CP&L

Carolina Power & Light Company

SERIAL: LAP-83-566

DEC 09 1983

Director of Nuclear Reactor Regulation
Attention: Mr. D. B. Vassallo, Chief
Operating Reactors Branch No. 2
Division of Licensing
United States Nuclear Regulatory Commission
Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-324
LICENSE NO. DPR-62
REQUEST FOR RELIEF FROM CERTAIN ASME
CODE TEST REQUIREMENTS

Dear Mr. Vassallo:

Carolina Power & Light Company (CP&L) has recently completed inspections of certain piping welds at Brunswick Steam Electric Plant Unit No. 2 (Brunswick-2) in accordance with IE Bulletin 83-02 and Orders contained in your letter dated August 26, 1983. The results of that inspection and details of certain repairs conducted on Brunswick-2 are contained in CP&L letters BSEP/83-3748 dated November 28, 1983, LAP-83-549 and LAP-83-554, both dated November 30, 1983. The purpose of this letter is to request relief from the hydrostatic pressure test requirements for two weld repairs which resulted from these inspections.

Specific Relief Requested

Relief is requested from the hydrostatic pressure test requirements of IWA-4400 and IWA-5000 of Section XI of the ASME Code edition 1977 through the summer of 1978 addenda, for the Unit 2 weld overlay repairs on welds 2-B32-12"-K2 and 2-B32-12"-K3.

This relief request is applicable to the weld overlay repairs made on Reactor Recirculation piping system welds 2-B32-12"-K2 and 2-B32-12"-K3. The weld configurations are pipe to elbow, and elbow to pipe, 12" nomimal diameter schedule 80 material with a nominal thickness of 0.631 inches. The welds are located on the B loop on the K-riser at an azimuth of 330°.

In lieu of these tests CP&L will perform a visual examination (VT-2) for leakage during the inservice leak-pressure test after pressurization to nominal operating pressure (1005 psig) and temperature (540°F).

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Justification

The Reactor Recirculation System piping cannot be isolated from the Reactor Pressure Vessel during a hydrostatic pressure test of the K riser weld overlays. Brunswick Unit 2 has a major refueling outage scheduled in the Spring of 1984 at which time the 10 year interval hydrostatic pressure test will be performed prior to returning the unit to service. Considering the exposure rates, expense, and short service duration until the spring outage; performance of a hydrostatic pressure test to satisfy Section XI is impractical. The utilization of the inservice leak pressure test coupled with the visual, liquid penetrant, and ultrasonic non-destructive examination already performed on the weld overlay provides adequate assurance of the integrity of the repair for return to commercial service until the spring outage.

The inservice leak test pressure is approximately 20 psi less than the hydrostatic test pressure with the hydro performed at the nominal operating temperature (see Table IWB-5220-1):

$$1.02\ Po = 1025.1\ psi$$

$$Po = \frac{1005}{20.1\ psi}$$

The performance of the hydrostatic pressure test at nominal operating temperature (540°F) is not feasible due to the inordinate amount of time involved attaining the required test temperature in a nonoperational status, and the cooldown time after hydro to prepare the unit for operational status before return to service. The performance of the hydrostatic test at lower temperature would also be time consuming, would involve considerable unnecessary exposure to personnel (for equipment installation and removal), and would be an unnecessary cycle of the pressure vessel when compared to the minimal additional safety margins it might provide with respect to the integrity of the weld overlays.

Should you have any questions regarding this request, please do not hesitate to contact our Licensing Staff.

Yours very truly,

P. W. Howe

P. W. Howe
Vice President
Brunswick Nuclear Project

JSD/kjr (9037JSD)

cc: Mr. D. O. Myers (NRC-BSEP)
Mr. J. P. O'Reilly (NRC-RII)
Mr. M. Grotenhuis (NRC)