SEABROOK STATION
Engineering Office

PSNH

June 13, 1986

Public Service of New Hampshire

NEW HAMPSHIRE YANKEE DIVISION

SBN- 1110
T.F. B7.1.2

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Mr. Vincent S. Noonan, Project Director
PWR Project Directorate No. 5

References: (a) Construction Permits CPPR-135 and CPPR-136, Docket Nos. 50-443 and 50-444
(b) PSNH Letter (SBN-1072), dated May 28, 1986, "Preservice Inspection Program (PSI) (SER Outstanding Issue No. 4), Relief Requests", J. DeVincentis to V. S. Noonan

Subject: Preservice Inspection Program (PSI) (SER Outstanding Issue No. 4): Revised Relief Requests

Dear Sir:

Enclosed, herewith, please find revised Seabrook Station Unit 1 PSI Relief Requests for examinations determined to be impractical pursuant to 10CFR50.55(a)(g)5(iii). These revisions are in accordance with our discussions with the Staff on June 11, 1986 regarding the relief requests submitted by Reference (b). The revised relief requests included herewith are listed below by number and subject.

PR-2	Pressurizer and Steam Generator Welds (Class 1)
PR-4	Class 1 Piping Welds
PR-5	Pump and Valve Internal Pressure Boundary Surfaces
PR-6	Steam Generator, Residual Heat Removal, and Letdown Heat Exchanger Welds
PR-7	RHR Heat Exchanger Nozzles
PR-9	Class 2 Piping Welds

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These revised relief requests will become a part of the final PSI Report. In accordance with previous discussion with the Staff, the final report will be submitted by July 15, 1986.

We trust that the enclosed is acceptable and request that the resolution of this issue be reflected in the next supplement to Seabrook's SER.

Very truly yours,

John DeVincentis
Director of Engineering

Enclosure

cc: Atomic Safety and Licensing Board Service List

Diane Curran, Esquire
Harmon & Weiss
2001 S. Street, N.W.
Suite 430
Washington, D.C. 20009

Sherwin E. Turk, Esq.
Office of the Executive Legal Director
U.S. Nuclear Regulatory Commission
Tenth Floor
Washington, DC 20555

Robert A. Backus, Esquire
116 Lowell Street
P.O. Box 516
Manchester, NH 03105

Philip Ahrens, Esquire
Assistant Attorney General
Department of The Attorney General
Statehouse Station #6
Augusta, ME 04333

Mrs. Sandra Gavutis
Chairman, Board of Selectmen
RFD 1 - Box 1154
Kennsington, NH 03827

Carol S. Sneider, Esquire
Assistant Attorney General
Department of the Attorney General
One Ashburton Place, 19th Floor
Boston, MA 02108

Senator Gordon J. Humphrey
U.S. Senate
Washington, DC 20510
(ATTN: Tom Burack)

Richard A. Hampe, Esq.
Hampe and McNicholas
35 Pleasant Street
Concord, NH 03301

Thomas F. Powers, III
Town Manager
Town of Exeter
10 Front Street
Exeter, NH 03833

Brentwood Board of Selectmen
RFD Dalton Road
Brentwood, NH 03833

Peter J. Mathews, Mayor
City Hall
Newburyport, MA 01950

Calvin A. Canney
City Manager
City Hall
126 Daniel Street
Portsmouth, NH 03801

Stephen E. Merrill, Esquire
Attorney General
George Dana Bisbee, Esquire
Assistant Attorney General
Office of the Attorney General
25 Capitol Street
Concord, NH 03301-6397

Mr. J. P. Nadeau
Selectmen's Office
10 Central Road
Rye, NH 03870

Mr. Angie Machiros
Chairman of the Board of Selectmen
Town of Newbury
Newbury, MA 01950

Mr. William S. Lord
Board of Selectmen
Town Hall - Friend Street
Amesbury, MA 01913

Senator Gordon J. Humphrey
1 Pillsbury Street
Concord, NH 03301
(ATTN: Herb Boynton)

H. Joseph Flynn, Esquire
Office of General Counsel
Federal Emergency Management Agency
500 C Street, SW
Washington, DC 20472

Paul McEachern, Esquire
Matthew T. Brock, Esquire
Shaines & McEachern
25 Maplewood Avenue
P.O. Box 360
Portsmouth, NH 03801

Gary W. Holmes, Esq.
Holmes & Ells
47 Winnacunnet Road
Hampton, NH 03842

Mr. Ed Thomas
FEMA Region I
442 John W. McCormack PO & Courthouse
Boston, MA 02109

Robert Carrigg
Town Office
Atlantic Avenue
North Hampton, NH 03862

Seabrook Nuclear Power Station Unit No. 1

Relief From Preservice Inspection Requirements

Relief Request: PR-2

Component Identification:

Pressurizer and Steam Generator Welds

Code Class: 1 Examination Category: B-B and B-D

Code Requirement:

For Seabrook Unit No. 1 a volumetric (ultrasonic) examination of 100 percent of the weld length and 100 percent of the nozzle inner radius areas shall be conducted for the following items in accordance with ASME B&PV Code, 1977 Edition through the Summer 1978 Addendum, Subarticle IWB-2500:

Item	Description
B2.11	Circumferential Shell-to-Head Welds (Pressurizer)
~~B2.12~~	~~Longitudinal Shell Welds (Pressurizer)~~
B2.40	Tube Sheet-to-Head Welds (Steam Generators)
B3.30	Nozzle-to-Vessel Welds (Pressurizer)
B3.40	Nozzle Inside Radius Section (Pressurizer)
B3.50	NOZZLE TO SHELL WELDS (STEAM GENERATORS)

Code Relief Request:

Pursuant to 10CFR50.55(a)(g)5(iii), relief is requested from performing the preservice volumetric examination of the inaccessible portions of the subject vessel welds and inner radius areas.

Basis for Relief:

Geometric configuration and permanent obstructions prohibit performance of a 100 percent volumetric examination of each of the subject welds. The PSI limitations and the specific relief as they apply to each weld, are noted in the attached table for each component.

