



**North  
Atlantic**

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The Northeast Utilities System

August 31, 2000

Docket No. 50-443

NYN-00072

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

Seabrook Station

"Submittal of the 2nd Ten-Year Interval Inservice Inspection  
Program Plan and Associated Relief Requests"

North Atlantic Energy Service Corporation (North Atlantic) has enclosed herein for your review, the Second Ten-Year Interval Inservice Inspection (ISI) Program Plan. The Second Ten-Year Interval ISI program plan was developed to meet the requirements of the 1995 Edition (through the 1996 Addenda) of Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code. The ISI program plan was revised in order to meet the requirements specified in 10 CFR 50.55a(g)(5)(i). Included within the Second Ten-Year Interval ISI program plan are 7 relief requests (2IR-1, 2IR-1, 2IR-4, 2IR-6, 2IR-10, 2IR-11, and 2IR-12) which require Nuclear Regulatory Commission (NRC) review and approval. These relief requests are located in Appendix F of Enclosure 1. North Atlantic requests review and approval of the subject relief requests by February 28, 2001.

It should be noted that North Atlantic previously forwarded 4 Alternative Requests that also pertain to ISI program activities for the 2<sup>nd</sup> Ten-Year Interval ISI program. Alternative Requests 00-01 and 00-02 were submitted by letter (NYN-00014) dated March 6, 2000. Alternative Request 00-01 proposed to utilize the 1995 Edition (including the 1996 Addenda) of Section XI of the ASME Boiler and Pressure Vessel Code in lieu of the 1989 Edition for ISI activities. Alternative Request 00-02 proposed to delay the implementation of certain aspects of the 2<sup>nd</sup> Ten-Year Interval. North Atlantic also forwarded Alternative Requests 2AR-01 and 2AR-02 by a separate letter (NYN-00036) dated May 19, 2000. These requests proposed alternative requirements for the visual inspection requirements for Class 1 and 2 bolted connections in systems borated for the purpose of controlling reactivity.

Enclosure 2 contains copies of the relevant ISI program drawings to facilitate the NRC review of the relief requests identified in Appendix F of Enclosure 1.

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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.

A handwritten signature in dark ink, appearing to read "Ted Feigenbaum", is written over a horizontal line.

Ted C. Feigenbaum  
Executive Vice President  
and Chief Nuclear Officer

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 1 to NYN-00072**

**North Atlantic Energy Service Corporation  
Seabrook Station  
Unit 1**

**INSERVICE INSPECTION PROGRAM  
SECOND TEN-YEAR INTERVAL**

**Revision 0**

**INSERVICE INSPECTION PROGRAM PLAN  
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## RECORD OF REVISIONS

Rev. No.	Date	Affected Pages	Description

## ACRONYMS AND ABBREVIATIONS

**Listed below are the acronyms and abbreviations utilized in this document:**

ANII	Authorized Nuclear Inservice Inspector
ASME	American Society of Mechanical Engineers
B&PV	Boiler and Pressure Vessel Code
BC	Branch Connection
CFR	Code of Federal Regulations
GL	Generic Letter (NRC)
IEB	Inspection and Enforcement Bulletin (NRC)
IEN	Inspection and Enforcement Notice (NRC)
ISI	Inservice Inspection
MT	Magnetic Particle Testing (Examination)
NAESCo	North Atlantic Energy Service Corporation
N/A	Not Applicable
NDE	Nondestructive Examination
NPS	Nominal Pipe Size
NRC	Nuclear Regulatory Commission
NSSS	Nuclear Steam Supply System
NWT	Nominal Wall Thickness
OD	Outside Diameter
P&ID	Piping and Instrumentation Diagram
PT	Liquid Penetrant Testing (Examination)
QA	Quality Assurance
RG	Regulatory Guide (NRC)
RPV	Reactor Pressure Vessel
SD	Structural Discontinuity
SRP	Standard Review Plan (NRC)
TE	Terminal End
TS	Technical Specification
TRM	Technical Requirements Manual
UFSAR	Updated Final Safety Analysis Report
UT	Ultrasonic Testing (Examination)
VT	Visual Testing (Examination Methods VT-1, VT-2, and VT-3)

Note: For system, component, and component support designations, see Appendix A.

## GLOSSARY

**ASME Section XI** - the eleventh section of the ASME Boiler and Pressure Vessel Code including its referenced codes and standards

**Authorized Inspection Agency** - an organization that is empowered by an enforcement authority to provide inspection personnel and services as required by ASME Section XI

**Authorized Nuclear Inservice Inspector (ANII)** - a person who is employed and has been qualified by an Authorized Inspection Agency to verify that examinations, tests, and repair/replacement activities (that do not include welding or brazing) are performed in accordance with the requirements of ASME Section XI

**Component** - an item in a nuclear power plant such as a vessel, pump, valve, or piping system

**Component Standard Support** - a support consisting of one or more generally mass-produced units usually referred to as catalog items

**Component Support** - a metal support designed to transmit loads from a component to the load-carrying building or foundation structure. Component supports include piping supports and encompass those structural elements relied upon to either support the weight or provide structural stability to components.

**Constant Load Type Support** - spring type support that produces a relatively constant supporting force throughout a specified deflection

**Core Support Structures** - those structures or parts of structures that are designed to provide direct support or restraint of the core (fuel and blanket assemblies) within the reactor pressure vessel

**Defect** - a flaw (imperfection or unintentional discontinuity) of such size, shape, orientation, location, or properties as to be rejectable

**Discontinuity** - a lack of continuity or cohesion; an interruption in the normal physical structure of material or a product

**Dissimilar Metal Weld** - a weld between (a) carbon or low alloy steels to high alloy steels, (b) carbon or low alloy steels to high nickel alloys, or (c) high alloy steels to high nickel alloys

**Enforcement Authority** - a regional or local governing body, such as a State or Municipality of the United States empowered to enact and enforce Boiler and Pressure Vessel Code legislation (e.g. State of New Hampshire)

## GLOSSARY (Cont.)

**Engineering Evaluation** - an evaluation of indications that exceed allowable acceptance standards to determine if the margins required by the Design Specifications and Construction Code are maintained

**Evaluation** - the process of determining the significance of examination or test results, including the comparison of examination or test results with applicable acceptance criteria or previous results

**Examination Category** - a grouping of items to be examined or tested

**Flaw** - an imperfection or unintentional discontinuity that is detectable by nondestructive examination

**Hanger** - an item that carries the weight of components or piping from above with the supporting members being mainly in tension

**Imperfection** - a condition of being imperfect; a departure of a quality characteristic from its intended condition

**Indication** - the response or evidence from the application of a nondestructive examination

**Inservice Examination** - the process of visual, surface, or volumetric examination performed in accordance with the rules and requirements of ASME Section XI

**Inservice Inspection** - methods and actions for assuring the structural and pressure retaining integrity of safety related nuclear power plant components in accordance with the rules of ASME Section XI

**Inspection** - verification of the performance of examinations and tests by an Inspector

**Inspection Interval** - the 10 years following placement of the power unit into initial commercial service and each subsequent 10 years thereafter (See Tables IWB, C, & D-2412-1)

**Inspection Period** - a duration of time within an inspection interval, i.e., 1<sup>st</sup> Period 0-3 years; 2<sup>nd</sup> Period 4-7 years; 3<sup>rd</sup> Period 8-10 years (See Tables IWB, C, & D-2412-1)

**Inspection Program** - the plan and schedule for performing examinations or tests

**Item** - a material, part, appurtenance, piping subassembly, component, or component support

## GLOSSARY (Cont.)

**Nondestructive Examination** - an examination by the visual, surface, or volumetric method

**Open Ended** - a condition of piping or lines that permits free discharge to atmospheric or containment atmosphere

**Owner** - the organization legally responsible for the construction and/or operation of a nuclear facility including but not limited to one who has applied for, or who has been granted, a construction permit or operating license by the regulatory authority having lawful jurisdiction (i.e., NAESECo)

**Regulatory Authority** - a federal government agency, such as the United States Nuclear Regulatory Commission, that is empowered to issue and enforce regulations affecting the design, construction, and operation of nuclear power plants

**Relevant Condition** - a condition observed during a visual examination that requires supplemental examination, corrective measure, correction by repair/replacement activities, or analytical evaluation

**Structural Discontinuities** - pipe weld joints to vessel nozzles, valve bodies, pump casings, pipe fittings (such as elbows, tees, reducers, flanges, etc., conforming to ANSI B16.9), and pipe branch connections and fittings (See Note 3 in Examination Category C-F-1 and C-F-2)

**Support** - (1) an item used to position components, resist gravity, resist dynamic loading, or maintain equilibrium of components; (2) an item that carries the weight of a component or piping from below with the supporting members being mainly in compression

**Support Part** - a part or subassembly of a component support or piping support

**Terminal Ends** - the extremities of piping runs that connect to structures, components, or pipe anchors, each of which acts as a rigid restraint or provides at least 2 degrees of restraint to piping thermal expansion

**Variable Spring Type Support** - a spring type support providing a variable supporting force throughout a specified deflection

**Verify** - to determine that a particular action has been performed in accordance with the rules and requirements of Section XI either by witnessing the action or by reviewing records

Reference: ASME Section XI, IWA-9000, 1995 Edition with 1996 Addenda

## ABSTRACT

This document establishes the Inservice Inspection Program Criteria, Plan, and Schedule for the second ten-year inspection interval for component welds, supports, bolting, pump casings, valve bodies, and reactor vessel internals for Seabrook Station, Unit 1.

The program identifies the Class 1, 2, and 3 systems, components, and items subject to examination, as set forth in the 1995 Edition with the 1996 Addenda of Section XI of the ASME Boiler and Pressure Vessel Code, within the limitations and modifications required by the Code of Federal Regulations in 10 CFR 50.55a(b)(2). Program appendices identify each of the inspection items selected for examination as required by Section XI, by code classification, examination category, examination method, and scheduled inspection period.

Where an examination required by Section XI has been determined to be impractical, the basis for this determination has been documented and approved by the NRC as a request for relief as permitted by 10 CFR 50.55a(a)(3)(i),(ii), and 10 CFR 50.55a(g)(5)(iii), (iv), and (6)(i), and are identified in Appendix F.

Additional augmented examinations have also been included as required or recommended by regulatory publications. These are discussed within the program.

## **1.0 INTRODUCTION**

### **1.1 General**

This document establishes the Inservice Inspection Program Criteria, Plan, and Schedule for the second 10-year inspection interval for component welds, supports, bolting, pump casings, valve bodies, and reactor vessel internals for Seabrook Station, Unit 1.

The Class 1, 2, and 3 systems, components, and items have been identified subject to examination, as set forth in the 1995 Edition with the 1996 Addenda of Section XI of the ASME Boiler and Pressure Vessel Code, within the limitations and modifications required by the Code of Federal Regulations in 10 CFR 50.55a(b)(2). Appendices B, C, and D identify the inspection items that have been selected for examination as required by Section XI. The Appendices identify, as applicable, code classification, examination category, examination item number, and scheduled inspection period.

