



Carolina Power & Light Company
P.O. Box 10429
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SEP 14 1995

SERIAL: BSEP 95-0452
10 CFR 50.55a

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

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 1
DOCKET NO. 50-325/LICENSE NO. DPR-71
ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI
IN-SERVICE INSPECTION PROGRAM RELIEF REQUEST
SERVICE WATER PIPING NON-CODE REPAIR

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) and Nuclear Regulatory Commission (NRC) Generic Letter 90-05, for the Brunswick Steam Electric Plant, Unit 1. The request for relief applies to a temporary non-code repair identified on the Service Water (SW) System. The detailed request for relief is provided in Enclosure 1.

Please refer any questions regarding this submittal to Mr. George Honma at (910) 457-2741.

Sincerely,

G. D. Hicks
Manager—Regulatory Affairs
Brunswick Nuclear Plant

Enclosures

pc (with enclosures):

- Mr. S. D. Ebnetter, Regional Administrator, Region II
- Mr. D. C. Trimble, NRR 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
- Mr. Billy Walker, Assistant Director - Boiler & Pressure Vessel Division
- Mr. Grady Young, ANII - Brunswick Units 1 and 2

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ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 1
DOCKET NO. 50-325/OPERATING LICENSE NO. DPR-71
ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI
IN-SERVICE INSPECTION PROGRAM RELIEF REQUEST
SERVICE WATER PIPING NON-CODE REPAIR

Unit:	1
Components:	Service Water Line 1-SW-140-16-17A
System:	Service Water System
Class:	3
Code Requirement:	The American Society of Mechanical Engineers (ASME) Code, Section XI, 1980 Edition through the 1981 Addenda, paragraph IWA-4000 states: "Repairs shall be performed in accordance with the Owner's Design Specification and Construction Code of the component or system."
Proposed Alternative:	Perform a temporary non-code repair on the pipe spool piece downstream of valve 1-SW-V382 in accordance with NRC Generic Letter 90-05 until the next scheduled or forced outage exceeding thirty days.
Basis For The Proposed Alternative	<p>On August 26, 1995, a through-wall leak was identified on line 1-SW-140-16-17A (Reactor Building Closed Cooling Water/SW discharge line). The through-wall leak is located in the pipe spool piece downstream of the valve 1-SW-V382. Line 1-SW-140-16-17A is part of a moderate energy system and is classified as ASME Class 3.</p> <p>The pipe spool piece containing the flaw was examined by the ultrasonic examination (UT) method. Thickness measurements were determined a grid of the entire spool piece. Upon review of the UT results, no reading below the minimum wall thickness for this piping was found with the exception of the area containing the flaw.</p> <p>Carolina Power & Light Company has performed an evaluation of line 1-SW-140-16-17A using the</p>

"through-wall flaw" approach identified in NRC Generic Letter 90-05. Specifically, the flaw was evaluated for stability using the linear elastic fracture mechanics approach. The code required minimum wall thickness (t_{min}) was determined and from this information, the flaw length was defined. The stress (S) at the flawed location was determined as stipulated in NRC Generic Letter 90-05 and met the acceptance criteria contained in the Generic Letter. On this basis, the evaluation concluded that the flaw on line 1-SW-140-16-17A is stable and this component is acceptable for continued operation until the next scheduled or forced outage longer than thirty days in duration.

Augmented inspections using the UT method of five (5) susceptible and accessible locations were performed. The results of these examinations were evaluated and found to be acceptable.

The overall degradation of the affected portion of the Service Water System has been assessed and evaluated as acceptable. The integrity of the temporary non-code repairs will routinely be assessed, as stipulated by NRC Generic Letter 90-05, to ensure structural integrity of the affected component is maintained until the code repair is completed.

ENCLOSURE 2

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 1
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LIST OF REGULATORY COMMITMENTS

The following table identifies the action committed to by Carolina Power & Light Company in this document. Any other actions discussed in the submittal represent intended or planned actions by Carolina Power & Light Company. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Manager-Regulatory Affairs at the Brunswick Nuclear Plant of any questions regarding this document or any associated regulatory commitments.

Commitment	Committed date or outage
1. Perform a repair in accordance with the ASME Code, Section XI of the flawed area on the pipe spool piece downstream of valve 1-SW-V382.	Next scheduled or forced outage exceeding 30 days or B111R1.
2. Assess the integrity of the temporary non-code repair as stipulated by NRC Generic Letter 90-05 to ensure structural integrity of the affected component is maintained until the code repair is completed.	Until completion of the code repair.