Support for Relief/Alternate Examinations:

A. The subject welds received both volumetric examination by radiography and surface examinations during fabrication, in accordance with ASME Section III requirements, which provide adequate assurance of the structural integrity of the welds.

B. A construction hydrostatic test was conducted successfully on the Class 1 pressure boundary, of which these welds are a part thereof, in accordance with the requirements of ASME Section III.

C. In-service system leakage tests will be performed per Category B-P, Table IWB-2500-1 each refueling outage.

Table 1

Pressurizer Limitations

Weld Identification	Data Sheet Number(1)	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
RC-E-10-A-NZ	6466-11	B 3.30	45°	½ Vee	Nozzle to Shell/*	75%
RC-E-10 A-NZ	6466-10	B 3.30	60°	½ Vee	Nozzle to Shell/*	75%
RC-E-10-B-NZ	6466-11	B 3.30	45°	½ Vee	Nozzle to Shell/*	75%
RC-E-10-B-NZ	6466-10	B 3.30	60°	½ Vee	Nozzle to Shell/*	75%
RC-E-10-C-NZ	6466-11	B 3.30	45°	½ Vee	Nozzle to Shell/*	75%
RC-E-10-C-NZ	6466-10	B 3.30	60°	½ Vee	Nozzle to Shell/*	75%
RC-E-10-D-NZ	6466-11	B 3.30	45°	½ Vee	Nozzle to Shell/*	75%
RC-E-10-D-NZ	6466-10	B 3.30	60°	½ Vee	Nozzle to Shell/*	75%
RC-E-10-SP-NZ	6466-11	B 3.30	45°	½ Vee	Nozzle to Shell/*	75%
RC-E-10-SP-NZ	6466-10	B 3.30	60°	½ Vee	Nozzle to Shell/*	75%

* GEOMETRY - I.D. CLADDING.

Table 1

Pressurizer Limitations

Weld Identification	Data Sheet Number (1)	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
1-RC-E-10-4	6466-6	B2.11	0°	0°	Shell to Shell/*1	96%
1-RC-E-10-4	6466-8	B2.11	45°	Circ. and Axial	Shell to Shell/*1	96%
1-RC-E-10-4	6466-7	B2.11	60°	Circ. and Axial	Shell to Shell/*1	96%
1-RC-E-10-9	6466-15	B2.11	0°	0°	Shell to Upper Head/*1	95%
1-RC-E-10-9	6466-8	B2.11	45°	Circ. and Axial	Shell to Upper Head/*1	95%
1-RC-E-10-9	6466-13	B2.11	60°	Circ. and Axial	Shell to Upper Head/*1	95%
1-RC-E-10-1	6466-9	B2.11	0°	0°	Lower Head to Shell/*1	99%
1-RC-E.10-1	6466-8	B2.11	45°	Circ. and Axial	Lower Head to Shell/*1	79%
1-RC-E-10-1	6466-10	B2.11	60°	Circ. and Axial	Lower Head to Shell/*1	80%
1-RC-E-10-S-NZ	6466-15	B3.30	0°	0°	Surge Nozzle to Lower Head/*2	74%
1-RC-E-10-S-NZ	6466-14	B3.30	45°	Circ. and Axial	Surge Nozzle to Lower Head/*2	74%
1-RC-E-10-S-NZ	6466-13	B3.30	60°	Circ. and Axial	Surge Nozzle to Lower Head/*2	74%
1-RC-E-10-S-I.R.	6467-11	B3.40	70° Inner Radius	----	Surge Nozzle to Lower Head/*2	74%

1. Data sheet number refers to data sheet containing incomplete scan.

*1 LIMITED DUE TO O.D. INTERFERENCES

*2 LIMITED BY GEOMETRY/HEATER PENETRATIONS

Table 2
Steam Generator Limitations

Weld Identification	Data Sheet Number (1)	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
1-RC-E-11A-2A-NZ	6465-42	B 3.50	45°	½ ± Vee	Nozzle to Shell	75%
1-RC-E-11A-2A-NZ	6465-48	B 3.50	60°	½ Vee	Nozzle to Shell	75%
1 RC-E-11A-2B-NZ	6465-42	B 3.50	45°	½ Vee	Nozzle to Shell	75%
1-RC-E-11A-2B-NZ	6465-48	B 3.50	60°	½ Vee	Nozzle to Shell	75%
1-RC-E-11B-2A-NZ	6465-52	B 3.50	45°	½ Vee	Nozzle to Shell	75%
1-RC-E-11B-2A-NZ	6465-44	B 3.50	60°	½ Vee	Nozzle to Shell	75%
1-RC-E-11B-2B-NZ	6465-52	B 3.50	45°	½ Vee	Nozzle to Shell	75%
1-RC-E-11B-2B-NZ	6465-44	B 3.50	60°	½ Vee	Nozzle to Shell	75%
1-RC-E-11C-2A-NZ	6465-49	B 3.50	45°	½ Vee	Nozzle to Shell	75%
1-RC-E-11C-2A-NZ	6465-47	B 3.50	60°	½ Vee	Nozzle to Shell	75%
1-RC-E-11C-2B-NZ	6465-49	B 3.50	45°	½ Vee	Nozzle to Shell	75%
1-RC-E-11C-2B-NZ	6465-47	B 3.50	60°	½ Vee	Nozzle to Shell	75%
1-RC-E-11D-2A-NZ	6465-46	B 3.50	45°	½ Vee	Nozzle to Shell	75%
1-RC-E-11D-2A-NZ	6465-50	B 3.50	60°	½ Vee	Nozzle to Shell	75%
1-RC-E-11D-2B-NZ	6465-46	B 3.50	45°	½ Vee	Nozzle to Shell	75%
1-RC-E-11D-2B-NZ	6465-50	B 3.50	60°	½ Vee	Nozzle to Shell	75%

GEOMETRY - I.D CLADDING.