Where an examination required by Section XI has been determined to be impractical, the basis for this determination has been documented and approved by the NRC as a request for relief as permitted in 10 CFR 50.55a(a)(3)(i), (ii) and 10 CFR 50.55a(g)(5)(iii), (iv), and (6)(i), and are identified in Appendix F.

Additional augmented examinations have also been included as required or recommended by regulatory and or NSSS technical publications. These are identified in Paragraph 1.9 and discussed in Appendix E.

### **1.2 Responsibilities**

North Atlantic Energy Service Corporation (NAESCo), as Owner, has overall responsibility for the conduct of the Inservice Inspection Program to assure compliance with the ASME Section XI Code, including IWA-1400, entitled "Owner's Responsibilities." The Director of Engineering has the responsibility for the Inservice Inspection Program, including preparation, revisions, implementation, scheduling, examinations, repairs, and replacements. The Director of Engineering also has the responsibility for the preparation, issuance, and revision of the nondestructive examination (NDE) procedures and is further responsible for personnel qualification and certifications for this program.

## 1.0 INTRODUCTION (Cont.)

### 1.3 Program Scope, Exceptions, and Exclusions

The scope of this program is limited to that portion of the Inservice Inspection Program which only addresses Class 1, 2, and 3 components, including all associated areas and surfaces as required by ASME Section XI and the augmented requirements specified in Paragraph 1.9. Specifically, the inspection items include component welds, supports, bolting, pump casings, valve bodies, and reactor vessel internals. Exceptions taken to the ASME Section XI requirements have been documented and approved by the NRC as a request for relief and included in Appendix F. The systems and components within the program and their boundaries are identified in Tables 1, 2, and 3. The following are specifically excluded from the scope of this program:

- Snubber Program
- Pump and Valve Test Program
- Repair and Replacement Program
- Containment Examination Program
- Containment Pressure Test Program

### 1.4 Component Classifications and Boundaries

Systems and components have been classified for inservice inspection using the guidance of 10 CFR 50.2, (Quality Group A), for Class 1 and Regulatory Guide 1.26, Rev. 3, (Quality Group B and C), for Class 2 and 3. Specific code classification boundaries are depicted on the isometric drawings noted in Table 2. A listing of the program systems by code classification that are subject to inspection are provided in Table 1.

### 1.5 Technical Specification Commitments

The Technical Specification commitments for the scope of this program are addressed in the following sections:

<u>Section</u>	<u>Subject</u>
4.0.5	Surveillance Requirements for Inservice Inspection
6.7	Procedures and Programs
6.9	Record Retention

## **1.0 INTRODUCTION (Cont.)**

### **1.6 Updated Final Safety Analysis Report (UFSAR) Commitments**

The UFSAR commitments for the scope of this program are addressed in the following sections:

<b><u>Section</u></b>	<b><u>Subject</u></b>
5.2.4	Inservice Inspection of the Reactor Coolant Pressure Boundary
6.6	Inservice Inspection of Class 2 and 3 Components
6.6.8	Augmented Inservice Inspection Requirements
13.5	Plant Procedures
13.5.1.3.n	Plant Records Management
13.5.1.3.x	Control of Special Processes
17.2.2.4	Commitments - NRC Regulatory Guides (RG)  RG 1.8 Personnel Selection and Training (ANS 3.1-1978)  RG 1.26 Quality Group Classification (Rev. 3)  RG 1.37 Cleaning of Fluid Systems and Components (ANSI N45.2.1-1973)  RG 1.58 Qualification of Personnel (ANSI N45.2.6-1978)  RG 1.88 Records (ANSI N45.2.9-1974)  RG 1.123 Procurement of Items and Services (ANSI N45.2.13-1976)
17.2.9	Control of Special Processes
17.2.9.2	Personnel Qualification (Special Processes)
17.2.9.3	Process Performance
17.2.10.1	Personnel Certification (SNT-TC-1A)

## **1.0 INTRODUCTION (Cont.)**

### **1.6 Updated Final Safety Analysis Report Commitments (Cont.)**

<u>Section</u>	<u>Subject</u>
17.2.10.5	Inservice Inspection
17.2.10.7	Qualification of Personnel (Inspection Verification)
17.2.12	Control of Measuring and Test Equipment
17.2.16	Corrective Action
17.2.17	Quality Assurance Records

### **1.7 Quality Assurance Program Commitments**

The Quality Assurance Manual (NAQA) implements the Quality Assurance requirements of 10CFR50, Appendix B. The inservice inspection activities that are controlled by this quality assurance provisions, due to NRC Regulatory Guide and ANSI standard commitments, are indicated below. For the actual commitments, see the Quality Assurance Manual (NAQA) sections as referenced.

<u>Section</u>	<u>Subject</u>
2.2.2	Qualification, Training, and Certification of Personnel (ANSI/ANS 3.1-1978, ANSI N45.2.6-1978, SNT-TC-1A-1980)
5.0	Manuals, Procedures, Instructions, and Drawings
6.0	Document Control
7.0	Control of Purchased Material, Equipment, and Services
9.0	Control of Special Processes
12.0	Control of Measuring and Test Equipment
15.0	Nonconforming Materials, Parts, or Components

## **1.0 INTRODUCTION (Cont.)**

### **1.7 Quality Assurance Program Commitments (Cont.)**

<u>Section</u>	<u>Subject</u>
16.0	Corrective Action
17.0	Quality Assurance Records
19.0	NRC Regulatory Guides and Standards
RG 1.8	Personnel Selection and Training (ANS 3.1-1978)
RG 1.26	Quality Group Classification (Rev. 3)
RG 1.37	Cleaning of Fluid Systems and Components (ANSI N45.2.1-1973)
RG 1.58	Qualification of Personnel (ANSI N45.2.6-1978)
RG 1.88	Records (ANSI N45.2.9-1974)
RG 1.123	Procurement of Items and Services (ANSI N45.2.13-1976)

### **1.8 Code of Federal Regulation 10 CFR 50.55a Requirements**

The Code of Federal Regulations in 10 CFR 50.55a(g)(4)(ii) requires the Inservice Inspection Program for the Second 10 Year Inspection Interval to be in accordance with ASME Section XI Edition and Addenda, Division 1, as approved for usage in 10 CFR 50.55a(b)(2), 12 months prior to the start of the interval. The Second Inspection Interval begins at midnight on August 19, 2000. Therefore, the ASME Section XI Edition and Addenda that was approved for usage 12 months prior was the 1989 Edition of Section XI. However, Seabrook Station has voluntarily elected to implement the 1995 Edition with the 1996 Addenda as approved for usage in the Federal Register (Vol. 64, No. 183) on September 22, 1999. Thus, the 1995 Edition with the 1996 Addenda is the ASME Section XI basis for the Second 10 Year Inspection Interval.

The supplements to ASME Section XI Appendix VIII of the 1995 Edition with the 1996 Addenda will be implemented in accordance with the schedule identified in 10 CFR 50.55(g)(6)(ii)(C) as amended by the Federal Register (Vol.64, No. 183) on September 22, 1999.

## **1.0 INTRODUCTION (Cont.)**

### **1.9 Augmented Requirements**

The augmented requirements for the scope of this program are addressed in the following documents and discussed in Appendix E:

<u><b>Document</b></u>	<u><b>Subject</b></u>
Technical Specification Surveillance Requirements Section 3/4 4.4.10	Reactor Coolant Pump Flywheel Examinations Per NRC Regulatory Guide 1.14
UFSAR Section 6.6.8	Main Steam and Feedwater Piping Examinations In The Non-Break Zone Penetrating Containment
RG 1.150	Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examinations

### **1.10 ASME Section XI Exemptions and Requirements**

Pursuant to 10 CFR 50.55a(g)(4)(ii), as discussed in Section 1.8, the requirements applicable to the second inservice inspection interval are based on the rules set forth in the 1995 Edition with the 1996 Addenda of ASME Section XI, which begins at midnight on August 19, 2000. The specific Class 1, 2, and 3 exemptions and requirements that have been incorporated into the program are identified below in Sections 2.0, 3.0, 4.0, and 5.0.

## 1.0 INTRODUCTION (Cont.)

### 1.11 ASME Section XI Code Case Commitments

ASME Section XI Code Cases clarify either the intent of the code or provide alternatives to Section XI code requirements. The NRC approves usage and or takes exceptions to specific Code Cases in Regulatory Guide 1.147. The application of Code Cases are further governed by Section XI Paragraph IWA-2440. Code Cases, which are not authorized for usage in Regulatory Guide 1.147 are not implemented unless specifically approved by the NRC in the form of a Relief Request or written correspondence. The following ASME Section XI Code Cases have been incorporated into the program:

<u>Code Case No.</u>	<u>Title</u>
N-307-1	Revised Ultrasonic Examination Volume for Class 1 Bolting, Table IWB-2500-1, Examination Category B-G-1, When the Examinations are Conducted From the Center-Drilled Hole
N-416-1	Alternative Pressure Test Requirement for Welded Repairs or Installation of Replacement Items by Welding Class 1, 2, and 3
N-460	Alternative Examination Coverage for Class 1 and Class 2 Welds
N-533 (pending)	Alternative Requirements for VT-2 Visual Examination of Class 1 Insulated Pressure-Retaining Bolted Connections
N-537	Location of Ultrasonic Depth-Sizing Flaws

## 1.0 INTRODUCTION (Cont.)

### 1.12 Relief Requests and Alternative Requests

Alternatives or deviations from Section XI code requirements are permitted in 10 CFR 50.55a(a)(3)(i), (ii), 10 CFR 50.55a(g)(5)(iii), (iv), and (6)(i), but only if they have been previously approved by the NRC. Such alternatives are documented in the form of a Relief Request or Alternative Request, which provides a description, basis, and proposed alternative for the request. Relief Requests listed below shows current NRC approval status. Full text versions are contained in Appendix F.

