



Progress Energy

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June 19, 2008

SERIAL: BSEP 08-0081
TSC-2007-04

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

Subject: Brunswick Steam Electric Plant, Unit Nos. 1 and 2
Docket Nos. 50-325 and 50-324/License Nos. DPR-71 and DPR-62
Response to Request for Additional Information Regarding Request for
License Amendment - Technical Specification 3.3.1.2, "Source Range
Monitor (SRM) Instrumentation" (NRC TAC Nos. MD6385 and MD6386)

Reference: Letter from James Scarola to the U.S. Nuclear Regulatory Commission
(Serial: BSEP 07-0080), "Request for License Amendment - Technical
Specification 3.3.1.2, "Source Range Monitor (SRM) Instrumentation"
dated August 13, 2007 (ADAMS Accession Number ML072330083)

Ladies and Gentlemen:

By letter dated August 13, 2007, Carolina Power & Light Company (CP&L), now doing
business as Progress Energy Carolinas, Inc., requested a revision to the Technical
Specifications (TSs) for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2.
The proposed license amendment revises Table 3.3.1.2-1, "Source Range Monitor
Instrumentation" to add a footnote which specifies the required locations of operable
Source Range Monitors (SRMs) in Mode 5, during core alterations. Additionally, an
administrative correction is made to Surveillance Requirement 3.3.1.2.2 in the Unit 1 TSs.


On May 5, 2008, the NRC provided an electronic request for information regarding the
referenced amendment request. On June 10, 2008, a telephone conference call was held
with the NRC, to discuss CP&L's proposed responses. The enclosure to this letter
documents the responses provided by CP&L.

There are no regulatory commitments associated with this submittal. Please refer any
questions regarding this submittal to Mr. Randy C. Ivey, Manager - Support Services, at
(910) 457-2447.

A001
NRR

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on June 19, 2008.

Sincerely,

A handwritten signature in black ink, appearing to read "Ben C. Waldrep". The signature is written in a cursive style with a large initial "B" and "W".

Benjamin C. Waldrep

MAT/mat

Enclosure:

Response to NRC Request for Additional Information

cc (with enclosure):

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Response to NRC Request for Additional Information

By letter dated August 13, 2007, Carolina Power & Light Company (CP&L), now doing business as Progress Energy Carolinas, Inc., requested a revision to the Technical Specifications (TSs) for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. The proposed license amendment revises Table 3.3.1.2-1, "Source Range Monitor Instrumentation" to add a footnote which specifies the required locations of operable Source Range Monitors (SRMs) in Mode 5, during core alterations. Additionally, an administrative correction is made to Surveillance Requirement (SR) 3.3.1.2.2 in the Unit 1 TSs.

On May 5, 2008, the NRC provided an electronic request for information regarding the referenced amendment request. On June 10, 2008, a telephone conference call was held with the NRC, to discuss CP&L's proposed responses. The following documents the responses provided by CP&L.

NRC Question 1

The proposed amendment states that during core alternations, an operable SRM shall be located in: (1) the fueled region; (2) the core quadrant where core alternations are being performed, when the associated SRM is included in the fueled region; and (3) a core quadrant adjacent to where core alternations are being performed, when the associated SRM is included in the fueled region. Please provide the explanation that the above three required operable SRM locations only need one operable SRM or three operable SRMs and describe the relationship among the above three locations relating to an operable SRM.

Response to NRC Question 1

The proposed change duplicates the existing operable SRM location requirements contained in SR 3.3.1.2.2 as footnote (c) in Table 3.3.1.2-1, "Source Range Monitor Instrumentation." These requirements are identical to the existing requirements of SR 3.3.1.2.2 for Brunswick as well as to SR 3.3.1.2.2 in NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," Revision 3.1, with respect to the location requirements for operable SRMs. As stated in the bases for SR 3.3.1.2.2 (i.e., both the Brunswick bases and the NUREG-1433 bases), to provide adequate coverage of potential reactivity changes in the core, one SRM is required to be operable in the quadrant where core alterations are being performed, and the other operable SRM must be in an adjacent quadrant containing fuel. Hence, to satisfy the location requirements of SR 3.3.1.2.2 and the proposed footnote (c) of Table 3.3.1.2-1, a minimum of two operable SRMs are required (i.e., one in the quadrant where the core alteration is taking place and one in an adjacent quadrant containing fuel). This is consistent with existing requirements in Table 3.3.1.2-1, which indicate that two SRM channels are required to be OPERABLE in Mode 5.

NRC Question 2

Please provide clarification that one Source Range Monitor (SRM) may be used to satisfy more than one of the above three locations in Question 1. Also, clarify that this one SRM must be operable one.

Response to NRC Question 2

As stated above, the proposed change duplicates the existing operable SRM location requirements contained in SR 3.3.1.2.2 as footnote (c) in Table 3.3.1.2-1. This includes replication of Note 2 of SR 3.3.1.2.2 into footnote (c). Both Note 2 and footnote (c) state that one SRM may be used to satisfy more than one operable SRM location requirements. The Bases for SR 3.3.1.2.2 states that Note 2 is a recognition that more than one of the three requirements (i.e., a, b, and c of SR 3.3.1.2.2) can be satisfied by a single SRM. Both SR 3.3.1.2.2 and footnote (c) require that OPERABLE SRMs be verified in the applicable locations.

As an example, assume that core alterations are to be made in quadrant A as depicted in the following diagram.

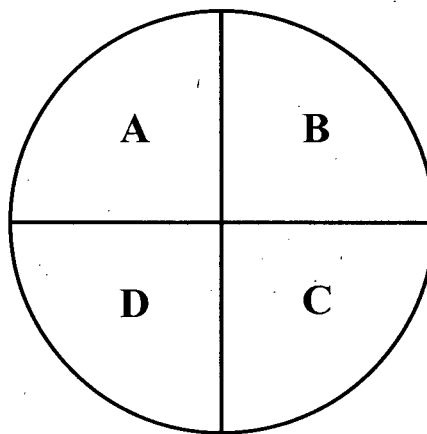


Table 3.3.1.2-1 requires two operable SRMs to support core alterations. SR 3.3.1.2.2 and the proposed footnote (c) state that during core alterations, the operable SRMs must be located in (1) the fueled region; (2) the core quadrant where core alternations are being performed, when the associated SRM is included in the fueled region; and (3) a core quadrant adjacent to where core alternations are being performed, when the associated SRM is included in the fueled region. Both also indicate that one SRM may be used to satisfy more than one of these location requirements.

To meet the location requirements of SR 3.3.1.2.2 and the proposed footnote (c), one of the operable SRMs must be located in the quadrant where the core alteration is made (i.e., quadrant A in this example). As such, this SRM would be satisfying location requirements (1) and (2).

The second operable SRM must be in a core quadrant adjacent to where the core alteration is being performed (i.e., location requirement (3)). In this example, the second SRM must be in either quadrant B or D, provided the SRM is neutronically linked to the first SRM (i.e., a "fuel bridge" exists between the two operable SRMs). Hence, the second SRM would be satisfying location requirements (1) and (3).