Table 2

Steam Generator Limitations

Weld Identification	Data Sheet Number (1)	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
1-RC-E-11A Seam 1	6465-011	B2.40	0°	0°	Tubesheet to lower head. S/G supports	78%
1-RC-E-11A Seam 1	6465-008	B2.40	45°	Circ. and Axial	Tubesheet to lwoer head. S/G supports	78%
1-RC-E-11A Seam 1	6465-007	B2.40	60°	Circ. and Axial	Tubesheet to lower head. S/G supports and surface contour.	58%
1-RC-E-11B Seam 1	6465-034	B2.40	0°	0°	Tubesheet to lower head S/G supports	78%
1-RC-E-11B Sean 1	6465-036	B2.40	45°	Circ. and Axial	Tubesheet to lower head S/G supports	78%
1-RC-E-11B Seam 1	6465-035	B2.40	60°	Circ. and Axial	Tubesheet to lower head. S/G supports	78%
1-RC-E-11C Seam 1	6465-036	B2.40	0°	0°	Tubesheet to lower head. S/G supports	78%
1-RC-E-11C Seam 1	6465-028	B2.40	45°	Circ. and Axial	Tubesheet to lower head. S/G supports	78%
1-RC-E-11C Seam 1	6465-029	B2.40	60°	Circ. and Axial	Tubesheet to lower head. S/G supports	78%
1-RC-E-11D Seam 1	6465-020	B2.40	0°	0°	Tubesheet to lower head. S/G supports	78%
1-RC-E-11D Seam 1	6465-036	B2.40	45°	Circ. and Axial	Tubesheet to lower head. S/G supports	78%
1-RC-E-11D Seam 1	6465-021	B2.40	60°	Circ. and Axial	Tubesheet to lower head. S/G supports	78%

1. Data sheet number refers to data sheet containing limited scan.

Seabrook Nuclear Power Station Unit No. 1

Relief From Preservice Inspection Requirements

Relief Request: PR-4

Component Identification:

Class 1 Piping Welds and Safe End Welds

Code Class: 1 Examination Category: B-J and B-F

Code Requirement:

For Seabrook Unit No. 1, volumetric (ultrasonic) and surface examination of 100 percent of the length of each weld in the main coolant piping system shall be conducted in accordance with the ASME, B&PV Code 1977 Edition through the Summer 1978 Addendum, Subarticle IWB-2500.

Code Relief Request:

Pursuant to 10CFR50.55(a)(g)5(iii), relief is requested from performing the preservice volumetric examination of the inaccessible portions of the welds listed in Table 1 attached.

Basis for Request:

Geometric configuration, permanent obstructions, and structural interferences prohibit 100 percent volumetric exam coverage of the Code required examination volume. Relief is, therefore, requested from performing preservice examinations on the inaccessible portions of the volume required as noted in Table 1.

It should be noted that the Westinghouse developed-UT technology for cast stainless steel piping was utilized in performing all exams on the cast portions of the main coolant piping. This technique was developed as a best effort method of examining cast stainless steel, which is a generic problem encountered in Westinghouse plants of similar design. In doing so, the alternate examination provisions of ASME Section XI, Subsubarticle IWA-2240 and ASME Section XI, Paragraph T-110(c) were evoked.

A 0° longitudinal beam examination was conducted on all cast stainless steel welds to map ID geometry contours. This was done in addition to Section XI requirements to aid in the performance and evaluation of angle beam examination results.

Complete examinations which met the requirements of ASME Section XI were performed on welds of similar configuration using the same inspection techniques, equipment and procedures as those partially inspected or uninspected welds. Since the partially inspected or uninspected welds will see the same operating and environmental conditions as the inspected welds, a reasonable assurance of the structural integrity of the welds for which relief is requested has been attained.

Proposed Alternative Examinations:

A. The subject welds received both volumetric examination by radiography and surface examinations during fabrication in accordance with ASME Section III requirements. Having met these requirements, adequate assurance of the structural integrity of the subject welds is provided.

B. A preoperational cold hydrostatic test was conducted successfully on the Class 1 Pressure Boundary, of which these welds are a part thereof, per the requirements of ASME Section III.

C. In-service system leakage tests will be performed per Category B-P, IWB-2500-1 as well as surface and volumetric exams on the accessible portions of the welds shown on Table 1, as required by Section XI selection criteria. Any advances in UT technology will be evaluated to determine its application for achieving maximum volume coverage and results and applied where deemed appropriate by New Hampshire Yankee.

Table 1
Pipe Weld Scan Limitations
Table IWB-2500-1, Category B-J, B-F

Weld Identification	Data Sheet Number (1)	Code Item Number	Exam Angle (2)	Technique	Configuration/Limitation	CRV Coverage
REACTOR COOLANT MAIN	LOOP PIPING					
Loop-1						
1-RC-1-1-1	None	B9.11	65° RL	1/2 Vee Axial-1 Direction 1/2 Vee Circ.	Safe End-to-Pipe / Metallurgy (Safe End Side)	75%
1-RC-2-1-2	None	B9.11	40°RL	½ Vee Elbow Side Axial and Circ.	Elbow-to-Pipe/Structural Steel	95%
1-RC-2-1-5	None	B9.11	42°RL	½ Vee Elbow Side Axial and Circ.	Pipe-to-Elbow/Structural Steel	95%
1-RC-2-1-6	None	B9.11	41°RL	½ Vee Elbow Side Axial and Circ.	Elbow-to-Pump/Surface Indentation	99%
~~1-RC-3-1-1~~	~~None~~	~~B9.11~~	~~41°RL~~	~~½ Vee Pump Side Axial and Circ.~~	~~Pump-to-Pipe/Metallurgy~~	~~0%~~
1-RC-3-1-3	None	B9.11	40°RL	½ Vee Elbow Side Axial and Circ.	Elbow-to-Safe End/Surface Geometry (Elbow Side)	1%
1-RC-3-1-3	None	B9.11	----	None	Elbow-to-Safe End/Metallurgy (Safe End Side)	0%
Loop-2						
1-RC-4-1-1	None	B9.11	65° RL	½ Vee Axial-1 Direction ½ Vee Circ.	Safe End-to-Pipe/Metallurgy (Safe End Side)	75%
1-RC-5-1-2	None	B9.11	40°RL	½ Vee Elbow Side Axial and Circ.	Elbow-to-Pipe/Structural Steel	93%
1-RC-5-1-5	None	B9.11	40°RL	½ Vee Elbow Side Axial and Circ.	Pipe-to-Elbow/Structural Steel	95%
~~1-RC-6-1-1~~	~~None~~	~~B9.11~~	~~42°RL~~	~~½ Vee Pump Side Axial and Circ.~~	~~Pump-to-Pipe/Metallurgy~~	~~0%~~
1-RC-6-1-3	None	B9.11	40°RL	½ Vee Elbow Side Axial and Circ.	Elbow-to-Safe End/Surface Geometry (Elbow Side)	1%