<u>Relief Request</u>	<u>Subject</u>	<u>NRC Status</u>
2IR-1, Rev.0	Examination Category B-A and B-D, Reactor Vessel Welds	Pending
2IR-2, Rev. 0	Examination Category B-B and B-D, Pressurizer and Steam Generator Welds	Pending
2IR-3	Deleted – Intentionally left blank	N/A
2IR-4, Rev.0	Examination Category C-A and C-B, Steam Generator and Excess Letdown Heat Exchanger Welds	Pending
2IR-5	Deleted – Intentionally left blank	N/A
2IR-6, Rev.0	Examination Category C-B, Residual Heat Removal Heat Exchanger Nozzle to Shell Welds	Pending
2IR-7	Deleted – Intentionally left blank	N/A
2IR-8	Deleted – Intentionally left blank	N/A
2IR-9	Deleted – Intentionally left blank	N/A
2IR-10, Rev.0	Examination Category B-A, Reactor Vessel Welds	Pending
2IR-11, Rev.0	Examination Category B-B, Pressurizer Weld	Pending
2IR-12, Rev.0	Examination Category B-K, Pressurizer Welded Attachments	Pending

## 1.0 INTRODUCTION (Cont.)

### 1.13 Exemptions, Examination Categories, and Item Numbers

Code Class 1, 2, and 3 exemptions as permitted in ASME Section XI, Paragraphs IWB-1220, IWC-1220, IWD-1220 and IWF-1230 were applied to the inservice inspection boundaries and thus are not included on the inservice inspection system isometric drawings. The weld numbers, etc., identified on the isometric drawings indicate those items that are "subject to" examination. The examination categories identified in Section XI, Tables IWB, C, D, F-2500-1, etc., specifically indicate the items (parts) that are "required" to be examined by size, percentage, etc., each with a unique examination category item number. Items not requiring examination per the examination categories, due to size, percentage, etc., are "excluded" from examination. Weld numbers, etc., that are scheduled for examination represent those items that have been "selected" for examination as required by Section XI. Examination Categories and or Item Numbers that are not applicable to Seabrook Unit 1 are not identified or addressed in this document.

### 1.14 Inspection Interval, Periods, and Outages

The second inservice inspection interval will follow Section XI Inspection Program B as provided in Paragraph IWA-2432 and discussed below in Paragraph 1.15. The interval is divided into three successive inspection periods as determined by calendar years of plant service. The first, second, and third inspection period are three (3), four (4), and three (3) years in length respectively, as required by Section XI, Tables IWB, C, D-2412-1 and IWF-2410-2. Inspection Periods are further divided into refueling outages as indicated in the table below, during which the majority of the examinations will be performed. The start and end dates for the scheduled three inspection periods occur at midnight on the dates as indicated. The scheduled period and outage dates are tentative and subject to change.

Period	Start	End	Unit 1 Outages
1	8-19-00	8-19-03	OR07, OR08
2	8-19-03	8-19-07	OR09, OR10, OR11
3	8-19-07	8-19-10	OR12, OR13

## 1.0 INTRODUCTION (Cont.)

### 1.15 Inspection Program B

Unless specific examination deferrals are permitted, examination percentages for each examination category meet the inspection period requirements per Inspection Program B in accordance with Section XI, Tables IWB, C, D-2412-1 and IWF-2410-2 as follows:

Period	Minimum Exams Required	Maximum Exams Credited
1	16 %	34 %
2	50 %	67 %
3	100 %	100 %

### 1.16 Inservice Inspection Plan Format, Development, and Revisions

The Inservice Inspection Program plan is reviewed by the Authorized Nuclear Inservice Inspector (ANII) as required by Section XI, Paragraph IWA-2110(a)(1). The review addresses all Section XI requirements within the scope of this program and is documented in a report to NAEsCo as required by IWA-2110(a)(3). Any inspection program plan revisions in the future will also be reviewed by the ANII and documented in a report to NAEsCo as required by IWA-2110(a)(2) and (3). The NRC also reviews the inspection program plan and issues a safety evaluation report authorizing its implementation in accordance with current technical specification commitments.

To enable the ANII and the NRC to determine that the inservice inspection program plan meets all of the requirements of Section XI, the program plan includes, as will future revisions, all of the necessary elements and information to support the reviews. To this end, the program plan identifies the components, welds and bolting, etc., being selected for examination and the inspection period that each item is scheduled to be examined. This permits the ANII and the NRC to verify program accuracy for elements such as:

- Quantities planned as required by examination categories; e.g. 7½% (Examination Category C-F-2), etc.
- Examination selection percentages planned for each examination category and period as required by IWA-2110(a)(1)(d) and Table IWB-2412-1, etc.
- Sequence of actual examinations planned from previous interval as required by IWA-2110(a)(1)(i) and IWB-2420(a), etc.

## **1.0 INTRODUCTION (Cont.)**

### **1.16 Inservice Inspection Plan Format, Development, and Revisions (Cont.)**

- Sequence of examinations planned due to evaluations from previous interval (e.g., next three periods) as required by IWA-2110(a)(1)(i) and IWB-2420(b), etc.
- Piping weld location distributions planned as required by Examination Category C-F-2, Note (2)(a), (b), and (c), etc.
- Bolting examinations planned for the piping, pump, and valves that are being examined as required by Examination Category B-G-1, Note (3), etc.

### **1.17 Administrative Program Controls**

The administrative controls for the Inservice Inspection Program are addressed in the following documents.

<u><b>Document</b></u>	<u><b>Title</b></u>
MA 6.1	Implementation Procedure for Inservice Inspection of Class 1, 2, and 3 Components and Primary Containment Structures
MA 6.2	ASME Section XI Repair and Replacement Program
ES 1807.030	Nondestructive Examination (NDE) Certification Program
ES 1802.006	Disposition of Inservice Inspection Anomalies
MNPR	Manuals and Procedures Administration Manual
NARC	Regulatory Compliance Manual (Reporting Defects, Noncompliance's, Preparation of Relief Requests, etc.)
SSMA	Maintenance Manual (Special Process Control, Inservice Inspection Programs, etc.)
NARM	Records Management Manual
NAMM	North Atlantic Management Manual (Plans, Programs, Procedures, etc.)

## **1.0 INTRODUCTION (Cont.)**

### **1.18 Examination Procedures**

The inservice inspection program examination requirements are performed and controlled through the use of both NAESCo and vendor nondestructive examination (NDE) procedures. The NAESCo procedures are prepared, qualified, issued, implemented, and controlled by the Director of Engineering and are maintained as Engineering Department Procedures. Vendor NDE procedures are reviewed, qualified, and approved for use by NAESCo prior to implementation.

### **1.19 Personnel Qualification and Certification**

Personnel performing Section XI nondestructive examinations are qualified and certified in accordance with ANSI/ASNT CP-189 (1991) as required by IWA-2300 and amended by the requirements of Section XI, Division 1. Qualification and certification of personnel performing examinations for augmented requirements specified in Paragraph 1.9 are in accordance with the requirements of each as stipulated. Implementation and control of the qualification and certification activities are within the jurisdiction of the Director of Engineering.

### **1.20 Weld Reference System**

A weld reference system is established for all welds and areas subject to surface or volumetric examinations as required by Section XI, IWA-2600. This system further provides specific identification of each area and item by identifying the applicable examination category item number and a unique reference number assigned to the specific area or item as discussed in Appendix A.

### **1.21 Program Implementation**

The Director of Engineering has the responsibility to identify the program examinations that are to be performed during each inspection period and outage, including the preparation of the outage plan. The Director of Engineering also has the responsibility for directing and performing all examination related activities. These activities are controlled by the documents referenced in Paragraph 1.17 and include planning, scheduling, coordinating, procedure development, providing personnel and equipment, performing examinations, tracking, evaluating indications, reporting, etc.. Examinations are generally performed during plant outages. However, some examinations may be performed during plant operation. Examinations will be performed by NAESCo personnel, NAESCo agents, and/or contractors.

## **1.0 INTRODUCTION (Cont.)**

### **1.22 Alternative, Successive, and Additional Examinations**

Alternative examination methods, if necessary, may be substituted for the methods specified in the program in accordance with Section XI, Paragraph IWA-2240. Successive examinations for Class 1, 2, 3 components and their supports includes repeating the sequence of examinations from the previous interval to the extent practical, in accordance with IWA-2110(a)(1)(i), and IWB, C, D, F, -2420(a) and reexamining any items in the next period(s) in accordance with IWA-2110(a)(1)(i), and IWB, C, D, F -2420(b) and (c) which exhibit conditions that are evaluated and found to be conditionally acceptable for continued service. Additional examinations for Class 1, 2, 3 components and their supports will be performed in accordance with IWB, C, D, F -2430 respectively when examinations reveal indications exceeding the acceptance standards.

### **1.23 Program Plan and Procedure Control**

Preparation, review, approval, and revision of this Inservice Inspection Program, including the supporting drawings and implementing procedures, will be in accordance with the administrative procedures identified above in Paragraph 1.17

### **1.24 Authorized Nuclear Inservice Inspector**

The duties of the Authorized Nuclear Inservice Inspector (ANII) are assigned by Section XI to verify that the responsibilities of the Owner and all mandatory requirements are met as specified in IWA-2110. It is the duty of the Inspector, among others, to perform a detailed review of this Inservice Inspection Program and subsequent revisions, to verify that the required examinations are being properly performed and recorded, and to verify the examination records, after verifying that the requirements have been met and that the records are correct.

## 2.0 ASME CLASS 1 EXEMPTIONS AND REQUIREMENTS

ASME Class 1 component exemptions and applicable examination category requirements are summarized below with the corresponding relief requests, code cases, and augmented requirements referenced.

### 2.1 Class 1 Component Exemptions

The following components (or parts of components) are exempted from the volumetric and surface examination requirements of IWB-2500, in accordance with IWB-1220:

- (a) Components that are connected to the reactor coolant system and part of the reactor coolant pressure boundary, and that are of such a size and shape so that upon postulated rupture the resulting flow of coolant from the reactor coolant system under normal plant operating conditions is within the capacity of makeup systems which are operable from on-site emergency power.
- (b)(1) Piping of NPS 1 and smaller, except for steam generator tubing;
- (b)(2) Components and their connections in piping of NPS 1 and smaller;
- (c) Reactor vessel head connections and associated piping, NPS 2 and smaller, made inaccessible by control rod drive penetrations.

Note: The above Class 1 component exemptions are from the 1989 Edition of Section XI as required in the Federal Register (Vol. 64, No. 183) dated September 22, 1999, page 51396, paragraph (xi).

### 2.2 Examination Category B-A Requirements

Examination Category B-A requires the reactor pressure vessel, shell, head, shell to flange, and head to flange welds be examined as noted below. The incorporated relief requests are referenced as applicable.

Item No.	Items Required to be Examined	Method	Reference
B1.11	All Reactor Vessel Circumferential Shell Welds	Vol	2IR-10
B1.12	All Reactor Vessel Longitudinal Shell Welds	Vol	
B1.21	Accessible Length of All Reactor Vessel Circumferential Head Welds	Vol	2IR-1, 2IR-10
B1.22	Accessible Length of All Reactor Vessel Meridional Head Welds	Vol	
B1.30	All of the Reactor Vessel Shell to Flange Weld	Vol	
B1.40	All of the Reactor Vessel Head to Flange Weld	Vol/Sur	2IR-1

## 2.0 ASME CLASS 1 EXEMPTIONS AND REQUIREMENTS (Cont.)

### 2.3 Examination Category B-B Requirements

Examination Category B-B requires the Pressurizer circumferential shell to head weld at both ends, 1 foot of one longitudinal weld per head intersecting the Pressurizer shell to head welds, and one Steam Generator tubesheet-to-head weld be examined as noted below. The incorporated relief requests are referenced as applicable.

