North Atlantic

North Atlantic Energy Service Corporation
P.O. Box 300
Seabrook, NH 03874
(603) 474-9521

The Northeast Utilities System

OCT 22 1996

Docket No. 50-443
NYN-96065

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Seabrook Station
Request to Use an Alternative to ASME Code Section XI

Pursuant to 10CFR50.55a(a)(3), North Atlantic Energy Service Corporation (North Atlantic) requests NRC Staff approval to use an alternative to the ASME Boiler and Pressure Vessel Code, Section XI, 1983 Edition with the Summer 1983 Addenda for Seabrook Station. Specifically, North Atlantic requests approval to use the provisions of the following ASME Code Case:

- Code Case N-524, "Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping, Section XI, Division 1."

Approval for use of Code Case N-524 has been granted to Northeast Utilities other nuclear power stations; Millstone Point 1, 2 & 3 and Haddam Neck.

Enclosure 1 provides detail for the relief request. North Atlantic believes that the proposed alternative examination requirements specified in Code Case N-524 provide an acceptable level of quality and safety while concurrently reducing hardship.

North Atlantic requests NRC review and approval of this relief request by March 31, 1997.

Should you have any questions regarding this matter, please call Mr. Anthony M. Callendrello, Licensing Manager, at (603) 474-9521, extension 2751.

Very truly yours,

William A. DiProfio
Station Director

290062

A047

cc: H. J. Miller, Region Administrator
A. W. De Agazio, Sr. Project Manager
J. B. Macdonald, NRC Senior Resident Inspector

North Atlantic Energy Service Corporation
Seabrook Unit 1
First Ten-Year Interval

REQUEST FOR RELIEF FROM INSERVICE INSPECTION REQUIREMENTS

(Code Case N-524)

1. Reference Code Case:

   Code Case N-524, "Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping Section XI, Division 1."

2. Applicable Inservice Inspection Code:

   ASME Section XI, 1983 Edition through Summer 1983 Addenda.

3. Components For Which Relief is Requested:

   ASME Class 1 and 2 longitudinally seam welded piping.

4. Code Requirement:

   ASME Class 1 longitudinal seam welds require examination of one pipe diameter in length, but no more than 12 inches. ASME Class 2 longitudinal seam welds require examination of 2.5t (where t is the thickness of the weld) in length. The weld length is measured from the intersection of the circumferential weld and longitudinal weld.

5. Code Requirement From Which Relief is Requested:

   Relief is requested from performing the Code required examination of Class 1 and 2 longitudinal piping seam welds for the lengths identified above.

6. Basis for Relief:

   Longitudinal welds are produced during the manufacturing process of the piping, not in the field, as in the case for circumferential welds. The Code contains requirements for characteristics and performance of materials and products, and specifies the examination requirements during the manufacture of the subject longitudinal piping welds. In addition, there are material, chemical, and tensile strength requirements in the Code. The manufacturing process that is specified by the Code provides assurance of the structural integrity of the longitudinal welds at the time the piping is manufactured.

   The preservice examination and initial inservice examinations performed by North Atlantic have provided assurance of the structural integrity of ASME Code longitudinal welds during the service life of Seabrook to date. The experience in the United States has been that ASME Code longitudinal welds have not experienced degradation that would warrant continued examination

6. Basis for Relief (continued):

beyond the boundaries required to meet the circumferential weld examination requirements. No significant loading conditions or known material degradation mechanisms have become evident to date which specifically relate to longitudinal seam welds in nuclear plant piping. 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. This intersection is inspected in accordance with the provisions of Code Case N-524.

7. Alternative Examination:

Perform the alternative examination requirements specified in Code Case N-524.

8. Justification For the Granting of Relief:

Code Case N-524 directs the examination effort at weld intersections. It eliminates the longitudinal weld from examination, significantly reducing examination time requirements and potential radiological exposure to examination personnel. Compliance with the existing ASME Section XI requirements, in lieu of the Code Case, results in unnecessary personnel exposure to complete the required examinations without commensurate increase in the level of quality or safety.

Approval of this Code Case by the ASME, with NRC participation, provides the basis for the approval of our request. The alternatives which are provided in this case have been determined by the ASME consensus process to provide an acceptable level of quality and safety.

9. Conclusion:

Based on the foregoing, North Atlantic concludes that the proposed alternative examination provides reasonable assurance of operational readiness while currently reducing hardship.