Table 1
Pipe Weld Scan Limitations
Table IWB-2500-1, Category B-J, B-F

Weld Identification	Data Sheet Number	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
Loop 2 Cont.						
1-RC-6-1-3	None	B9.11	----	None	Elbow-to-Safe End/Metallurgy (Safe End Side)	0%
Loop 3						
1-RC-7-1-1	None	B9.11	65° RL	½ Vee Axial-1 Direction ½ Vee Circ.	Safe End-to-Pipe/Metallurgy (Safe End Side)	75%
1-RC-8-1-2	None	B9.11	41°RL	½ Vee Elbow Side Axial and Circ.	Elbow-to-Pipe/Structural Steel	94%
~~1-RC-9-1-1~~	~~None~~	~~B9.11~~	~~42°RL~~	~~½ Vee Pump Side Axial and Circ.~~	~~Pump-to-Pipe/Metallurgy~~	~~0%~~
1-RC-9-1-3	None	B9.11	40°RL	½ Vee Elbow Side Axial and Circ.	Elbow-to-Safe End/Surface Geometry (Elbow Side)	1%
1-RC-9-1-3	None	B9.11	----	None	Elbow-to-Safe End/Metallurgy (Safe End Side)	0%
Loop 4						
1-RC-10-1-1	None	B9.11	65°RL	½ Vee Axial-1 Direction ½ Vee Circ.	Safe End-to-Pipe/Metallurgy (Safe End Side)	75%
~~1-RC-12-1-1~~	~~None~~	~~B9.11~~	~~41°RL~~	~~½ Vee Pump Side Axial and Circ.~~	~~Pump-to-Pipe/Metallurgy~~	~~0%~~
1-RC-12-1-3	None	B9.11	40°RL	½ Vee Elbow Side Axial and Circ.	Elbow-to-Safe End/Surface Geometry (Elbow Side)	1%
1-RC-12-1-3	None	B9.11	----	None	Elbow-to-Safe End/Metallurgy (Safe End Side)	0%

Table 1
Pipe Weld Scan Limitations
Table IWB-2500-1, Category B-J, B-F

Weld Identification	Data Sheet Number	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
Branch Piping 1-SI-203-2-2	6462-229	B9.11	45°S	1½ Vee Axial 1½ Vee Circ.	Valve-to-Pipe/Permanent Obstruction	84%
1-RH-158-5-19	6462-203	B9.11	45°RL 45°S	½ Vee Axial ½ Vee Circ.	Pipe-to-Reducer/Metallurgy Surface Geometry	75%
1-RH-158-5-20	6462-203	B9.11	45°RL 45°S	½ Vee Axial ½ Vee Circ.	Pipt-to-Pipe/Metallurgy Surface Geometry	78%
1-RH-160-17-2	6462-340	B9.11	45°RL 45°S	½ Vee Axial ½ Vee Circ.	Pipe-to-Tee/Metallurgy Surface Geometry	50%
1-RC-48-2-2	6462-358	B9.11	45°RL 45°S	½ Vee Axial ½ Vee Circ.	Pipe-to-Tee/Metallurgy Surface Geometry	50%
1-RC-1-1-5B	6462-131 6462-132	B9.3 1	45°	Full Vee Axial only	12" Branch Connection/Limited by Weld 1-RC-1-1-2 and surface contour	33%
1-RC-3-1-5B	6462-137	B9.31	45°	Full Vee Axial only	10" Branch Connection / Limited by surface contour on Circ. scan	50%
1-RC-4-1-5B	6462-130	B9.31	45°	Full Vee Axial only	6" Branch Connection / Limited by surface contour on Circ. scan	50%
1-RC-6-1-3B	6462-132	B9.31	45°	Full Vee Axial only	10" Branch Connection / Limited by surface contour on Circ. scan	50%
1-RC-7-1-5B	6462-137	B9.31	45°	Full Vee Axial only	14" Branch Connection / Limited by surface contour on Circ. scan	50%

Table 1
Pipe Weld Scan Limitations
Table IWB-2500-1, Category B-J, B-F

Weld Identification	Data Sheet Number	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
1-RC-7-1-6B	6462-132	B9.31	45°	Full Vee Axial only	6" Branch Connection / Limited by surface contour on Circ. scan	50%
1-RC-9-1-4B	6462-125	B9.31	45°	Full Vee Axial only	10" Branch Connection / Limited by surface contour on Circ. scan	50%
1-RC-10-1-5B	6462-137	B9.31	45°	Full Vee Axial only	12" Branch Connection / Limited by surface contour on Circ. scan	50%
1-RC-12-1-4B	6462-130	B9.31	45°	Full Vee Axial only	10" Branch Connection / Limited by surface contour on Circ. scan	50%
Safe End Welds- Reactor Vessel						
1-SB-RV-301-121-D	None	B5.10	Composite	½Vee Axial and Circ.	Nozzle-to-Safe End/ID Geometry	97%
Safe End Welds-Steam Generator						
1-RC-1-1-3	6463-120	B5.30	45°	½ Vee Axial only One Direction	Nozzle-to-Elbow/Surface Geometry (Nozzle Side) (Carbon Steel Only)	25%
1-RC-2-1-1	6463-129	B5.30	45°	½ Vee Axial only One Direction	Nozzle-to-Elbow/Surface Geometry (Nozzle Side) (Carbon Steel only)	25%
1-RC-4-1-3	6463-125	B5.30	45°	½ Vee Axial Only	Nozzle-to-Elbow/Surface Geometry (Nozzle Side) (Carbon Steel only)	25%