Item No.	Items Required to be Examined	Method	Reference
B2.11	Pressurizer Circumferential Shell to Head Welds	Vol	2IR-2, 2IR-11
B2.12	Pressurizer Longitudinal Weld Per Head	Vol	
B2.40	Steam Generator Tubesheet-to-Head Weld	Vol	2IR-2

### 2.4 Examination Category B-D Requirements

Examination Category B-D requires the Reactor Pressure Vessel, full penetration nozzle to vessel welds and the nozzle inside radius sections be examined as noted below. This also requires the Pressurizer and Steam Generator full penetration nozzle to vessel welds and the nozzle inside radius sections be examined as noted below. The incorporated relief requests are referenced as applicable.

Item No.	Items Required to be Examined	Method	Reference
B3.90	All Reactor Vessel Nozzle to Vessel Welds	Vol	2IR-1
B3.100	All Reactor Vessel Nozzle Inside Radius'	Vol	
B3.110	All Pressurizer Nozzle to Vessel Welds	Vol	2IR-2
B3.120	All Pressurizer Nozzle Inside Radius'	Vol	
B3.130	All Steam Generator Nozzles to Vessel Welds	Vol	2IR-2
B3.140	All Steam Generator Nozzle Inside Radius'	Vol	

### 2.5 Examination Category B-F Requirements

Class 1 nozzle-to-safe end welds in Subsection IWB, Examination Category B-F, "Pressure Retaining Dissimilar Metal Welds in Vessel Nozzles" have been excluded from this program and will be addressed separately in a Risk Informed Inservice Inspection (RI-ISI) Program. A two year delay in implementing Class 1 piping examinations as permitted in NRC Information Notice 98-44 dated December 10, 1998 has been requested per NAESCo letter NYN-00014.

## 2.0 ASME CLASS 1 EXEMPTIONS AND REQUIREMENTS (Cont.)

### 2.6 Examination Category B-G-1 Requirements

Examination Category B-G-1 requires pressure retaining bolting larger than 2 inch for the Reactor Vessel and pumps to be examined as indicated below. The incorporated code cases are referenced as applicable.

Item No.	Items Required to be Examined	Method	Reference
B6.10	All Reactor Vessel Closure Head Nuts (Greater Than 2")	VT-1	
B6.20	All Reactor Vessel Closure Head Studs in Place (Greater Than 2")	Vol	N-307-1
B6.30	All Reactor Vessel Closure Head Studs When Removed (Greater Than 2")	Vol/Sur	N-307-1
B6.40	All Reactor Vessel Threads in Flange (Greater Than 2")	Vol	
B6.50	All Reactor Vessel Closure Washers and Bushings (Greater Than 2")	VT-1	
B6.180	All Pump Bolts and Studs (Greater Than 2") for Pumps Selected Under Category B-L-2	Vol	N-307-1
B6.190	Pump Flange Surface When Connection is Disassembled (For Bolting Greater Than 2") for Pumps Selected Under Category B-L-2	VT-1	

### 2.7 Examination Category B-G-2 Requirements

Examination Category B-G-2 requires pressure retaining bolting 2 inch and less for the Pressurizer, Steam Generators, piping, pump casings, and valve bodies, to be examined as indicated below.

Item No.	Items Required to be Examined	Method	Reference
B7.20	All Pressurizer Bolts, Studs, and Nuts (2" and Less)	VT-1	
B7.30	All Steam Generator Bolts, Studs, and Nuts (2" and Less)	VT-1	
B7.50	Bolts, Studs, and Nuts for all B-J Piping Selected for Examination (2" and Less)	VT-1	
B7.60	Bolts, Studs, and Nuts for all B-L-2 Pump Casings Selected for Examination (2" and Less)	VT-1	
B7.70	Bolts, Studs, and Nuts for all B-M-2 Valve Bodies Selected for Examination (2" and Less)	VT-1	

## 2.0 ASME CLASS 1 EXEMPTIONS AND REQUIREMENTS (Cont.)

### 2.8 Examination Category B-J Requirements

Class 1 piping welds in Examination Category B-J, "Pressure Retaining Welds in Piping", have been excluded from this program and will be addressed separately in a Risk Informed Inservice Inspection (RI-ISI) Program. A two year delay in implementing Class 1 piping examinations as permitted in NRC Information Notice 98-44 dated December 10, 1998 has been requested per NAEsCo letter NYN-00014.

### 2.9 Examination Category B-K Requirements

Examination Category B-K requires welded attachments for vessels, piping, pumps, and valves to be examined as indicated below.

Item No.	Items Required to be Examined	Method	Reference
B10.10	Each Vessel Welded Attachment and One Vessel Welded Attachment of One Vessel Per Each Multiple Vessel Group Associated with Component Supports	Sur	2IR-12
B10.20	10% of the Piping Welded Attachments Associated with Component Supports Selected for Examination	Sur	

### 2.10 Examination Category B-L-2 Requirements

Examination Category B-L-2 requires pump casing internal surfaces to be examined as indicated below. See Table 3 for identification of the pump groups.

Item No.	Items Required to be Examined	Method	Reference
B12.20	One Pump Casing Internal Surface per Group When Disassembled for Maintenance or Repair	VT-3	

## 2.0 ASME CLASS 1 EXEMPTIONS AND REQUIREMENTS (Cont.)

### 2.11 Examination Category B-M-2 Requirements

Examination Category B-M-2 requires valve body internal surfaces to be examined as indicated below. See Table 3 for identification of the valve groups.

Item No.	Items Required to be Examined	Method	Reference
B12.50	One Valve Body Internal Surface per Group Exceeding NPS 4 When Disassembled for Maintenance or Repair	VT-3	

### 2.12 Examination Category B-N-1 Requirements

Examination Category B-N-1 requires examination of the Reactor Vessel accessible interior areas after removal of the components each inspection period during a normal refueling outage as indicated below.

Item No.	Items Required to be Examined	Method	Reference
B13.10	Reactor Vessel Accessible Interior Areas Above and Below the Core after Removal of Components During Normal Refueling Outages	VT-3	

### 2.13 Examination Category B-N-2 Requirements

Examination Category B-N-2 requires examination of the Reactor Vessel accessible interior attachment welds beyond the beltline region as indicated below.

Item No.	Items Required to be Examined	Method	Reference
B13.60	Reactor Vessel Accessible Interior Attachment Welds Beyond the Beltline Region	VT-3	

## 2.0 ASME CLASS 1 EXEMPTIONS AND REQUIREMENTS (Cont.)

### 2.14 Examination Category B-N-3 Requirements

Examination Category B-N-3 requires examination of the Reactor Vessel accessible core support structure surfaces as indicated below.

Item No.	Items Required to be Examined	Method	Reference
B13.70	Reactor Vessel Accessible Core Support Structure Surfaces	VT-3	

### 2.15 Examination Category B-O Requirements

Examination Category B-O requires examination of the pressure retaining welds in the Reactor Vessel control rod drive housings as indicated below.

Item No.	Items Required to be Examined	Method	Reference
B14.10	10% of the Reactor Vessel Peripheral Control Rod Drive Housing Welds	Sur	

### 3.0 ASME CLASS 2 EXEMPTIONS AND REQUIREMENTS

ASME Class 2 component exemptions and applicable examination category requirements are summarized below with the corresponding relief requests, code cases, and augmented requirements referenced.

#### 3.1 Class 2 Component Exemptions

The following components (or parts of components) within RHR, ECC, and CHR Systems (or portions of systems) are exempted from the volumetric and surface examination requirements of IWC-2500, in accordance with IWC-1221 and IWC-1223:

- (a) For systems, except high pressure safety injection systems in pressurized water reactor plants:
  - (1) Piping NPS 4 and smaller
  - (2) Vessels, pumps, and valves and their connections in piping NPS 4 and smaller
- (b) For high pressure safety injection systems in pressurized water reactor plants:
  - (1) Piping NPS 1 ½ and smaller
  - (2) Vessels, pumps, and valves and their connections in piping NPS 1 ½ and smaller
- (c) Vessels, piping, pumps, valves, other components, and component connections of any size in statically pressurized, passive (i.e., no pumps) safety injection systems of pressurized water reactor plants
- (d) Piping and other components of any size beyond the last shutoff valve in open-ended portions of systems that do not contain water during normal plant operating conditions
- (e) Welds or portions of welds that are inaccessible due to being encased in concrete, buried underground, located inside a penetration, or encapsulated by guard pipe

### 3.0 ASME CLASS 2 EXEMPTIONS AND REQUIREMENTS (Cont.)

#### 3.1 Class 2 Component Exemptions (Cont.)

The following components (or parts of components) within systems (or portions of systems) other than RHR, ECC, and CHR are exempted from the volumetric and surface examination requirements of IWC-2500, in accordance with IWC-1222 and IWC-1223:

- (a) Piping NPS 4 and smaller
- (b) Vessels, pumps, and valves and their connections in piping NPS 4
- (c) Vessels, piping, pumps, valves, other components, and component connections of any size in systems or portions of systems that operate (when the system function is required) at a pressure equal to or less than 275 psig and at a temperature equal to or less than 200°F,
- (d) Piping and other components of any size beyond the last shutoff valve in open ended portions of systems that do not contain water during normal plant operating conditions
- (e) Welds or portions of welds that are inaccessible due to being encased in concrete, buried underground, located inside a penetration, or encapsulated by guard pipe

#### 3.2 Examination Category C-A Requirements

Examination Category C-A requires examination of the pressure retaining shell circumferential welds, head circumferential welds and the tubesheet to shell welds in pressure vessels as indicated below. See Table 3 for identification of the vessel groups.

Item No.	Items Required to be Examined	Method	Reference
C1.10	Pressure Vessel Shell Circumferential Welds (One Vessel per Group)	Vol	2IR-4
C1.20	Pressure Vessel Head Circumferential Welds (One Vessel per Group)	Vol	
C1.30	Pressure Vessel Tube Sheet to Shell Welds (One Vessel per Group)	Vol	

### 3.0 ASME CLASS 2 EXEMPTIONS AND REQUIREMENTS (Cont.)

#### 3.3 Examination Category C-B Requirements

Examination Category C-B requires examination of the pressure retaining nozzles in vessels as indicated below. See Table 3 for identification of the vessel groups.

Item No.	Items Required to be Examined	Method	Reference
C2.21	All Vessel Nozzle to Shell (or Head) Welds in Vessels > ½ " Thickness Without Reinforcing Plate at Terminal Ends in C-F Selected Piping Runs (One Vessel per Group)	Vol/Sur	
C2.22	All Vessel Nozzle Inside Radius Sections in Vessels > ½ " Thickness Without Reinforcing Plate at Terminal Ends in C-F Selected Piping Runs (One Vessel per Group)	Vol	2IR-4
C2.31	All Vessel Nozzle to Shell Welds in Vessels > ½ " Thickness With Reinforcing Plate at Terminal Ends in C-F Selected Piping Runs (One Vessel per Group)	Sur	2IR-6
C2.33	All Vessel Nozzle to Shell (or Head) Welds in Vessels > ½ " Thickness With Reinforcing Plate at Terminal Ends in C-F Selected Piping Runs When Inside of Vessel is Inaccessible (One Vessel per Group)	VT-2	2IR-6

### 3.0 ASME CLASS 2 EXEMPTIONS AND REQUIREMENTS (Cont.)

#### 3.4 Examination Category C-C Requirements

Examination Category C-C requires welded attachments for vessels, piping, pumps, and valves to be examined as indicated below.

