



February 23, 2009

SERIAL: BSEP 09-0022

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
Special Report - Technical Requirements Manual Section 3.4,
Accident Monitoring Instrumentation

Ladies and Gentlemen:

In accordance with Technical Requirements Manual Section 3.4, "Accident Monitoring Instrumentation," for the Brunswick Steam Electric Plant (BSEP), Unit No. 2, Carolina Power & Light Company, now doing business as Progress Energy Carolinas, Inc., is submitting the enclosed Special Report associated with the Unit 2 Safety/Relief Valve Position Indication.

No regulatory commitments are contained in this letter. Please refer any questions regarding this submittal to Mr. Gene Atkinson, Supervisor - Licensing/Regulatory Programs, at (910) 457-2056.

Sincerely,

A handwritten signature in cursive script that reads 'Gene Atkinson'. To the right of the signature, the word 'FOR' is written in a smaller, handwritten font.

Phyllis N. Mentel
Manager - Support Services
Brunswick Steam Electric Plant

MAT/mat

Enclosure:

Special Report - Unit 2 Safety/Relief Valve Position Indication

Progress Energy Carolinas, Inc.
Brunswick Nuclear Plant
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Handwritten initials 'JEB22' in a large, bold script, with 'NMR' written below it in a smaller script.

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cc (with enclosure):

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Special Report - Unit 2 Safety/Relief Valve Position Indication

Background

On January 10, 2009, one channel of the Brunswick Steam Electric Plant (BSEP), Unit No. 2 Safety/Relief Valve Position Indication, Secondary-Temperature (i.e., Function 3.b. of Technical Requirements Manual (TRM) Table 3.4-1, "Accident Monitoring Instrumentation") was declared inoperable due to cycling of the tailpipe temperature indication (i.e., temperature element 2-B21-TE-N004L) for Safety/Relief Valve (SRV) 2-B21-F013L. As a result, Condition A of TRM Section 3.4, "Accident Monitoring Instrumentation," was entered, which required the position indication to be restored to operable status within 31 days. Repair of temperature element 2-B21-TE-N004L cannot be completed with the unit online and, as a result, Condition C of TRM Section 3.4 was entered on February 10, 2009. This Special Report is submitted in accordance with Condition C of TRM Section 3.4.

Cause of Inoperability

On January 10, 2009, temperature element 2-B21-TE-N004L appeared to be failing and was declared inoperable when indicated Safety/Relief Valve tailpipe temperature was observed to be cycling between 185 degrees F and 195 degrees F. Between January 10, 2009, and January 23, 2009, a reduction in nominal indicated temperature was also observed which did not correspond to power reductions or drywell temperature changes. Since January 23, 2009, the cycling has dampened and the temperature element indicated nominal value has returned to its pre-January 10, 2009, level.

The temperature element is located inside the Unit 2 drywell. Further troubleshooting of the element is scheduled for the Unit 2 refueling outage (i.e., B219R1), currently scheduled to begin on February 28, 2009. The cause of the erratic temperature element cannot be conclusively determined until the troubleshooting activities are completed. However, based on investigation efforts completed to date, the degraded condition is most likely a result of a degraded connection within the cabling inside primary containment or a degraded component internal to the temperature element. As such, the repair of temperature element 2-B21-TE-N004L cannot be completed with Unit 2 online. Required repairs will be completed during the upcoming B219R1 refueling outage.

Preplanned Alternate Monitoring Method

During the time period that the 2-B21-TE-N004L is inoperable, the redundant Primary-Sonic Safety/Relief Valve Position Indication (i.e., Function 3.a. of TRM Table 3.4-1) instrumentation provides monitoring capability. Additionally, although inoperable, SRV L tailpipe temperature indication remains available using 2-B21-TE-N004L.

Plans for Restoring the Instrumentation

Any required repairs of temperature element 2-B21-TE-N004L will be completed during the B219R1 refueling outage.