Table 1
Pipe Weld Scan Limitations
Table IWB-2500-1, Categoty B-J, B-F

Weld Identification	Data Sheet Number	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
1-RC-5-1-1	6463-124	B5.30	45°	½ Vee Axial Only One Direction	Nozzle-to-Elbow/Surface Geometry (Nozzle Side Carbon Steel Only)	25%
1-RC-7-1-3	6463-124	B5.30	45°	½ Vee Axial Only One Direction	Nozzle-to-Elbow/Surface Geometry (Nozzle Side Carbon Steel Only)	25%
1-RC-8-1 [1]	6463-81	B5.30	45°	½ Vee Axial Only One Direction	Nozzle-to-Elbow/Surface Geometry	25%
1-RC-10-1-3	6463-127	B5.30	45°	½ Vee Axial Only One Direction	Nozzle-to-Elbow/Surface Geometry	25%
1-RC-11-1 [1]	6463-56	B5.30	45°	½ Vee Axial Only One Direction	Nozzle-to-Elbow/Surface Geometry	25%

1. Data sheet number, where given, refers to data sheet containing incomplete scan.
2. S = Shear
   RL = Refracted Longitudinal

Seabrook Nuclear Power Station Unit No. 1

Relief From Preservice Inspection Requirements

Relief Request: PR-5

Component Identification:

Pump and Valve Internal Pressure Boundary Surfaces

Code Class: 1 Examination Category: B-L-2 and B-M-2

Code Requirement:

For Seabrook Unit No. 1, a visual examination (VT-3) of the internal surfaces shall be conducted for the following items in accordance with ASME B&PV Code, 1977 Edition through the Summer 1978 Addendum.

Item	Description
B12.40	Valve bodies exceeding 4" NPS
B12.20	Pump casings

Note: Examinations are limited to:

A. One valve within each group of valves that are of the same design, manufacturing method, and are performing similar functions in the system.

B. One pump per group performing similar functions.

Code Relief Request:

Pursuant to 10CFR50-55(a)(g)5(iii), relief is requested from performing a preservice visual examination (VT-3).

Support for Relief/Alternate Examinations:

For the reactor coolant pump casings and 33 valve bodies (see Table 1 attached) in the reactor coolant, pressurizer, safety injection, and residual heat removal systems, relief is requested from disassembly of an operable valve or pump for the performing a preservice visual examination (VT-3).

The requirement to disassemble an operable valve or pump for the sole purpose of performing a visual examination (VT-3) of the internal pressure retaining boundary is impractical and not commensurate to the increased assurance of safety achieved by this inspection. Class 1 valves and pumps are installed in their respective systems and all active valves completed functional testing in accordance with ASME Section XI, Article IWV. To disassemble these items would provide a very small potential for increasing plant safety margins with a disproportionate impact on expenditures of plant manpower and resources.

The manufacturer's test data will be used in lieu of a preservice visual examination (VT-3). This includes documentation of examinations performed during fabrication and installation of the subject valves. The examinations performed may include volumetric, surface, and visual examinations, as required by ASME Section II, Material Specifications for Ferrous and Nonferrous Materials, and ASME Section III, Construction and Installation Requirements.

Class 1 valves and pumps are subjected to numerous types of nondestructive testing and a rigorous quality assurance program during all stages of fabrication, storage, and installation. These valves and pumps have been found acceptable by the manufacturer, the ASME Authorized Nuclear Inspector, and New Hampshire Yankee's Quality Assurance. During maintenance of Class 1 pumps, a visual examination (VT-3) will be performed during in-service.

Table 1

Class 1 Pumps and Valves
Subject to Internals Visuals per
IWB-2500-1 Cat. B-L-2, B-M-2

Group*	Valve I.D.	System	Description	Manufacturer
1.	1-RC-V22	Reactor Coolant	12" Gate	Westinghouse
	1-RC-V23	Reactor Coolant	12" Gate	Westinghouse
	1-RC-V87	Reactor Coolant	12" Gate	Westinghouse
	1-RC-V88	Reactor Coolant	12" Gate	Westinghouse
2.	1-RC-V115	Reactor Coolant	6" Relief	Crosby
	1-RC-V116	Reactor Coolant	6" Relief	Crosby
	1-RC-V117	Reactor Coolant	6" Relief	Crosby
3.	1-RH-V15	Residual Heat Removal	6" Check	Westinghouse
	1-RH-V29	Residual Heat Removal	6" Check	Westinghouse
	1-RH-V30	Residual Heat Removal	6" Check	Westinghouse
	1-RH-V31	Residual Heat Removal	6" Check	Westinghouse
	1-RH-V52	Residual Heat Removal	6" Check	Westinghouse
	1-RH-V53	Residual Heat Removal	6" Check	Westinghouse
	1-RH-V50	Residual Heat Removal	8" Check	Westinghouse
	1-RH-V51	Residual Heat Removal	8" Check	Westinghouse
4.	1-RH-V59	Residual Heat Removal	6" Gate Valve	Westinghouse
	1-RH-V61	Residual Heat Removal	6" Gate Valve	Westinghouse
	1-RH-V63	Residual Heat Removal	6" Gate Valve	Westinghouse
	1-RH-V65	Residual Heat Removal	6" Gate Valve	Westinghouse
5.	1-SI-V3	Safety Injection	10" Gate Valve	Westinghouse
	1-SI-V17	Safety Injection	10" Gate Valve	Westinghouse
	1-SI-V32	Safety Injection	10" Gate Valve	Westinghouse
	1-SI-V47	Safety Injection	10" Gate Valve	Westinghouse
6.	1-SI-V5	Safety Injection	10" Check Valve	Westinghouse
	1-SI-V6	Safety Injection	10" Check Valve	Westinghouse
	1-SI-V20	Safety Injection	10" Check Valve	Westinghouse
	1-SI-V21	Safety Injection	10" Check Valve	Westinghouse
	1-SI-V35	Safety Injection	10" Check Valve	Westinghouse
	1-SI-V36	Safety Injection	10" Check Valve	Westinghouse
	1-SI-V50	Safety Injection	10" Check Valve	Westinghouse
	1-SI-V51	Safety Injection	10" Check Valve	Westinghouse
	1-SI-V82	Safety Injection	6" Check Valve	Westinghouse
	1-SI-V87	Safety Injection	6" Check Valve	Westinghouse

