



**North
Atlantic**

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The Northeast Utilities System

June 29, 2000

Docket No. 50-443

CR# 97-23082-02

NYN-00060

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

Seabrook Station
"Inservice Inspection Program Relief Request"

North Atlantic Energy Service Corporation (North Atlantic) is in the process of reviewing activities performed during the First Ten-Year Interval Inservice Inspection (ISI) program. The First Ten-Year Interval Program was developed in accordance with Section XI of the 1983 Edition (including the Summer of 1983 Addenda) of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code.

As a result of this review, North Atlantic has determined that relief from the examination coverage requirements of the ASME Code pertaining to the Seabrook Station Pressurizer Shell-to-Head Weld is necessary. Accordingly, North Atlantic has provided relief request IR-11, Revision 0 in the attached enclosure. NRC review and approval IR-11 is requested by January 12, 2001.

Should you have any questions regarding this letter, please contact Mr. James M. Peschel, Manager - Regulatory Programs, at (603) 773-7194.

Very truly yours,

NORTH ATLANTIC ENERGY SERVICE CORP.

Ted C. Feigenbaum
Executive Vice President
and Chief Nuclear Officer

A047

cc: H. J. Miller, NRC Regional Administrator
R.M. Pulsifer, NRC Project Manager, Project Directorate I-2
R. K. Lorson, NRC Senior Resident Inspector

ENCLOSURE TO NYN-00060

Seabrook Nuclear Power Station Unit No. 1
Relief From Inservice Inspection Requirements
IR-11, Revision 0

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Components For Which Relief Is Requested:

One (1) Pressurizer Shell-to-Head Circumferential Weld

Component ID No: RC E-10 09

ASME Code Class: 1

Examination Category: B-B, Item No. B2.11

Code Requirement From Which Relief Is Requested:

ASME B&PV Code Section XI, 1983 Edition through Summer 1983 Addenda, Table IWB-2500-1, Examination Category B-B requires volumetric examination of essentially 100% of the weld length.

Note: Essentially 100% has been interpreted as greater than 90% in ASME Code Case N-460.

Basis and Justification for the Granting of Relief:

Pursuant to 10CRF50.55a(g)(5)(iv), relief is requested from performing a volumetric examination on essentially 100% of the weld length on the basis that the Code requirement is impractical to achieve.

A 15" thick concrete shield wall weighing approximately 85,000 pounds surrounds the Seabrook Pressurizer. The clearance between the shield wall and the Pressurizer vessel is approximately 9½". At the head-to-shell weld, this clearance is further reduced to approximately 3½" by an extensive safety valve support structure. The limited clearance and support structure obstructions made manual volumetric examination extremely difficult and not repeatable as demonstrated on a prefabricated mock-up.

A state of the art automated ultrasonic system with a magnetic low profile scanner was utilized due to its ability to fit in the limited space, interrogate the Code required weld volume and its excellent repeatability. In spite of overcoming the highly restricted access, reinforcing plates and stiffeners on the Pressurizer shell prevented achievement of full coverage. Pressurizer head-to-shell weld examination coverage was limited to 83%. This examination was performed during refueling outage 05.

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Additionally, the removal of welded attachments solely to achieve increased examination coverage results in an undue hardship with no compensating increase in quality and safety. The reinforcing plates and stiffeners are associated with seismic support of Pressurizer safety valves. Temporary support of this structure for access to remove the welded attachments is impractical. Also, repeated removal and re-welding of attachments has the potential to create negative metallurgical conditions to the shell of the Pressurizer vessel.

Alternative Examination:

No additional examinations will be performed. The Pressurizer head-to-shell weld was volumetrically examined to the maximum extent possible in accordance with Code requirements. In addition a VT-2 visual examination associated with the system pressure test is also performed on this weld each refueling outage as specified in Table IWB-2500-1, Examination Category B-P of the 1983 Edition through Summer 1983 Addenda of ASME Section XI. The coverage achieved and the associated pressure testing performed ensures the integrity of the subject weld.

Relief Request Applicability

This Relief Request is applicable for the third period of the First Ten-Year ISI Interval.