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SERIAL: BSEP 94-0360  
10 CFR 50.55a

U. S. Nuclear Regulatory Commission  
ATTENTION: Document Control Desk  
Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-325 AND 50-324/LICENSE NOS. DPR-71 AND DPR-62  
ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI  
IN-SERVICE INSPECTION PROGRAM RELIEF REQUEST  
USE OF ASME CODE CASE N-416-1

Gentlemen:

The purpose of this letter is to request relief from the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, in accordance with 10 CFR 50.55a(g)(6)(i), for the Brunswick Steam Electric Plant, Units 1 and 2. CP&L requests permission to use the alternative requirements of ASME Code Case N-416-1 for alternative pressure testing of welded repairs or replacements of Class 2 components in the Main Steam System and the Standby Liquid Control (SLC) System.

The detailed request for relief is provided in Enclosure 1. Approval of this relief request is needed by March 1, 1995 in order to support planning activities for the upcoming Unit 1 refueling outage, which is currently scheduled to begin on April 1, 1995.

Please refer any questions regarding this submittal to Mr. R. P. Lopriore at (910) 457-2212.

Sincerely,

R. P. Lopriore, Manager—Regulatory Affairs  
Brunswick Nuclear Plant

WRM/wrm

Enclosure

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cc (with enclosure):

Mr. S. D. Ebnetter, Regional Administrator, Region II  
Mr. P. D. Milano, NRR Senior Project Manager - Brunswick Units 1 and 2  
Mr. C. A. Patterson, NRC Senior Resident Inspector - Brunswick Units 1 and 2  
The Honorable H. Wells, Chairman - North Carolina Utilities Commission

## ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-325 AND 50-324  
OPERATING LICENSE NOS. DPR-71 AND DPR-62  
IN-SERVICE INSPECTION PROGRAM — REQUEST FOR RELIEF  
ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI  
USE OF ASME CODE CASE N-416-1

Unit: 1 and 2

Component: Main Steam (MS) and Standby Liquid Control (SLC) piping  
and valves identified below:

1-MS-V46	2-MS-V46
1-MS-V47	2-MS-V47
1-MS-V48	2-MS-V48
1-MS-V49	2-MS-V49
1-MS-FO-1767	2-MS-S3
	2-MS-V35
	2-C41-F033B
	2-MVD-S1

System: Main Steam, Standby Liquid Control

Class: 2

Code Requirement: The American Society of Mechanical Engineers (ASME) Code, Section XI, 1980 Edition through the 1981 Addenda, paragraph IWA-4400(a) states: "After repairs by welding on the pressure retaining boundary, a system hydrostatic test shall be performed in accordance with IWA-5000."

Proposed Alternative: CP&L has used ASME Code Case N-416 following repair or replacement to numerous components on the Main Steam System and one component on the Standby Liquid Control System. The Main Steam components are located between the main steam isolation valves (MSIVs) and the turbine stop valves. As required by N-416:

- 1) A VT-2 exam for leakage was performed to the requirements of the ASME Code, Section XI, 1980 edition through the 1981 Addenda, when the system was returned to service at nominal operating pressure, and
- 2) Repair/replacement welds were examined in accordance with paragraphs IWA-4000 and

IWA-7000 using a volumetric examination method for full penetration welds or surface examination method for partial penetration welds.

CP&L would like to use ASME Code Case N-416-1 for these repair/replacements. Code Case N-416-1 provides an alternate to the code required hydrostatic testing following repair/replacements by:

- 1) Performing non-destructive examinations (NDE) in accordance with the methods and acceptance criteria of the applicable subsection of the 1992 Edition of the ASME Code, Section III,
- 2) Prior to or immediately upon return to service, performing a Visual Examination (VT-2) in conjunction with a system leakage test, using the 1992 Edition of Section XI, in accordance with paragraph IWA-5000, at nominal operating pressure and temperature, and
- 3) Documenting the use of the code case on the NIS-2 form.

The examination methods performed on the Main Steam and Standby Liquid Control components to meet the requirements of Code Case N-416, also meet the requirements of Code Case N-416-1.

#### Basis For The Proposed Alternative

The hydrostatic testing following the repair/replacement of the Main Steam and Standby Liquid Control components above imposes undue hardship for the following reasons:

For the Main Steam components detailed above, a hydrostatic test would require filling the four (4) main steam lines with water. Additionally, the installation of scaffolding and the pinning of hangers would be required, impacting outage personnel resources. This hydrostatic test would be performed in conjunction with the Class 1 reactor pressure vessel hydrostatic test, which has the potential to increase critical path time since the inventory associated with the reactor pressure vessel (RPV) is now open beyond the Class 1 boundary main steam isolation valves. Also, additional time would be required to look for leakage. Such testing has the potential to extend the outage schedule by approximately 3.2 days.

For the Standby Liquid Control components, a hydrostatic test would require filling the lines with water, the removal of heat trace, and the use of a hydrostatic testing pump. These activities would also impact outage time and resources (approximately 2 days).