Item No.	Items Required to be Examined	Method	Reference
C3.10	Each Vessel Welded Attachment and One Vessel Welded Attachment of One Vessel Per Each Multiple Vessel Group Associated with Component Supports	Sur	
C3.20	10% of the Piping Welded Attachments Associated with Component Supports Selected for Examination	Sur	

#### 3.5 Examination Category C-F-1 Requirements

Examination Category C-F-1 requires examination of pressure retaining circumferential, socket, and branch connection welds in austenitic stainless steel or high alloy piping as indicated below.

Item No.	Items Required to be Examined	Method	Reference
C5.11	7 ½% of All Circumferential Austenitic Stainless Steel or High Alloy ( $> \text{NPS } 4$ with Nominal Wall $\geq 3/8"$ ) Piping Welds	Vol/Sur	
C5.21	7 ½% of All Circumferential Austenitic Stainless Steel or High Alloy ( $\geq \text{NPS } 2$ and $\leq \text{NPS } 4$ with Nominal Wall $> 1/5"$ ) Piping Welds	Vol/Sur	
C5.30	7 ½% of All Austenitic Stainless Steel or High Alloy Socket Welds	Sur	
C5.41	7 ½% of All Circumferential Austenitic Stainless Steel or High Alloy ( $\geq \text{NPS } 2$ ) Branch Piping Welds	Sur	

### 3.0 ASME CLASS 2 EXEMPTIONS AND REQUIREMENTS (Cont.)

#### 3.6 Examination Category C-F-2 Requirements

Examination Category C-F-2 requires examination of pressure retaining circumferential and branch welds in carbon or low alloy steel piping as indicated below. The incorporated relief requests are referenced as applicable.

Item No.	Items Required to be Examined	Method	Reference
C5.51	7 ½% of All Circumferential Carbon or Low Alloy (> NPS 4 with Nominal Wall $\geq 3/8$ ") Piping Welds	Vol/Sur	
C5.81	7 ½% of All Circumferential Carbon or Low Alloy ( $\geq$ NPS 2) Branch Piping Welds	Sur	

### 4.0 ASME CLASS 3 EXEMPTIONS AND REQUIREMENTS

ASME Class 3 component exemptions and applicable examination category requirements are summarized below with the corresponding relief requests, code cases, and augmented requirements referenced.

#### 4.1 Class 3 Component Exemptions

The following components or parts of components are exempted from the VT-3 visual examination requirements of IWD-2500, in accordance with IWD-1220:

- (a) For systems, except Auxiliary Feedwater Systems in pressurized water reactor plants:
  - (1) Piping NPS 4 and smaller
  - (2) Vessels, pumps, and valves and their connections in piping NPS 4 and smaller
- (b) For Auxiliary Feedwater Systems in pressurized water reactor plants:
  - (1) Piping NPS 1 and smaller
  - (2) Vessels, pumps, and valves and their connections in piping NPS 1 and smaller

#### 4.0 ASME CLASS 3 EXEMPTIONS AND REQUIREMENTS (Cont.)

- (c) Components that operate at a pressure of 275 psig or less and at a temperature of 200°F or less in systems (or portions of systems) whose function is not required in support of reactor residual heat removal, containment heat removal, and emergency core cooling
- (d) Welds or portions of welds that are inaccessible due to being encased in concrete, buried underground, located inside a penetration, or encapsulated by guard pipe

#### 4.2 Examination Category D-A Requirements

Examination Category D-A requires examination of welded attachments most subject to corrosion and associated with component supports for vessels, piping, pumps, and valves as indicated below.

Item No.	Items Required to be Examined	Method	Reference
D1.20	10% of the Piping Welded Attachments Most Subject to Corrosion Associated with Component Supports	VT-1	

## **5.0 ASME CLASS 1, 2, AND 3 COMPONENT SUPPORT EXEMPTIONS AND REQUIREMENTS**

ASME Class 1, 2, and 3 component support exemptions and applicable examination category requirements are summarized below. Note that the term “component support” includes both supports for components such as vessels, pumps, etc., and supports for piping, which are treated separately for selection purposes as discussed below in Paragraph 5.2.

### **5.1 ASME Class 1, 2, and 3 Component Support Exemptions**

Supports exempt from the examination requirements of IWF-2000 are those connected to piping and other items exempted from volumetric, surface, or VT-1 or VT-3 visual -examination by IWB-1220, IWC-1220, IWD-1220, and IWE-1220. In addition, portions of supports that are inaccessible by being encased in concrete, buried underground, or encapsulated by guard pipe are also exempt from the examination requirements of IWF-2000, in accordance with IWF-1230.

### **5.2 ASME Class 1, 2, and 3 Component Support Selections**

The supports to be selected and examined for components (vessels, pumps, etc.), are the supports for the components that are required to be examined under IWB-2500, IWC-2500, IWD-2500, and IWE-2500. The supports to be examined for piping are to be selected in accordance with the percentages and sampling requirements of Table IWF-2500-1 from the support population of all piping not exempted by IWB-1220, IWC-1220, and IWD-1220, in accordance with IWF-2510.

## **5.0 ASME CLASS 1, 2, AND 3 COMPONENT SUPPORT EXEMPTIONS AND REQUIREMENTS (Cont.)**

### **5.3 Examination Category F-A Requirements**

Examination Category F-A requires examination of component supports for Class 1, 2, and 3 piping and component supports for Class 1, 2, 3, and MC components as indicated below.

<b>Item No.</b>	<b>Items Required to be Examined</b>	<b>Method</b>	<b>Reference</b>
F1.10	25% of the Class 1 Supports for the nonexempt Class 1 piping	VT-3	
F1.20	15% of the Class 2 Supports for the nonexempt Class 2 piping	VT-3	
F1.30	10% of the Class 3 Supports for the nonexempt Class 3 piping	VT-3	
F1.40	100% of the Class 1, 2, 3, and MC Supports for the components being examined	VT-3	

Note: Snubbers and their attachments (bolting, pins, and clamps) are examined and tested under a separate program in accordance with the Technical Requirements Manual. Welded attachments associated with snubbers and other supports are examined in accordance with Examination Categories B-K, C-C, and D-A.

## 6.0 ASME CLASS 1, 2, AND 3 ACCEPTANCE STANDARDS

### 6.1 ASME Class 1 Acceptance Standards

The following acceptance standards are applicable to Class 1 Components:

<b>Exam Category</b>	<b>Examination Area</b>	<b>Acceptance Standards</b>
B-A	Pressure Retaining Welds in Reactor Vessel	IWB-3510
B-B	Pressure Retaining Welds in Vessels Other Than Reactor Vessels	IWB-3510
B-D	Full Penetration Welded Nozzles in Vessels	IWB-3512
B-G-1	Pressure Retaining Bolting, Greater Than 2" in Diameter	IWB-3515 IWB-3517
B-G-2	Pressure Retaining Bolting, 2 in. and Less in Diameter	IWB-3517
B-K	Welded Attachments for Vessels, Piping, Pumps, and Valves	IWB-3516
B-L-2	Pump Casings	IWB-3519
B-M-2	Valve Bodies	IWB-3519
B-N-1	Interior of Reactor Vessel	IWB-3520
B-N-2	Welded Core Support Structures and Interior Attachments to Reactor Vessels	IWB-3520
B-N-3	Removable Core Support Structures	IWB-3520
B-O	Pressure Retaining Welds in Control Rod Housings	IWB-3523

### 6.2 ASME Class 2 Acceptance Standards

The following acceptance standards are applicable to Class 2 Components:

<b>Exam Category</b>	<b>Examination Area</b>	<b>Acceptance Standards</b>
C-A	Pressure Retaining Welds in Pressure Vessels	IWC-3510
C-B	Pressure Retaining Nozzle Welds in Vessels	IWC-3511
C-C	Welded Attachments for Vessels, Piping, Pumps, and Valves	IWC-3512
C-F-1	Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping	IWC-3514
C-F-2	Pressure Retaining Welds in Carbon or Low Alloy Steel Piping	IWC-3514

## **6.0 ASME CLASS 1, 2, AND 3 ACCEPTANCE STANDARDS (Cont.)**

### **6.3 ASME Class 3 Acceptance Standards**

The following acceptance standards are applicable to Class 3 Components:

<b>Exam Category</b>	<b>Examination Area</b>	<b>Acceptance Standards</b>
D-A	Welded Attachments for Vessels, Piping, Pumps, and Valves	IWD-3000

### **6.4 ASME Class 1, 2, and 3 Component Support Acceptance Standards**

The following acceptance standards are applicable to Class 1, 2, and 3 Component Supports:

<b>Exam Category</b>	<b>Examination Area</b>	<b>Acceptance Standards</b>
F-A	Component Supports	IWF-3410

## **7.0 RECORDS AND REPORTS**

### **7.1 General**

Records and reports of inservice inspection activities are developed and maintained in accordance with ASME Section XI, IWA-6000, and should include as applicable, program plans, schedules, examination procedures, examination results, final reports, equipment/personnel certifications, documentation of corrective actions, etc..

### **7.2 Owner's Reports for Inservice Inspection and Repair/Replacement Activities**

An Owner's Report for Inservice Inspections, Form NIS-1, will be prepared, certified by the Owner, and verified and signed by the ANII upon completion each refueling outage and submitted within 90 days to the enforcement and regulatory authorities in accordance with IWA-6200. An Owners Report for Repair/Replacement Activity, Form NIS-2, will be prepared as necessary, certified by the Owner, verified and signed by the ANII, and also submitted in accordance with IWA-6200.

### **7.3 Records Retention**

All records associated with inservice inspection and repair/replacement activities will be retained for the duration of the facility operating license in accordance with Technical Specification Paragraph 6.9.

