

Carolina Power & Light Company
P.O. Box 10429
Southport, NC 28461-0429

SERIAL: BSEP 95-0512

OCT 19 1995

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

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 5-324/LICENSE NOS. DPR-71 AND DPR-62
ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI
REQUEST FOR APPROVAL TO USE CODE CASE N-524

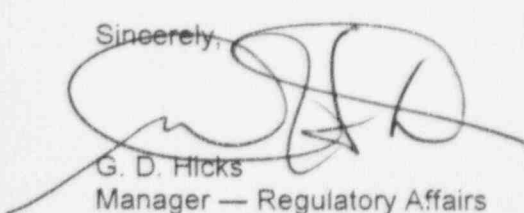
Gentlemen:

In accordance with 10 CFR 50.55a(a)(3), Carolina Power & Light (CP&L) Company requests approval for the Brunswick Steam Electric Plant, Units 1 and 2 to use an alternative to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code requirements for examination of longitudinal welds in Class 1 and 2 piping. The requested alternative is delineated in ASME Code Case N-524, "Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping" which was approved by the ASME committee on August 9, 1993, but has not yet been incorporated into Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability ASME Section XI Division 1." The basis for this request is provided in Enclosure 1. A list of the regulatory commitments contained in this letter is provided in Enclosure 2.

Carolina Power & Light Company considers this request to use ASME Code Case N-524 to be a regulatory burden reduction item for the Brunswick Plant with anticipated savings in excess of \$70,000 for the remaining Unit 1 and Unit 2 refueling outages in the current 10-year in-service inspection interval. Approval of ASME Code Case N-524 for use at the Brunswick Plant is requested by December 15, 1995 in order to support the upcoming Unit 2 Reload 11 (B212R1) outage. The B212R1 outage is presently scheduled to begin on February 2, 1996.

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

JWC/wrm

Enclosures

240130
9510250182 951019
PDR ADOCK 05000324
Q PDR

ADH

cc: 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

ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 5-324
LICENSE NOS. DPR-71 AND DPR-62
ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI
REQUEST FOR APPROVAL TO USE CODE CASE N-532

In accordance with 10 CFR 50.55a(a)(3), Carolina Power & Light (CP&L) Company requests approval for the Brunswick Steam Electric Plant, Units 1 and 2 to use an alternative to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code requirements for examination of longitudinal welds in Class 1 and 2 piping. The requested alternative is delineated in ASME Code Case N-524, "Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping" which was approved by the ASME Code committee on August 9, 1993. Code Case N-524 has not yet been incorporated into Regulatory Guide 1.147.

Code Case N-524 allows alternative requirements for surface and volumetric examination of longitudinal piping welds specified in Table IWB-2500-1 (Category B-J) and IWC-2500-1 (Category C-F) of ASME Section XI. The alternative requirements of this Code Case limit the surface and volumetric examination requirements of longitudinal welds to the area or volume contained within the examination requirements of the intersecting circumferential weld. The alternative requirements of this Code Case have been reviewed by CP&L and determined that the use of this Code Case would provide an acceptable level of quality and safety for the following reasons:

- Longitudinal welds are not produced in the field or fabrication shops as is the case of a circumferential weld. Longitudinal piping welds for Class 1 and 2 applications were made by the piping manufacturer under controlled conditions which produced higher quality welds and more uniform residual stress patterns. These welds were examined in accordance with the appropriate ASTM or ASME specifications with additional nondestructive examination requirements imposed by the purchasing specifications. The manufacturing controls specified by the appropriate ASTM or ASME specifications along with the additional examinations imposed by the purchasing specification provides assurance of the structural integrity of the longitudinal weld at the time the piping is manufactured.
- In-service inspections have provided assurance of the structural integrity of the longitudinal welds during the service life of the plant to date. Based on results of these in-service inspections, the Brunswick Plant has not experienced degradation that would warrant continued examination beyond the intersection area or volume bounded by this Code Case. If any degradation associated with a longitudinal weld were to occur, it is expected that it would be located at the intersection with a circumferential weld. The inspection of this intersection is within the scope of this Code Case.

Based on the above, the continual examination of longitudinal welds as currently required by the 1980 Edition with Addenda through Winter 1981 of ASME Code, Section XI is not technically warranted. The ASME Code committee has recognized this fact and for this reason approved alternative requirements outlined in Code Case N-524.

In addition to the above, there is a significant accumulation of personnel radiation exposure associated with the examination of longitudinal welds. The personnel radiation exposure associated with the examination of longitudinal welds are dependent on the time it would take to remove and reinstall insulation and interferences, prepare the weld for examination, and perform the examinations. Based on the current examination scope for the upcoming Unit 2 Reload 11 (B212R1) outage, exposure savings of approximately 2.5 person-rem (for the main steam system and reactor recirculation system) could result from the approval to use the alternative requirements of Code Case N-524. Therefore, the continued imposition of the ASME Code, Section XI examination requirements for longitudinal welds constitutes a hardship to the Brunswick Plant without a compensating increase in quality and safety.

The approval to use the alternative provisions of ASME Code Case N-524, "Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping," is requested for the remainder of the second ten-year inservice inspection interval or until such time as Code Case N-524 is incorporated into Regulatory Guide 1.147.

ENCLOSURE 2

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324
OPERATING LICENSE NOS. DPR-71 AND DPR-62
ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI
REQUEST FOR APPROVAL TO USE CODE CASE N-524

LIST OF REGULATORY COMMITMENTS

The following table identifies those actions 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. None | N/A |