

September 26, 2002

Mr. J. S. Keenan
Vice President
Brunswick Steam Electric Plant
Carolina Power & Light Company
Post Office Box 10429
Southport, North Carolina 28461

SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2 - CLOSURE OF
GENERIC LETTER 96-06, "ASSURANCE OF EQUIPMENT OPERABILITY AND
CONTAINMENT INTEGRITY DURING DESIGN-BASIS ACCIDENT
CONDITIONS" (TAC NOS. M96787 AND M96788)

On September 30, 1996, the U.S. Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 96-06, "Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions," requesting information and actions regarding the following safety-significant issues:

1. Cooling water systems serving the containment air coolers may be exposed to the hydrodynamic effects of waterhammer during either a loss-of-coolant accident (LOCA) or a main steamline break (MSLB).
2. Cooling water systems serving the containment air coolers may experience two-phase flow conditions during postulated LOCA and MSLB scenarios.
3. Thermally induced overpressurization of isolated water-filled piping sections in containment could jeopardize the ability of accident mitigating systems to perform their safety functions and could also lead to a breach of containment integrity via bypass leakage.

In a letter dated January 28, 1997, to the NRC from Carolina Power & Light Company (CP&L, or the licensee), you provided an assessment for the Brunswick Steam Electric Plant (BSEP) Unit Nos. 1 and 2, and additional information was submitted in letters dated May 30, 1997, May 17, 1998, July 30, 1998, July 16, 2002, and September 3, 2002.

Based primarily on the information that was submitted in the September 3, 2002, letter, it is our understanding that CP&L will revise BSEP operating procedures to instruct operators not to restore cooling water flow to the primary containment following the event scenarios of interest without first performing an engineering evaluation to confirm that waterhammer and two-phase flow conditions of any consequence will not occur in the reactor building closed cooling water system.

We are satisfied with your response and consider the waterhammer and two-phase flow elements of GL 96-06 to be closed for BSEP.

The GL 96-06 issue concerning thermal overpressurization was addressed in the submittals of January 28, 1997, and May 30, 1998, and have been reviewed by the NRC staff. In your response of January 28, 1997, you identified three penetrations potentially vulnerable to a water solid volume within the drywell that may be subjected to an increase in pressure due to heating of trapped fluid. The three identified penetrations are: the Residual Heat Removal Shutdown Cooling Suction Lines, Drywell Floor Sump Pump Discharge Lines, and Drywell Equipment Sump Pump Discharge Lines. In the January 28, 1997, submittal, you stated that these penetrations, including the associated piping and valves, will remain operable to withstand postulated overpressurization with no safety impact on the plant, and that a long-term resolution of this GL-96-06 issue would be determined. In your response of May 30, 1997, as a final corrective action, you committed to install pressure relief protection devices for the three penetrations prior to start-up from Refueling Outages 11 and 12 for Unit Nos. 1 and 2, respectively. In a letter dated January 24, 2002, regarding your recent extended power uprate, you confirmed that the modifications were completed.

The staff finds that the corrective actions provide an acceptable resolution for the issue of thermally induced pressurization of piping runs penetrating the containment.

The NRC staff finds that you have provided the required evaluations, taken appropriate actions, and adequately addressed the issues raised in GL 96-06. Accordingly, TAC Nos. M96787 and M96788 are now closed. If you have any questions regarding this issue, please contact me at 301-415-2020 or by e-mail at blm@nrc.gov.

Sincerely,

/RA/

Brenda L. Mozafari, Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-325 and 50-324

cc: See next page

September 26, 2002

We are satisfied with your response and consider the waterhammer and two-phase flow elements of GL 96-06 to be closed for BSEP.

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Sincerely,

/RA/

Brenda L. Mozafari, Senior Project Manager, Section 2
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 Office of Nuclear Reactor Regulation

Docket Nos. 50-325 and 50-324

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