**Table 1**

**CLASS 1, 2, AND 3 PROGRAM SYSTEMS**

**Table 1**

**CLASS 1, 2, AND 3 PROGRAM SYSTEMS**

<b>System</b>	<b>Classification</b>		
	<b>Class 1</b>	<b>Class 2</b>	<b>Class 3</b>
Reactor Coolant (RC)	X	X	
Residual Heat Removal (RH)	X	X	
Safety Injection (SI)	X	X	
Chemical & Volume Control (CS)	X	X	
Containment Spray (CBS)		X	
Main Steam (MS)	X*	X	X*
Feedwater (FW)		X	
Primary Component Cooling (CC)		X*	X
Diesel Generator (DG)			X
Steam Generator Blowdown (SB)		X*	
Spent Fuel Pool Cooling (SF)			X
Service Water (SW)			X

\* Component Supports Only

**Table 2**

**WELD AND COMPONENT ISOMETRIC DRAWINGS**

**Table 2****WELD AND COMPONENT ISOMETRIC DRAWINGS**

<b>Drawing</b>	<b>Title</b>
1-NHY-202299ISI	Main Steam Atmospheric Relief Piping
1-NHY-202300ISI	Main Steam Atmospheric Relief Piping
1-NHY-202301ISI	Main Steam Line No. 4000
1-NHY-202302ISI	Main Steam Line No. 4001
1-NHY-202303ISI	Main Steam Line No. 4002
1-NHY-202304ISI	Main Steam Line No. 4003
1-NHY-202396ISI	Feedwater Line No. 4606
1-NHY-202397ISI	Feedwater Line No. 4607
1-NHY-202398ISI	Feedwater Line No. 4608
1-NHY-202399ISI	Feedwater Line No. 4609
1-NHY-202445ISI	Main Steam Safety Valve Discharge
1-NHY-650000	Excess Letdown Heat Exchanger CS-E-3
1-NHY-650001	Residual Heat Removal Heat Exchanger RH-E-9A
1-NHY-650002	Residual Heat Removal Heat Exchanger RH-E-9B
1-NHY-650003	Regenerative Heat Exchanger 1-CS-E-2
1-NHY-650004	Reactor Coolant Pumps RC-P-1A-D
1-NHY-650005	Reactor Coolant Pump Flywheel
1-NHY-650006	Pressurizer RC-E-10
1-NHY-650007	Reactor Vessel RC-E-1
1-NHY-650008	Reactor Vessel RC-E-1
1-NHY-650009	Reactor Vessel RC-E-1
1-NHY-650010	Reactor Vessel RC-E-1
1-NHY-650011	Steam Generator RC-E-11A (typ.)
1-NHY-650012	Steam Generator RC-E-11A & 11B
1-NHY-650012	Steam Generator RC-E-11C & 11D
1-NHY-800013ISI	RC System Line No. 13
1-NHY-800015ISI	RC System Line No. 15
1-NHY-800018ISI	RC System Line No. 18
1-NHY-800021ISI	RC System Line No. 21
1-NHY-800030ISI	RC System Line No. 30
1-NHY-800033ISI	RC System Line No. 33
1-NHY-800044ISI	RC System Line No. 44
1-NHY-800045ISI	RC System Line No. 45
1-NHY-800048ISI	RC System Line No. 48
1-NHY-800049ISI	RC System Line No. 49
1-NHY-800058ISI	RC System Line No. 58
1-NHY-800059ISI	RC System Line No. 59
1-NHY-800062ISI	RC System Line No. 62
1-NHY-800074ISI	RC System Line No. 74
1-NHY-800075ISI	RC System Line No. 75
1-NHY-800076ISI	RC System Line No. 76
1-NHY-800080ISI	RC System Line No. 80
1-NHY-800093ISI	RC System Line No. 93
1-NHY-800094ISI	RC System Line No. 94
1-NHY-800096ISI	RC System Line No. 96
1-NHY-800097ISI	RC System Line No. 97
1-NHY-800098ISI	RC System Line No. 98

**Table 2****WELD AND COMPONENT ISOMETRIC DRAWINGS**

<b>Drawing</b>	<b>Title</b>
1-NHY-800151ISI	RH System Line No. 151
1-NHY-800152ISI	RH System Line No. 152
1-NHY-800155ISI	RH System Line No. 155
1-NHY-800157ISI	RH System Line No. 157
1-NHY-800158ISI	RH System Line No. 158
1-NHY-800159ISI	RH System Line No. 159
1-NHY-800160ISI	RH System Line No. 160
1-NHY-800161ISI	RH System Line No. 161
1-NHY-800162ISI	RH System Line No. 162
1-NHY-800163ISI	RH System Line No. 163
1-NHY-800167ISI	RH System Line No. 167
1-NHY-800178ISI	RH System Line No. 178
1-NHY-800179ISI	RH System Line No. 179
1-NHY-800180ISI	RH System Line No. 180
1-NHY-800201ISI	SI System Line No. 201
1-NHY-800202ISI	SI System Line No. 202
1-NHY-800203ISI	SI System Line No. 203
1-NHY-800204ISI	SI System Line No. 204
1-NHY-800250ISI	SI System Line No. 250
1-NHY-800251ISI	SI System Line No. 251
1-NHY-800256ISI	SI System Line No. 256
1-NHY-800257ISI	SI System Line No. 257
1-NHY-800258ISI	SI System Line No. 258
1-NHY-800259ISI	SI System Line No. 259
1-NHY-800260ISI	SI System Line No. 260
1-NHY-800261ISI	SI System Line No. 261
1-NHY-800270ISI	SI System Line No. 270
1-NHY-800272ISI	SI System Line No. 272
1-NHY-800273ISI	SI System Line No. 273
1-NHY-800274ISI	SI System Line No. 274
1-NHY-800275ISI	SI System Line No. 275
1-NHY-800324ISI	CS System Line No. 324
1-NHY-800325ISI	CS System Line No. 325
1-NHY-800326ISI	CS System Line No. 326
1-NHY-800327ISI	CS System Line No. 327
1-NHY-800328ISI	CS System Line No. 328
1-NHY-800329ISI	CS System Line No. 329
1-NHY-800330ISI	CS System Line No. 330
1-NHY-800331ISI	CS System Line No. 331
1-NHY-800355ISI	CS System Line No. 355
1-NHY-800357ISI	CS System Line No. 357
1-NHY-800358ISI	CS System Line No. 358
1-NHY-800362ISI	CS System Line No. 362
1-NHY-800363ISI	CS System Line No. 363
1-NHY-800364ISI	CS System Line No. 364
1-NHY-800365ISI	CS System Line No. 365
1-NHY-800366ISI	CS System Line No. 366

**Table 2****WELD AND COMPONENT ISOMETRIC DRAWINGS**

<b>Drawing</b>	<b>Title</b>
1-NHY-800367ISI	CS System Line No. 367
1-NHY-800368ISI	CS System Line No. 368
1-NHY-800369ISI	CS System Line No. 369
1-NHY-800370ISI	CS System Line No. 370
1-NHY-800371ISI	CS System Line No. 371
1-NHY-800374ISI	CS System Line No. 374
1-NHY-800375ISI	CS System Line No. 375
1-NHY-800377ISI	CS System Line No. 377
1-NHY-800353ISI	CS System Line No. 353
1-NHY-800473ISI	CS System Line No. 473
1-NHY-801201ISI	CBS System Line No. 1201
1-NHY-801202ISI	CBS System Line No. 1202
1-NHY-801207ISI	CBS System Line No. 1207
1-NHY-801208ISI	CBS System Line No. 1208
1-NHY-801209ISI	CBS System Line No. 1209
1-NHY-801210ISI	CBS System Line No. 1210
1-NHY-801211ISI	CBS System Line No. 1211
1-NHY-801212ISI	CBS System Line No. 1212
1-NHY-801213ISI	CBS System Line No. 1213
1-NHY-801214ISI	CBS System Line No. 1214
1-NHY-801215ISI	CBS System Line No. 1215
1-NHY-801216ISI	CBS System Line No. 1216
1-NHY-804000ISI	MS System Line No. 4000
1-NHY-804001ISI	MS System Line No. 4001
1-NHY-804002ISI	MS System Line No. 4002
1-NHY-804003ISI	MS System Line No. 4003
1-NHY-804606ISI	FW System Line No. 4606
1-NHY-804607ISI	FW System Line No. 4607
1-NHY-804608ISI	FW System Line No. 4608
1-NHY-804609ISI	FW System Line No. 4609
1-NHY-805554ISI	Reactor Coolant Loop Weld ID
1-NHY-805555ISI	Reactor Coolant Loop Weld Table
1-NHY-860000ISI	RH Line No. 155 Weld Table
1-NHY-860001ISI	RH Line No. 158 Weld Table
1-NHY-860002ISI	RH Line No. 48 Weld Table
1-NHY-860003ISI	CS Line No. 369 Weld Table

**Table 3**

**VESSEL, PUMP, AND VALVE GROUPINGS**

**Table 3**

**Class 1 Vessel Grouping**

**Steam Generators (Primary Side)**

RC E-11A  
RC E-11B  
RC E-11C  
RC E-11D

**Class 2 Vessel Grouping**

**Steam Generators**

RC E-11A  
RC E-11B  
RC E-11C  
RC E-11D

**Residual Heat Removal Heat Exchangers**

RH E-9A  
RH E-9B

**Class 1 Pump Grouping**

**Reactor Coolant Pumps**

RC RC-P-1A  
RC RC-P-1B  
RC RC-P-1C  
RC RC-P-1D

**Table 3**  
**Class 1 Valve Grouping**

<b>Group No.</b>	<b>Manufacturer</b>	<b>System</b>	<b>Valve No.</b>	<b>Description</b>
1	Westinghouse	Reactor Coolant	RC-V-22 RC-V-23 RC-V-87 RC-V-88	12" Gate Valve
2	Crosby	Reactor Coolant	RC-V-115 RC-V-116 RC-V-117	6" Relief Valve
3	Westinghouse	Residual Heat Removal	RH-V-15 RH-V-29 RH-V-30 RH-V-31 RH-V-52 RH-V-53  RH-V-50 RH-V-51	6" Check Valve       8" Check Valve
4	Westinghouse	Residual Heat Removal	RH-V-59 RH-V-61 RH-V-63 RH-V-65	6" Gate Valve
5	Westinghouse	Safety Injection	SI-V-3 SI-V-17 SI-V-32 SI-V-47	10" Gate Valve
6	Westinghouse	Safety Injection	SI-V-5 SI-V-6 SI-V-20 SI-V-21 SI-V-35 SI-V-36 SI-V-50 SI-V-51  SI-V-82 SI-V-87	10" Check Valve          6" Check Valve