Group*	Pump I.D.	System	Description	Manufacturer
1.	1-RC-P-1A	Reactor Coolant	31"x27.5" Centrifugal Pump	Westinghouse
	1-RC-P-1B	Reactor Coolant	31"x27.5" Centrifugal Pump	Westinghouse
	1-RC-P-1C	Reactor Coolant	31"x27.5" Centrifugal Pump	Westinghouse
	1-RC-P-1D	Reactor Coolant	31"x27.5" Centrifugal Pump	Westinghouse

*Examinations required are limited to one (1) pump or valve in each group.

Seabrook Nuclear Power Station Unit No. 1

Relief From Preservice Inspection Requirements

Relief Request: PR-6

Component Identification:

Steam Generator, Residual Heat Removal and Excess Letdown Heat Exchanger Welds

Code Class: 2 Examination Category: C-A and C-B

Code Requirement:

For Seabrook Unit No. 1, a volumetric (ultrasonic) examination of 100 percent of the weld length and 100% of the nozzle inner radius areas shall be conducted for the following items in accordance with ASME B&PV Code, 1977 Edition through the Summer 1978 Addendum, Subarticle IWC-2500:

Item	Description
C-1.10	Shell circumferential welds
C-1.20	Head circumferential welds
C-1.30	Tubesheet-to-Shell weld
C-2.20	Nozzle to shell welds

Code Relief Request:

Purusant to 10CFR50.55(a)(g)5(iii), relief is requested from performing the preservice volumetric examination of the inaccessible portion of the subject vessel welds.

Basis for Relief:

Geometric configuration and permanent obstructions prohibit the performance of a 100 percent volumetric examination of each of the subject welds. The PSI limitations and the specific relief, as they apply to each weld, are noted in the attached table for each component.

Support for Relief/Alternate Examinations:

A. The subject welds received both volumetric examination by radiography and surface examinations during fabrication in accordance with ASME Section III requirements which provide adequate assurance of the structural integrity of the welds.

B. A construction hydrostatic test was conducted successfully on the Class 1 pressure boundary, of which these welds are a part thereof, in accordance with the requiremetns of ASME Section III.

C. In-service system leakage tests will be performed per Category C-H Table IWC-2500-1 each refueling outage.

Table 1
Steam Generator Limitations

Weld Identification	Data Sheet Number (1)	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
1-RC-E-11A Seam 8	6465-005	C1.20	0°	0°	Upper shell to head. 4 plates	98%
1-RC-E-11A Seam 8	6465-011	C1.20	45°	Circ. and Axial	Upper shell to head. 4 plates	98%
1-RC-E-11A Seam 8	6465-004	C1.20	60°	Circ. and Axial	Upper shell to head. 4 plates and surface contour.	80%
1-RC-E-11A Seam 6	6465-006	C1.10	0°	0°	Shell to transition. 2 plates and 4 instrumentation lines	96%
1-RC-E-11A Seam 6	6465-002	C1.10	45°	Circ. and Axial	Shell to transition. 2 plated and 4 instrumentation lines	96%
1-RC-E-11A Seam 6	6465-003	C1.10	60°	Circ. and Axial	Shell to transition. 2 plates and 4 instrumentation lines, also surface contour of weld	82%
1-RC-E-11A Seam 5	6465-012	C1.10	60°	Circ. and Axial	Transition to shell. Surface contour.	80%
1-RC-E-11A Seam 3	6465-010	C1.10	0°	0°	Shell to stub barrel. Surface gouge.	99%
1-RC-E-11A Seam 3	6465-009	C1.10	45°	Circ. and Axial	Shell to stub barrel. Surface gouge.	99%
1-RC-E-11A Seam 3	6465-013	C1.10	60°	Circ. and Axial	Shell to stub barrel. Surface gouge.	91%
1-RC-E-11A Seam 2	6465-014	C1.30	45°	Axial	Stub barrel to tubesheet. Tube-sheet flange, and hand way.	86%
1-RC-E-11A Seam 2	6465-015	C1.30	60°	Axial	Stub barrel to tubesheet. Tube-sheet flange and handway.	80%
1-RC-E-11A-16IR	None	C2.20	None	None	Steam outlet nozzle inner radius/ID geometry	0%
1-RC-E-11B-16IR	None	C2.20	None	None	Steam outlet nozzle inner radius/ID geometry	0%
1-RC-E-11C-16IR	None	C2.20	None	None	Steam outlet nozzle inner radius/ID geometry	0%
1-RC-E-11D-16IR	None	C2.20	None	None	Steam outlet nozzle inner radius/ID geometry	0%

