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

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50-325

Subject: Brunswick Steam Electric Plant, Unit No. 1  
Docket No. 50-325/License No. DPR-71  
Notification of Deviation From Boiling Water Reactor Vessel and Internals  
Project Guidelines

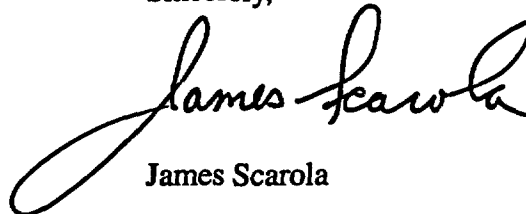
Ladies and Gentlemen:

Carolina Power & Light (CP&L) Company, now doing business as Progress Energy Carolinas, Inc., is notifying the NRC of a deviation from a Boiling Water Reactors Vessel and Internals Project (BWRVIP) program element for the Brunswick Steam Electric Plant (BSEP), Unit No. 1. This is a notification only and no action from the NRC is being requested.

The deviation is from a "needed" element of the BWRVIP program. The needed element is evaluation of a flaw in Unit 1 core spray sparger tee box weld S2a-350 in accordance with BWRVIP-18A, *BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines*. A deviation disposition has been prepared, reviewed, and approved in accordance with BWRVIP Report BWRVIP-94, Revision 1, *BWR Vessel and Internals Project, Program Implementation Guide*. Enclosure 1 of this letter describes the deviation taken from BWRVIP guidelines and actions taken in lieu of the BWRVIP requirement. Enclosure 2 documents a commitment made by CP&L.

Please refer any questions regarding this submittal to Mr. Leonard R. Beller, Supervisor - Licensing/Regulatory Programs, at (910) 457-2073.

Sincerely,



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Enclosures:

1. Description of Deviation From Boiling Water Reactor Vessel and Internals Project (BWRVIP) Guideline
2. List of Regulatory Commitments

cc (with enclosures):

U. S. Nuclear Regulatory Commission, Region II  
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U. S. Nuclear Regulatory Commission (Electronic Copy Only)  
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U. S. Nuclear Regulatory Commission  
ATTN: Mr. Eugene M. DiPaolo, NRC Senior Resident Inspector  
8470 River Road  
Southport, NC 28461-8869

Ms. Jo A. Sanford  
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**Description of Deviation From Boiling Water Reactor Vessel and Internals Project (BWRVIP) Guideline**

Carolina Power & Light (CP&L) Company, now doing business as Progress Energy Carolinas, Inc., is notifying the NRC of a deviation from BWRVIP Report BWRVIP-18A, *BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines*. A deviation disposition has been prepared, reviewed, and approved in accordance with BWRVIP-94, Revision 1, *BWR Vessel and Internals Project, Program Implementation Guide*.

BWRVIP-94, Revision 1, provides implementation guidance to ensure the consistent application of BWRVIP guidelines by BWRVIP member utilities. Section 3.5 of BWRVIP-94, Revision 1, provides specific guidance for the reporting of inspection results, new repairs, and deviations taken from BWRVIP guidelines. If a utility does not implement any portion of an applicable "mandatory" or "needed" BWRVIP guideline that has been approved by the BWRVIP Executive Committee and transmitted to the NRC, the utility is required to notify the NRC and BWRVIP within 45 days following the utility executive concurrence with the disposition of the deviation. The utility is required to describe what BWRVIP requirement they are deviating from and what is being done in lieu of the applicable requirement.

During the BSEP Unit 1 refueling outage in March 2006, CP&L performed an inspection of core spray tee box weld S2a-350, including a re-inspection of a crack in this weld that was previously identified in 1993. A description of the deviation taken from the applicable BWRVIP inspection guideline is provided below.

BWRVIP Document	BWRVIP Requirement	Exception	Alternative In Lieu Of
BWRVIP-18-A, Section 5.1.5	If the measured extent of cracking is "x" percent of the inspected length, then it must be assumed that "2x" percent of the un-inspected length is cracked.	The current evaluation of the flaw in the heat affected zone of core spray sparger weld S2a-350 does not account for potential flaws in the inaccessible region.	An evaluation of current and historical inspection results for core spray sparger weld S2a-350 and a 1993 limit load analysis for the sparger tee crack has concluded that complete failure is unlikely. However, a review of short-term and long-term cooling has determined that a failure of core spray sparger weld

BWRVIP Document	BWRVIP Requirement	Exception	Alternative In Lieu Of
			<p>S2a-350 will not prevent the Core Spray System from accomplishing its design function.</p> <p>This deviation will end during Unit 1 Refueling Outage B117R1, currently scheduled for March 2008, at which time a repair will be performed.</p>

**List of Regulatory Commitments**

The following table identifies those actions committed to by Carolina Power & Light Company, now doing business as Progress Energy Carolinas, Inc., in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to the Manager – Support Services at the Brunswick Steam Electric Plant.

Commitment	Schedule
Perform a repair core spray sparger weld S2a-350.	Unit 1 Refueling Outage B117R1, currently scheduled for March 2008.