**Table 4**

**ULTRASONIC CALIBRATION BLOCK STANDARDS**

**Table 4**

**Ultrasonic Calibration Block Standards**

CalBlockID	MaterialSpec	Description
06-02-02		Pressurizer Head-to-Shell Weld
1-RC-MM-427A	SA-516 GR.70	Pressurizer Support Skirt
1-RC-MM-427B	SA-533 GR.A	Pressurizer Shell & Nozzle
1-RC-MM-428A	SA-533 GR.A	Steam Generator
1-RC-MM-428B	SA-533 GR.B	Steam Generator
1-RC-MM-430A	SA-508	Steam Generator Primary Nozzle
196-101	SA-533 GR.B	Reactor Pressure Vessel
196-102	SA-533 GR.B	Reactor Pressure Vessel
196-103	SA-533 GR.B	Reactor Pressure Vessel
196-104	SA-533 GR.B	Reactor Pressure Vessel
196-201	SA-533 GR.B	RPV Flange Ligament
196-202	SA-508	RPV Nozzle Safe End
196-206	SA-182 F-304	RPV CRD Mechanism
SB-1-CBS-HX	SA-240 TP.304	Vessel Shell
SB-1-RHR-HX	SA-240 TP.304	Vessel Shell
SB-10-140-SS	SA-376 TP.316	Piping Class 1 & 2
SB-10-40-SS	SA-312 TP.304	Class 2 Thin Wall
SB-10-80-CS	SA-106	Piping Class 1 & 2
SB-10-XX1-CS-F	SA-234 WPB	Piping Class 1 & 2
SB-12-140-SS	SA-376 TP.316	Piping Class 1 & 2
SB-12-40-SS	SA-312 TP.304	Class 2 Thin Wall
SB-14-160-SS	SA-376 TP.304	Piping Class 1 & 2
SB-14-40-SS	SA-358 TP.304	Class 2 Thin Wall
SB-16-100-CS	SA-106 GR.B	Piping Class 1 & 2
SB-16-STD-SS	SA-358 TP.304	Class 2 Thin Wall
SB-18-100-CS	SA-106 GR.B	Piping Class 1 & 2
SB-18-XX1-CS	SA-105	Piping Class 1 & 2
SB-3-160-SS	SA-376 TP.316	Class 2 Thin Wall
SB-3-40-SS	SA-312 TP.304	Class 2 Thin Wall
SB-3-80-SS	SA-312 TP.304	Class 2 Thin Wall
SB-30-XX1-CS	SA-155 GR.KC70	Piping Class 1 & 2
SB-30-XX2-CS	SA-106 GR.C	Piping Class 1 & 2
SB-30-XX3-CS	SA-105	Piping Class 1 & 2
SB-32-XX1-CS	SA-155 GR.KC70	Piping Class 1 & 2
SB-32-XX2-CS	SA-155 GR.KC70	Piping Class 1 & 2
SB-4-160-SS	SA-376 TP.316	Piping Class 1 & 2
SB-4-40-SS	SA-312 TP.304	Class 2 Thin Wall
SB-4-80-SS	SA-312 TP.304	Class 2 Thin Wall
SB-6-160-SS	SA-376 TP.316	Piping Class 1 & 2
SB-6-40-SS	SA-312 TP.304	Class 2 Thin Wall
SB-6A-160-SS		Piping Class 1 & 2
SB-8-160-SS	SA-376 TP.316	Piping Class 1 & 2
SB-8-40-SS	SA-312 TP.304	Class 2 Thin Wall
SB-IR-23-CS	SA-508 CL 2	Pressurizer Spray Nozzles IR
SB-IR-27-CS	SA-508 CL 2	Pressurizer Safety Relief IR
SB-IR-32-CS	SA-508 CL 2	Pressurizer Surge Nozzle IR
SB-RC-3	SA-182 F.304	Piping Class 1 & 2
SB-RC-4	SA-376 GR.304	Piping Class 1 & 2
SB-RC-5	SA-351 GR.CF8A	Piping Class 1 & 2
SB-RCP-BOLT	SA-540 GR-B-24	Reactor Coolant Pump Bolt
SB-RV-STUD	SA-540 GR-B-24	Reactor Vessel Stud
SE-IR-47-CS	SA-508 CL 2	Steam Generator Feedwater IR

## **Appendix A**

### **SYSTEM, COMPONENT, AND COMPONENT SUPPORT DESIGNATIONS**

## Appendix A

### SYSTEM, COMPONENT, AND COMPONENT SUPPORT DESIGNATIONS

A. Piping systems are designated as follows:

System	Designation
Main Steam	MS
Feedwater (including Emergency Feedwater)	FW
Reactor Coolant	RC
Residual Heat Removal	RH
Safety Injection	SI
Chemical & Volume Control	CS
Containment Spray	CBS
Primary Component Cooling	CC
Condensate	CO
Diesel Generator	DG
Spent Fuel Pool Cooling	SF
Service Water	SW

B. Components are designated as follows:

Component	Designation
Reactor Vessel	RPV
Steam Generator A	E-11A
Steam Generator B	E-11B
Steam Generator C	E-11C
Steam Generator D	E-11D
Pressurizer	E-10
RHR Heat Exchanger A	E-9A
RHR Heat Exchanger B	E-9B
Regenerative Heat Exchanger	E-2
Reactor Coolant Pump A	RC-P-1A
Reactor Coolant Pump B	RC-P-1B
Reactor Coolant Pump C	RC-P-1C
Reactor Coolant Pump D	RC-P-1D

## Appendix A

### SYSTEM, COMPONENT, AND COMPONENT SUPPORT DESIGNATIONS

C. Weld identification has the following format:

AAA-XXXX-YYY-ZZ

Where:	AAA	is “system prefix” per piping system abbreviation
	XXXX-YYY	is unique number for each line
	ZZ	is weld ISI identification number

**NOTE:** A “B” indicates a branch connection.

Welds and components may also have a suffix attached, which designates a particular examination area.

#### Suffix Key:

B	-	Bolting (studs, nuts, washers, etc., as applicable to component identification only).
L	-	Pipe Lugs
N	-	Nuts
S	-	Studs, bolts
IR	-	Inner radius
NZ	-	Nozzle
IS	-	Internal surface

D. Component support identification has the following format:

AAA-XXXX-BC-ZZ

Where: B is hanger “function” according to:

S =	support
R =	seismic restraint or guide
PW =	pipe whip restraint
T =	transient thrust restraint (bumper)
A =	anchor

C is hanger “type” according to:

V =	variable
C =	constant
M =	snubber
U =	U-bolt
H =	rigid rod or strut
G =	guide

ZZ is hanger number.

## **Appendix B**

### **CLASS 1 AND CLASS 2 COMPONENT PLAN AND SCHEDULE**

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

The following definitions are provided for the Class 1 and Class 2 Component Plan and Schedule.

1. “Ex Item” refers to the Code Category and Code Item Number. When no Code Category is listed, this indicates it is not applicable. When no Code Item Number is listed, this indicates there are no non-exempt components.
2. “Exams” refers to the number of components examined out of the total number of non-exempt components applicable to that Code Item Number.
3. “P1”, “P2”, and “P3” refer to the applicable inspection period. The numbers shown in these columns indicate the number of component examinations to be performed during each inspection period.
4. The designations found in the “REL REQ” (Relief Request) column refer to the appropriate relief request in Appendix F.

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
<b>B-A Pressure Retaining Welds in Reactor Vessel</b>								
B1.11	3/3	RC	RPV	101-171	0	0	3	2IR10
		RC	RPV	103-121				
		RC	RPV	104-141				
B1.12	9/9	RC	RPV	101-122-162°	0	0	9	
		RC	RPV	101-122-282°				
		RC	RPV	101-122-42°				
		RC	RPV	101-124-0°				
		RC	RPV	101-124-120°				
		RC	RPV	101-124-240°				
		RC	RPV	101-142-210°				
		RC	RPV	101-142-330°				
		RC	RPV	101-142-90°				
B1.21	2/2	RC	RPV	102-151	1	0	1	2IR-10
		RC	RPV	103-101				2IR-1
B1.22	8/8	RC	RPV	101-104-135°	2	0	6	
		RC	RPV	101-104-225°				
		RC	RPV	101-104-315°				
		RC	RPV	101-104-45°				
		RC	RPV	101-154-0°				
		RC	RPV	101-154-180°				
		RC	RPV	101-154-270°				
		RC	RPV	101-154-90°				
B1.30	1/1	RC	RPV	101-121	0	0	1	
B1.40	1/1	RC	RPV	101-101	1	0	0	2IR-1
<b>B-B Pressure Retaining Welds in Vessels Other Than Reactor Vessels</b>								
B2.11	2/2	RC	E-10	01	1	0	1	2IR-2
		RC	E-10	09				2IR-11
B2.12	2/2	RC	E-10	03	1	0	1	
		RC	E-10	08				
B2.40	1/4	RC	E-11A	SEAM-1	1	0	0	2IR-2

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
<b>B-D Full Penetration Welded Nozzles in Vessels - Inspection Program B</b>								
B3.90	8/8	RC	RPV	105-121-B	0	0	8	
		RC	RPV	105-121-C				
		RC	RPV	105-121-F				
		RC	RPV	105-121-G				
		RC	RPV	107-121-A				2IR-1
		RC	RPV	107-121-D				2IR-1
		RC	RPV	107-121-E				2IR-1
		RC	RPV	107-121-H				2IR-1
B3.100	8/8	RC	RPV	IR-128-101-B	0	0	8	
		RC	RPV	IR-128-101-C				
		RC	RPV	IR-128-101-F				
		RC	RPV	IR-128-101-G				
		RC	RPV	IR-128-301-A				
		RC	RPV	IR-128-301-D				
		RC	RPV	IR-128-301-E				
		RC	RPV	IR-128-301-H				
B3.110	6/6	RC	E-10	A-NZ	2	2	2	2IR-2
		RC	E-10	B-NZ				2IR-2
		RC	E-10	C-NZ				2IR-2
		RC	E-10	D-NZ				2IR-2
		RC	E-10	S-NZ				2IR-2
		RC	E-10	SP-NZ				2IR-2
B3.120	6/6	RC	E-10	A-IR	2	2	2	
		RC	E-10	B-IR				
		RC	E-10	C-IR				
		RC	E-10	D-IR				
		RC	E-10	S-IR				
		RC	E-10	SP-IR				
B3.130	8/8	RC	E-11A	2A-NZ	4	2	2	2IR-2
		RC	E-11A	2B-NZ				2IR-2
		RC	E-11B	2A-NZ				
		RC	E-11B	2B-NZ				
		RC	E-11C	2A-NZ				
		RC	E-11C	2B-NZ				
		RC	E-11D	2A-NZ				
		RC	E-11D	2B-NZ				

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
<b>B-D Full Penetration Welded Nozzles in Vessels - Inspection Program B (Continued)</b>								
B3.140	8/8	RC	E-11A	2A-IR	4	2	2	
		RC	E-11A	2B-IR				
		RC	E-11B	2A-IR				
		RC	E-11B	2B-IR				
		RC	E-11C	2A-IR				
		RC	E-11C	2B-IR				
		RC	E-11D	2A-IR				
		RC	E-11D	2B-IR				

**B-F Pressure Retaining Dissimilar Metal Welds in Vessel Nozzles**

B5.10 Welds within these Code Items are included in the Risk-Informed ISI Program.

