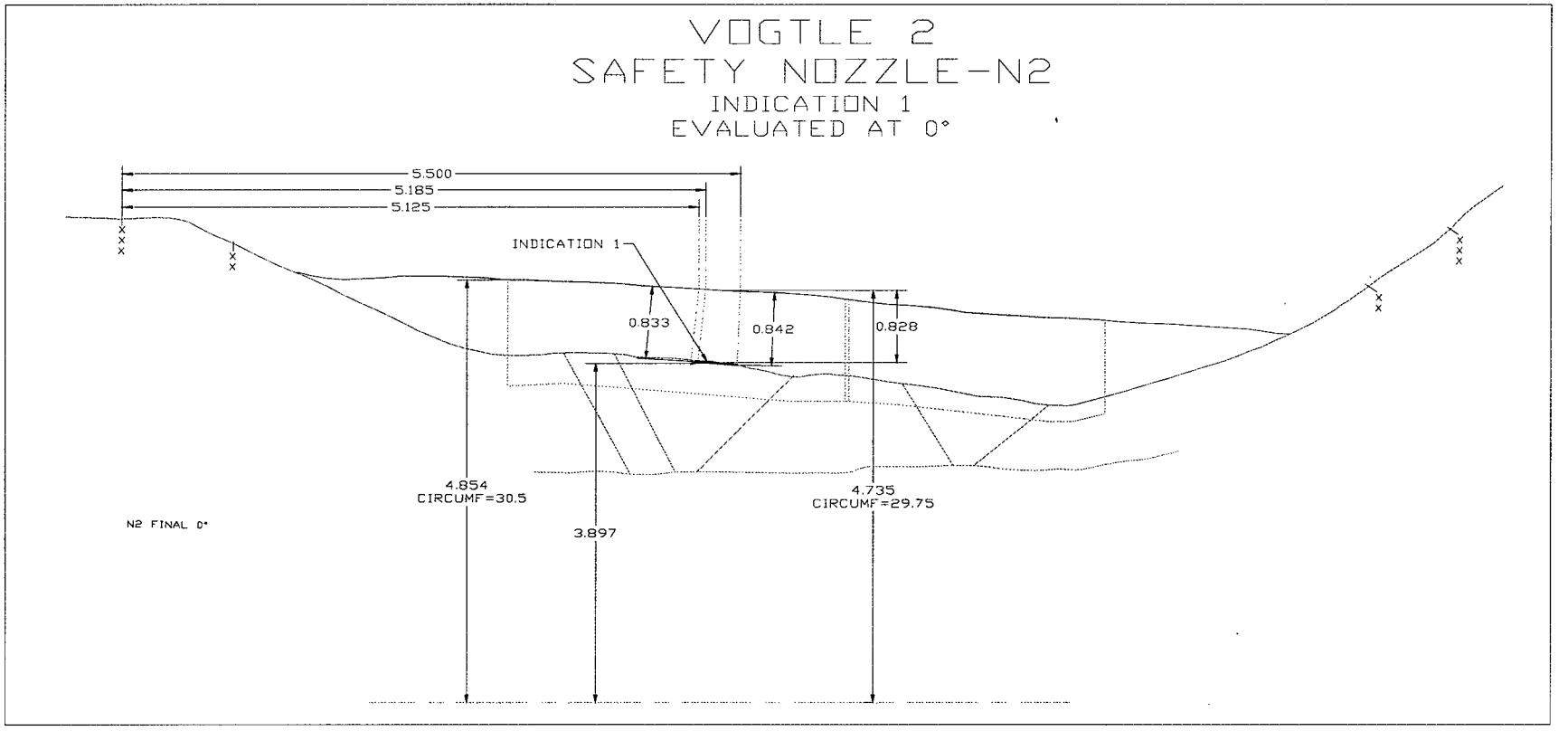
Vogtle Unit No. 2 Weld Overlay Examination Results and Repairs Table						
Nozzle	**Results PT of Base Metal**	**PT of Mitigation Layer Results/Repairs**	**PT of Overlay Results/Repairs**	**PDI UT Exam Results**	**Post PDI UT Repairs**	**PDI UT Re-exams**
N-1 SAFETY	NRI	NRI	NRI	NRI	NONE	NA
N-2 SAFETY	Two linear indications; lengths were 0.07-inch and 0.12-inch. The indications were repaired and a new PT was performed with acceptable results.	Numerous rejectable indications found at the 180^0 Quadrant; indications were in the range of 0.062-inches to 0.250-inches. The indications were repaired and a new PT examination was performed with indications observed at 90^0 1/16-inch to 0.25-inches and at 270^0 1/16-inch to 0.25-inches. The indications were repaired and a new PT was performed with acceptable results.	NRI	UT exams detected an acceptable lamination located at the interface of the overlay and the dissimilar metal weld. The surface area of the lamination is 0.2 square inches with a max dimension of 0.62-inches. There was no loss of coverage in the overlay material, thus a planar flaw was not postulated. The reduction in coverage of the preservice inspection volume is less than 0.2% and the lamination is sufficiently small such that there is reasonable assurance that a PWSCC indication growing into the upper 25% (of the original dissimilar metal weld) would be detected. See the attached figure to show indication location.	NONE	NA
N-3 SAFETY	NRI	NRI	One linear indication with a length of 1/4-inch was detected at the weld toe to pipe interface. The indication was repaired and a new PT was performed with acceptable results.	NRI	NONE	NA