Table 1
Steam Generator Limitations

Weld Identification	Data Sheet Number (1)	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
1-RC-E-11B Seam 6	6465-040	C1.10	0°	0°	Transition to shell. 6 pads	95%
1-RC-E-11B Seam 6	6465-~~033~~ 039	C1.10	45°	Axial	Transition to shell. 6 pads	95%
1-RC-E-11B Seam 6	6465-~~032~~ 041	C1.10	60°	Axial	Transition to shell. 6 pads	95%
1-RC-E-11B Seam 5	6465-~~040~~ 031	C1.10	0°	0°	Shell to transition. Surface Contour.	72%
1-RC-E-11B Seam 5	6465-030	C1.10	45°	Circ. and Axial	Shell to transition. Surface contour.	75%
1-RC-E-11B Seam 5	6465-032	C1.10	60°	Circ. and Axial	Shell to transition. Surface contour.	79%
1-RC-E-11B Seam 3	6465-031	C1.10	0°	0°	Shell to stub barrel. Surface contour.	71%
1-RC-E-11B Seam 3	6465-033	C1.10	45°	Circ. and Axial	Shell to stub barrel. Surface contour.	79%
1-RC-E-11B Seam 3	64650-032	C1.10	60°	Circ. and Axial	Shell to stub barrel. Surface contour.	80%
1-RC-E-11B-11NZ	6465-037	C2.20	0°	0°	Nozzle to shell. Nozzel and surface contour.	99%
1-RC-E-11B-11NZ	6465-038	C2.20	45°	Circ. and Axial	Nozzle to shell. Nozzle and curface contour.	89%
1-RC-E-11B-11NZ	6465-039	C2.20	60°	Circ. and Axial	Nozzle to shell. Nozzle and surface contour.	84%
1-RC-E-11C Seam 6	6465-040	C1.10	0°	0°	Transition to shell. 6 pads	95%
1-RC-E-11C Seam 6	6465-039	C1.10	45°	Axial	Transition to shell. 6 pads	95%
1-RC-E-11C Seam 6	6465-041	C1.10	60°	Axial	Transition to shell. 6 pads	95%
1-RC-E-11C Seam 5	6465-031	C1.10	0°	0°	Shell to transition. Surface contour.	77%

Table 1

Steam Generator Limitations

Weld Identification	Data Sheet Number (1)	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
1-RC-E-11C Seam 5	6465-~~031~~ 030	C1.10	45°	Circ. and Axial	Shell to transition. Surface contour.	78%
1-RC-E-11C Seam 5	6465-032	C1.10	60°	Circ. and Axial	Shell to transition. Surface contour.	78%
1-RC-E-11C -11-IR	6467-8	C2.20	70°	Skew (inner radius)	Nozzle to shell. Surface contour	0%
1-RC-E-11D Seam 6	6465-017	C1.10	0°	0°	Transition to shell. Surface contour and 6 pads.	88%
1-RC-E-11D Seam 6	6465-019	C1.10	45°	Circ. and Axial	Transition to shell. Surface contour and 6 pads.	91%
1-RC-E-11D Seam 6	6465-018	C1.10	60°	Circ. and Axial	Transition to shell. Surface contour and 6 pads.	92%
1-RC-E-11D Seam 5	6465-017	C1.10	0°	0°	Shell to transition. Surface contour for a 5" square area and weld contour.	85%
1-RC-E-11D Seam 5	6465-022	C1.10	45°	Circ. and Axial	Shell to transition. Surface contour for a 5" square area and weld contour.	83%
1-RC-E-11D Seam 5	6465-018	C1.10	60°	Circ. and Axial	Shell to transition. Surface contour for a 5" square area and weld contour.	79%
1-RC-E-11D 16NZ	6465-020	C2.20	0°	0°	Nozzle to shell. Nozzle and and surface contour.	57%
1-RC-E-11D 16NZ	6465-036	C2.20	45°	Circ. and Axial	Nozzle to shell. Nozzle and and surface contour.	57%
1-RC-E-11D 16NZ	6465-021	C2.20	60°	Circ. and Axial	Nozzle to shell. Nozzle and surface contour.	57%

1. Data sheet number refers to data sheet containing imcomplete scan.

Table 2
Excess Letdown HX and Regenerative HX Limitations

Weld Identification	Data Sheet Number (1)	Code Item Number	Exam Angle	Technique	Configuration/Limitation	CRV Coverage
1-CS-E-3C	6487-4	C1.20	45°	1 ½ Vee Axial 1 ½ Vee Circ.	Permanent Head-to-Flange/Obstruct'on Surface Geometry	46.4%
1-REG-4A	6487-7	C1.10	45°	½ Vee Axial and Circ.	Shell-to-Bonnet/Permanent Channel Obstruction	70.4%
1-REG-4B	6487-7	C1.10	45°	½ Vee Axial and Circ.	Shell-to-Bonnet/Permanent Channel Obstruction	70.4%

1. Data sheet number refers to data sheet containing incomplete scan.

Seabrook Nuclear Power Station Unit No. 1

Relief From Preservice Inspection Requirements

Relief Request: PR-7

Component Identification:

RHR Heat Exchanger Nozzles

Code Class: 2 Examination Category: C-B

Code Item No.: C2.20

Code Requirement:

For Seabrook Unit No. 1, volumetric and surface examinations of the nozzle-to-shell welds (C2.20) for the residual heat removal heat exchangers shall be conducted in accordance with ASME B&PV Code, 1977 Edition through the Summer 1978 Addendum, Subarticle IWC-2500.

Code Relief Request:

Pursuant to 10CFR50.55(a)(g)5(iii), relief is requested from performing the preservice ultrasonic examination of the nozzle to vessel welds on the tube side waterbox of the RHR Heat exchangers.

Reason for Relief:

* REVISED PAR.

* Table IWC-2500-1, Category C-B, requires a volumetric examination of nozzle welds in vessels whose thickness exceeds 1/2" nominal. In the case of the Seabrook RHR Heat Exchangers, the weld geometry for the inlet and outlet nozzles do not have a configuration (Figure 1) which can be examined with ultrasonic techniques. The Pre-Service volumetric requirements will be fulfilled by the construction radiography.

Ultrasonic examination techniques will be developed, such that maximum coverage will be achieved at the first refueling outage.

Proposed Alternate Examinations:

1. Since the weld thickness is < 1/2" nominal, PSI examinations were performed in accordance with the requirements of Code Item Number C2.10 and Examination Requirements Figure IWC-2520-3 for nozzles in vessels 1/2" or less in nominal thickness.

