



Progress Energy

APR 24 2006

SERIAL: BSEP 06-0040

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

Subject: Brunswick Steam Electric Plant, Unit No. 2
Docket No. 50-324/License No. DPR-62
Notification of Deviation From Boiling Water Reactor Vessel and Internals
Project Guidelines

Ladies and Gentlemen:

In accordance with BWR Vessel and Internals Project (BWRVIP) Report BWRVIP-94, Revision 1, *BWR Vessel and Internals Project, Program Implementation Guide*, Carolina Power & Light Company, now doing business as Progress Energy Carolinas, Inc., is notifying the NRC of deviations from BWRVIP guidelines taken by the Brunswick Steam Electric Plant, Unit No. 2. These deviations pertain to the deferral of core shroud horizontal weld inspections. The enclosure of this letter describes each deviation taken from BWRVIP guidelines and what is being done in lieu of the BWRVIP requirement. This information is being submitted to the NRC in accordance with Section 3.5, Reporting, of BWRVIP-94, Revision 1, and no NRC action is being requested in response to the submittal of this information.

No regulatory commitments are contained in this letter. Please refer any questions regarding this submittal to Mr. Leonard R. Beller, Supervisor - Licensing/Regulatory Programs, at (910) 457-2073.

Sincerely,

Randy C. Ivey
Manager - Support Services
Brunswick Steam Electric Plant

WRM/wrm

Enclosure: Descriptions of Deviations From Boiling Water Reactor Vessel and Internals
Project (BWRVIP) Guideline

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cc (with enclosure):

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Descriptions of Deviations From Boiling Water Reactor Vessel and Internals Project (BWRVIP) Guideline

In accordance with BWR Vessel and Internals Project (BWRVIP) Report BWRVIP-94, Revision 1, *BWR Vessel and Internals Project, Program Implementation Guide*, Carolina Power & Light Company (CP&L), now doing business as Progress Energy Carolinas, Inc., is notifying the NRC of deviations from BWRVIP guidelines taken by the Brunswick Steam Electric Plant (BSEP), Unit No. 2. These deviations are associated with inspections of the BSEP Unit 2 core shroud.

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 2 refueling outage in March 2005, CP&L performed ultrasonic inspections of core shroud welds. Descriptions of deviations taken from the applicable BWRVIP inspection guideline are provided below. These deviations were discussed with the NRC in a telephone call at the conclusion of the BSEP Unit 2 refueling outage.

BWRVIP Document	BWRVIP Requirement	Exception	Alternative In Lieu Of
BWRVIP-76, Table 2-1	Inspect core shroud horizontal welds at the intervals specified in Table 2-1. Table 2-1 specifies core shroud inspection intervals for Category B and C plants, in years, as a function of the degree of cracking found and the faulted weld stress level.	Instead of inspecting the upper side of horizontal weld H1 at 6 years following its last inspection, per the plant-specific evaluation performed as required by Table 2-1, the upper side of horizontal weld H1 will be	Due to inspection tooling problems encountered during BSEP Unit 2 Refueling Outage B217R1 in 2005, inspection of the upper side of horizontal weld H1 was deferred until BSEP Unit 2 Outage B218R1 in 2007. The upper side of weld H1 was last inspected during BSEP

BWRVIP Document	BWRVIP Requirement	Exception	Alternative In Lieu Of
	<p>BSEP Unit 2 is a Category C plant. Based on the degree of cracking present in horizontal weld H1, BSEP Unit 2 uses a plant specific evaluation, as required by Table 2-1, for establishing inspections of weld H1.</p>	<p>inspected at 8 years following its last inspection. The inspection schedule for weld H1 is currently governed by the degree of cracking of the lower side of weld H1. During the 1999 inspection, cracking was identified on only 2.2 percent of the upper side of weld H1.</p>	<p>Unit 2 Outage B214R1 in 1999.</p>
<p>BWRVIP-76, Table 2-1</p>	<p>Inspect core shroud horizontal welds at the intervals specified in Table 2-1. Table 2-1 specifies core shroud inspection intervals for Category B and C plants, in years, as a function of the degree of cracking found and the faulted weld stress level.</p> <p>BSEP Unit 2 is a Category C plant.</p>	<p>Instead of inspecting horizontal weld H7 at 10 years following its last inspection, per Table 2-1, weld H7 will be inspected at 11 years following its last inspection.</p>	<p>Due to inspection tooling problems encountered during BSEP Unit 2 Refueling Outage B217R1 in 2005, inspection of horizontal weld H7 was deferred until BSEP Unit 2 Refueling Outage B218R1 in 2007. The upper side of weld H7 was last inspected during BSEP Unit 2 Refueling Outage B212R1 in 1996. The lower side of weld H7 was not inspected during BSEP Unit 2 Refueling Outage B212R1 because Alloy 600 was not considered susceptible, at that time, to intergranular stress corrosion cracking.</p> <p>A plant-specific analysis was performed for weld H7, using the previous inspection results (i.e., 11 percent cracking) and a 12-year crack growth period, which</p>

BWRVIP Document	BWRVIP Requirement	Exception	Alternative In Lieu Of
			demonstrates that appropriate safety margins will be maintained.