Vogtle Unit No. 2 Weld Overlay Examination Results and Repairs Table						
Nozzle	**Results PT of Base Metal**	**PT of Mitigation Layer Results/Repairs**	**PT of Overlay Results/Repairs**	**PDI UT Exam Results**	**Post PDI UT Repairs**	**PDI UT Re-exams**
N-4 RELIEF	NRI	Two indications due to probable hot cracking: Indication 1 @ 90^0 Length = 5.6-inches Indication 2 @ 180^0 Length = 2.8-inches The indications were repaired and a new PT was performed with acceptable results.	NRI	NRI	NONE	NA
N-5 SPRAY	After the first layer of credited weld overlay was applied, a PT examination detected numerous indications through the entire weld band 360^0 around the pipe. The indications were repaired and a new PT was performed with acceptable results. The remainder of the weld overlay was installed and the subsequent PT examination showed no recordable indications.	NRI	NRI	An intermittent 360^0 laminar indication was detected by UT. It was approximately 1/8-inch above the original surface near the interface of the safe-end to stainless steel weld. The likely cause was lack of fusion. See the attached figure to show indication location.	Grinding was performed to remove the laminar indication. A PT examination of the excavated area was performed with acceptable results. In the welding process to fill in the ground-out area, six linear PT indications were observed (lengths varied from 0.125-inch to 0.250-inch). These indications were ground out and the areas were re-welded. A new PT was performed with acceptable results.	NRI

Vogtle Unit No. 2 Weld Overlay Examination Results and Repairs Table						
Nozzle	**Results PT of Base Metal**	**PT of Mitigation Layer Results/Repairs**	**PT of Overlay Results/Repairs**	**PDI UT Exam Results**	**Post PDI UT Repairs**	**PDI UT Re-exams**
N-6 SURGE	NRI	NRI	Three linear indications that were 0.1inch long each, plus one 0.3-inch rounded indication were detected. The indications were repaired and a new PT was performed with acceptable results.	NRI	NONE	NA