2. The subject welds received both volumetric examination by radiography and surface examination during fabrication in accordance with the requirements of ASME Section III which provides adequate assurance of the structural integrity of the welds.

3. A preservice hydrostatic test was successfully conducted on the Class 2 portion of the heat exchanger, which includes the nozzle-to-shell welds, in accordance with ASME Section III.

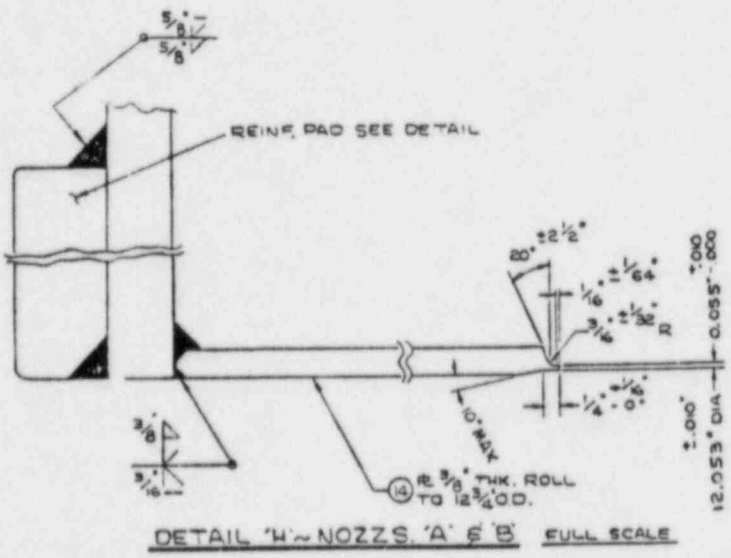
4. Regular system pressure tests will be performed inservice in accordance with the requirements of Table IWC-2500-1, Category C-B.

* 5. At the first refueling outage, the welds will be ultrasonically examined from the nozzle side using techniques developed on the Unit 2 heat exchangers.

*ADDED NOTE:

Seabrook Station Unit 1

Figure 1



DETAIL 'H' ~ NOZZS. 'A' & 'B' FULL SCALE

RHR Nozzle-to-Shell Welds, 2 Heat Exchangers
two nozzles each.

Seabrook Nuclear Power Station Unit No. 1

Relief From Preservice Inspection Requirements

Relief Request: PR-9

Component Identification:

Class 2 Piping Welds

Code Class: 2 Examination Category: C-F

Code Requirement:

For Seabrook Unit No. 1, volumetric (ultrasonic) and surface examinations of 100 percent of the length of each weld requiring examination shall be conducted in accordance with the ASME B&PV Code, Section XI, 1977 Edition through the Summer 1978 Addendum.

Code Relief Request:

Purusant to 10CFR50.55(a)(g)5(iii), relief is requested from performing the preservice volumetric and/or surface examinations on the inaccessible portions of the welds listed in Table 1 (attached).

Basis for Relief:

Geometric configuration, permanent obstructions and/or structural interferences, prohibit 100 percent examination coverage of the Code required volume. Relief, is, therefore, requested from performing preservice examinations on the inaccessible portions of certain circumferential welds as noted in Table 1 (attached).

Proposed Alternative Examinations:

A. The subject welds received volumetric examination by radiography during fabrication in accordance with ASME Section III requirements. Having met these requirements, adequate assurance of the structural integrity of the subject welds is provided.

B. A Section III hydrostatic test was conducted successfully on the Class 2 Pressure Boundary, of which these welds are a part thereof.

C. In-service system leakage tests will be performed per Category C-H, Table IWC-2500-1 as well as surface and volumetric exams on the accessible portions of the welds shown on Table 1, as required by Section XI selection criteria. Any advances in UT technology will be evaluated to determine its application for achieving maximum volume coverage and results and applied where deemed appropriate by New Hampshire Yankee.

Table 1
Pipe Weld Scan Limitations
Table IWC-2500-1 Category C-F

Weld Identification	Data Sheet Number(1)	Code Item Number	Exam Angle(2)	Technique	Configuration/Limitation	CRV Coverage
1-RH-158-4-2	6462-294	C5.21	45°RL 45°S	½ Vee Axial ½Vee Circ.	Pipe-to-Flange/Metallurgy Surface Geometry	50%
1-MS-4002-36-~~61B~~ LU-7	6463-067	C5.22	45°S	1½ Vee Axial ½ Vee Circ.	Pipe Longitudinal Weld Seam / Surface Contour	99.6%
MS-4000-41-4B	6463-038	C5.31	45°S	Full Vee Axial ½ Vee Circ.	6" Branch Connection/Permanent Obstruction	70%
MS-4000-41-13B	6463-038	C5.31	45°S	Full Vee Axial ½ Vee Circ.	6" Branch Connection/Permanent Obstructions	59%
MS-4001-41-4B	6463-038	C5.31	45°S	Full Vee Axial ½Vee Circ.	6" Branch Connection/Permanent Obstruction	70%
MS-4003-37-3B	6463-038	C5.31	45°S	Full Vee Axial ½ Vee Circ.	6"Branch Connection/Permanent Obstruction	95%
MS-4001-41-3B	6463-038	C5.31	45°S	Full Vee Axial ½Vee Circ.	6" Branch Connection/ Permanent Obstruction	65%

Table 1
Pipe Weld Scan Limitations
Table IWC-2500-1 Category C-F

Weld Identification	Data Sheet Number(1)	Code Item Number	Exam Angle(2)	Technique	Configuration/Limitation	CRV Coverage
MS-4002-37-3B	6463-038	C5.31	45°S	Full Vee Axial ½ Vee Circ.	6" Branch Connection / Permanent Obstruction	95%
MS-4001-41-13B	6463-038	C 5.31	45°S	Full Vee Axial 1 Vee Circ.	6" Branch Connection / Permanent Obstruction	70%

(1) Data sheet number, where given, refers to data sheet containing incomplete scan.

(2) S = Shear Wave

RL= Refracted Longitudinal Wave