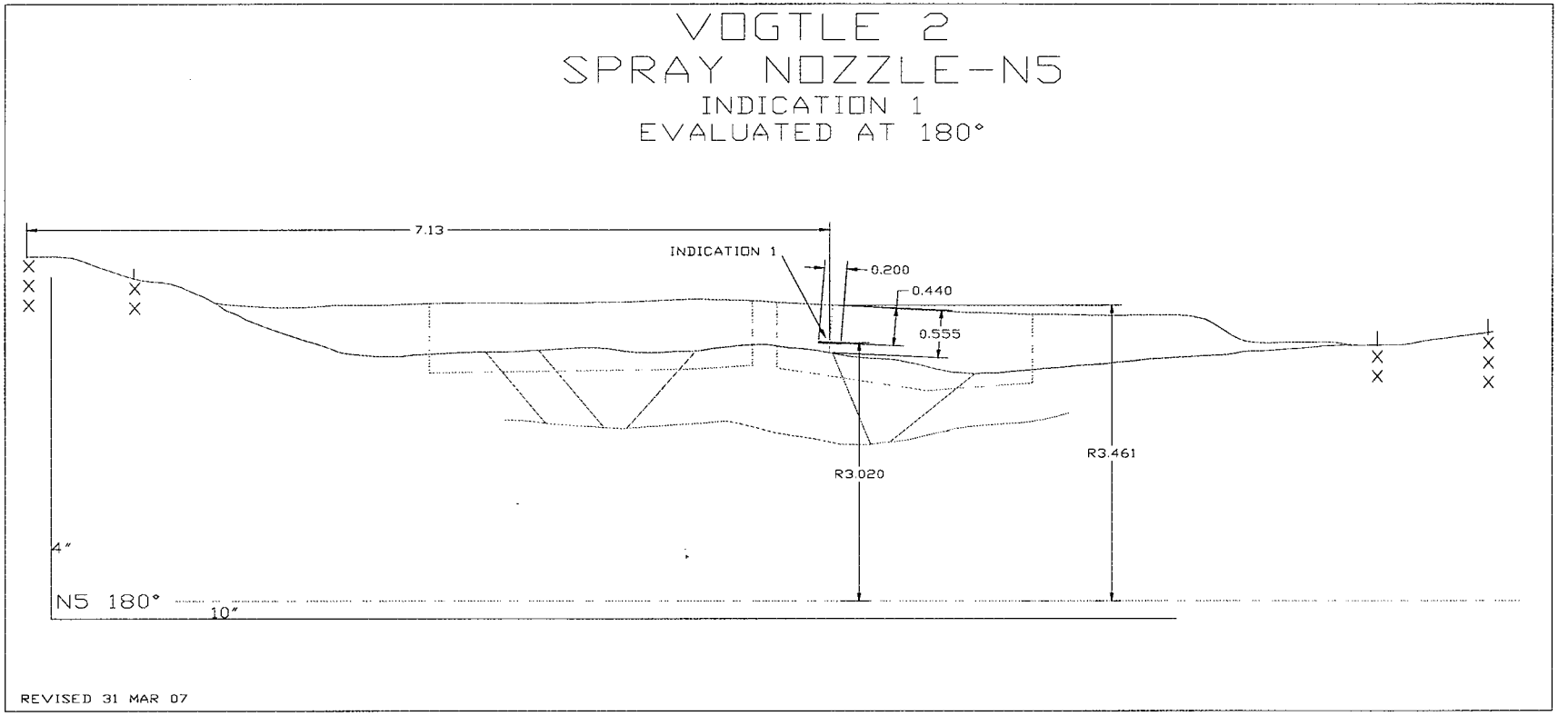
NRI – No Recordable Indications

Vogtle-2 Figures showing Indication Locations



The acceptable laminar indication for Nozzle N-2 is shown in the figure above and exists at the interface between the final weld overlay and the original Alloy-600 weld.

Vogtle-2 Figures showing Indication Locations



The unacceptable laminar indication for Nozzle N-5 is shown in the figure above and was removed during the fabrication process and therefore, does not exist in the final weld overlay.

Enclosure 2

Vogtle Electric Generating Plant Unit 2
Pressurizer Nozzle Full Structural Weld Overlay
Nondestructive Examination Results Spring 2007 Outage (2R12)

Regulatory Commitment List

Enclosure 2

Regulatory Commitment List

The following table identifies those actions committed by Southern Nuclear Operating Company in this document for Vogtle Electric Generating Plant. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

Commitment	Type		Scheduled Completion Date (If Required)
	One-Time Action	Continuing Compliance	
Perform subsequent ISI on the VEGP Unit 2 pressurizer FSWOLs in accordance with Q-4300 of Appendix Q to the 2004 Edition of Section XI with Addenda through 2005		X	