B5.40

B5.70

**B-G-1 Pressure Retaining Bolting, Greater Than 2 Inches in Diameter**

B6.10	54/54	RC	RPV	NUT 1-54	18	0	36	
B6.20 & B6.30	54/54	RC	RPV	STUD 1-54	18	18	18	
B6.40	54/54	RC	RPV	FLANGE THREAD 1-54	54	0	0	
B6.50	54/54	RC	RPV	WASHER 1-54	19	18	17	

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
<b>B-G-1 Pressure Retaining Bolting, Greater than 2 Inches in Diameter</b> (Continued)								
B6.180	24/96	RC	RC-P-1A	S-11516	0	0	24	
		RC	RC-P-1A	S-11521				
		RC	RC-P-1A	S-11529				
		RC	RC-P-1A	S-11535				
		RC	RC-P-1A	S-11706				
		RC	RC-P-1A	S-11709				
		RC	RC-P-1A	S-11710				
		RC	RC-P-1A	S-11712				
		RC	RC-P-1A	S-11722				
		RC	RC-P-1A	S-11724				
		RC	RC-P-1A	S-11726				
		RC	RC-P-1A	S-11727				
		RC	RC-P-1A	S-11728				
		RC	RC-P-1A	S-11730				
		RC	RC-P-1A	S-11731				
		RC	RC-P-1A	S-11733				
		RC	RC-P-1A	S-11734				
		RC	RC-P-1A	S-11736				
		RC	RC-P-1A	S-11738				
		RC	RC-P-1A	S-11743				
		RC	RC-P-1A	S-12385				
		RC	RC-P-1A	S-12386				
		RC	RC-P-1A	S-12411				
		RC	RC-P-1A	S-12427				
B6.190	1/1	RC	RC-P-1B	FLANGE	0	0	1	
<b>B-G-2 Pressure Retaining Bolting, 2 Inches and Less in Diameter</b>								
B7.20	1/1	RC	E-10	R-BOLT	1	0	0	

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
<b>B-G-2 Pressure Retaining Bolting, 2 Inches and Less in Diameter (Continued)</b>								
B7.30	16/16	RC	E-11A	2-A-STUDS	8	0	8	
		RC	E-11A	2-A-NUTS				
		RC	E-11A	2-B-STUDS				
		RC	E-11A	2-B-NUTS				
		RC	E-11B	2-A-STUDS				
		RC	E-11B	2-A-NUTS				
		RC	E-11B	2-B-STUDS				
		RC	E-11B	2-B-NUTS				
		RC	E-11C	2-A-STUDS				
		RC	E-11C	2-A-NUTS				
		RC	E-11C	2-B-STUDS				
		RC	E-11C	2-B-NUTS				
		RC	E-11D	2-A-STUDS				
		RC	E-11D	2-A-NUTS				
		RC	E-11D	2-B-STUDS				
		RC	E-11D	2-B-NUTS				
B7.50	5/5	RH	0160-05	FE-2540-B	2	1	2	
		RH	0180-03	FE-2541-B				
		SI	0273-01	FE-925-B				
		SI	0274-01	FE-926-B				
		SI	0275-01	FE-927-B				
B7.60	4/4	CS	0328-07	P-1A-B	2	0	2	
		CS	0329-05	P-1B-B				
		CS	0330-05	P-1C-B				
		CS	0331-05	P-1D-B				
B7.70	48/48	RC	0013-01	V22-B	28	14	6	
		RC	0013-01	V23-B				
		RC	0021-01	PCV455B-B				
		RC	0048-01	PCV455A-B				
		RC	0058-01	V87-B				
		RC	0058-01	V88-B				
		RC	0074-01	V115-B				
		RC	0075-01	V116-B				
		RC	0076-01	V117-B				
		RC	0080-02	PCV456A-B				

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
<b>B-G-2 Pressure Retaining Bolting, 2 Inches and Less in Diameter (Continued)</b>								
B7.70 (Continued)		RC	0080-02	V122-B				
		RC	0080-06	V124-B				
		RC	0080-06	PCV456B-B				
		RC	0097-01	LCV459-B				
		RC	0097-01	LCV460-B				
		RC	0097-01	V81-B				
		RH	0155-05	V15-B				
		RH	0155-05	V59-B				
		RH	0158-05	V29-B				
		RH	0158-05	V63-B				
		RH	0160-05	V50-B				
		RH	0160-06	V53-B				
		RH	0162-02	V31-B				
		RH	0162-02	V61-B				
		RH	0163-02	V30-B				
		RH	0163-02	V65-B				
		RH	0180-02	V51-B				
		RH	0180-03	V52-B				
		SI	0201-02	V3-B				
		SI	0201-02	V5-B				
		SI	0201-02	V6-B				
		SI	0202-02	V17-B				
		SI	0202-02	V20-B				
		SI	0202-02	V21-B				
		SI	0203-02	V32-B				
		SI	0203-02	V35-B				
		SI	0203-02	V36-B				
		SI	0204-02	V47-B				
		SI	0204-02	V50-B				
		SI	0204-02	V51-B				
		SI	0251-07	V82-B				
		SI	0261-04	V87-B				
		SI	0272-04	V140-B				
		CS	0365-02	V185-B				
		CS	0366-02	V181-B				
		CS	0366-02	V182-B				
		CS	0368-02	V178-B				
		CS	0368-02	V179-B				

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
B-J Pressure Retaining Welds in Piping								
B9.11	Welds within these Code Items are included in the Risk-Informed ISI Program.							
B9.21								
B9.31								
B9.32								
B9.40								
B-K Welded Attachments for Vessels, Piping, Pumps, and Valves								
B10.10	1/5	RC	E-10	A-LUG				2IR-12
		RC	E-10	B-LUG				2IR-12
		RC	E-10	C-LUG				2IR-12
		RC	E-10	D-LUG				2IR-12
		RC	E-10	SKIRT				
B10.20	1/1	RC	0021-00	SG-08-L	0	1	0	
B-L-2 Pump Casings								
B12.20	1/4	RC	RC-P-1B	IS	1	0	0	
B-M-2 Valve Bodies								
B12.50	6/33	See Table 2			1	0	5	
B-N-1 Interior of Reactor Vessel								
B13.10	1/1	RC	RPV	INTERIOR	1	1	1	
B-N-2 Welded Core Support Structures and Interior Attachments to Reactor Vessels								
B13.60	6/6	RC	RPV	104-142-0°	0	0	6	
		RC	RPV	104-142-120°				
		RC	RPV	104-142-180°				
		RC	RPV	104-142-240°				
		RC	RPV	104-142-300°				
		RC	RPV	104-142-60°				
B-N-3 Removable Core Support Structures								
B13.70	1/1	RC	RPV	CORE SUPPORT	0	0	1	
B-O Pressure Retaining Welds in Control Rod Housings								
B14.10	2/20	RC	RPV	214-112-B	2	0	0	
		RC	RPV	215-112-A				

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Line No.</b>	<b>Component ID</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>REL REQ</b>
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**B-P All Pressure Retaining Components**

The requirements of this category are met as described by the Pressure Test Plan - Appendix D.

**B-Q Steam Generator Tubing**

The requirements of this category are governed by plant Technical Specifications.

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
C-A Pressure Retaining Welds in Pressure Vessels								
C1.10	11/21	RC	E-11A	SEAM-3	3	2	6	
		RC	E-11A	SEAM-5				
		RC	E-11A	SEAM-6				
		CS	E-2	REG-3A				
		CS	E-2	REG-3B				
		CS	E-2	REG-4A				
		CS	E-2	REG-4B				
		CS	E-2	REG-5A				
		CS	E-2	REG-5B				
		CS	E-3	C				
		RH	E-9B	01B				
C1.20	4/8	RC	E-11A	SEAM-8	1	2	1	
		CS	E-2	REG-2A				
		CS	E-2	REG-2B				
		RH	E-9B	02B				
C1.30	1/4	RC	E-11A	SEAM-2	0	1	0	
C-B Pressure Retaining Nozzle Welds in Vessels								
C2.21	2/8	RC	E-11A	11-NZ	0	1	1	
		RC	E-11A	16-NZ				
C2.22	1/8	RC	E-11A	11-IR	0	0	1	2IR-4
		RC	E-11A	16-IR				
C2.31	2/4	RH	E-9B	NZA-B	2	0	0	2IR-6
		RH	E-9B	NZB-B				2IR-6
C2.33	2/4	RH	E-9B	NZA-B	0	2	0	2IR-6
		RH	E-9B	NZB-B				2IR-6
C-C Integral Attachments for Vessels, Piping, Pumps, and Valves								
C3.10	1/2	RH	E-9B	SKIRT B	1	0	0	
C3.20	4/29	FW	4607-00	SC-09A-L	1	2	1	
		MS	4001-00	SV-09A-L				
		MS	4002-00	SV-09A-L				
		MS	4003-00	SV-09A-L				

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Line No.</b>	<b>Component ID</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>REL REQ</b>
<b>C-F-1 Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping</b>								
C5.11	60/790	RC	0013-02	15	17	20	23	
		RC	0013-02	16				
		RC	0013-02	21				
		RC	0013-03	01				
		RC	0013-03	04				
		RC	0013-04	10				
		RH	0151-01	02				
		RH	0151-10	03				
		RH	0151-10	04				
		RH	0152-01	03				
		RH	0155-02	01				
		RH	0155-02	32				
		RH	0155-03	08				
		RH	0157-01	06				
		RH	0157-01	10				
		RH	0157-10	03				
		RH	0158-02	36				
		RH	0158-03	12				
		RH	0159-01	14				
		RH	0159-02	03				
		RH	0160-01	34				
		RH	0160-01	35				
		RH	0160-04	01				
		RH	0161-01	05				
		RH	0162-01	01				
		RH	0162-04	02				
		RH	0163-01	02				

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
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**C-F-1 Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping (Continued)**

C5.11 (Continued)

RH	0163-05	04
RH	0179-01	01
RH	0179-01	03
RH	0179-01	05
RH	0180-01	01
SI	0202-01	03
SI	0261-02	01
CBS	1201-01	08
CBS	1202-03	03
CBS	1207-01	08
CBS	1207-02	02
CBS	1208-01	02
CBS	1208-02	05
CBS	1208-03	01
CBS	1209-01	02
CBS	1210-11	02
CBS	1210-11	06
CBS	1212-02	03
CBS	1212-16	10
CBS	1213-01	02
CBS	1213-02	03
CBS	1213-02	09
CBS	1213-03	02
CBS	1214-01	02
CBS	1214-02	19
CBS	1214-02	21
CBS	1215-01	01
CBS	1215-02	08
CBS	1215-03	01
CBS	1216-01	01
CBS	1216-02	01
CBS	1216-02	20
CBS	1216-02	22

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Line No.</b>	<b>Component ID</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>REL REQ</b>
<b>C-F-1 Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping (Continued)</b>								
C5.21	59/761	SI	0250-02	07	14	16	29	
		SI	0250-02	14				
		SI	0250-03	01				
		SI	0250-03	03				
		SI	0250-03	04				
		SI	0251-02	04				
		SI	0251-02	08				
		SI	0251-03	01				
		SI	0251-03	09				
		SI	0251-03	27				
		SI	0256-01	02				
		SI	0256-01	08				
		SI	0256-02	02				
		SI	0256-02	09				
		SI	0257-01	02				
		SI	0259-01	01				
		SI	0272-02	10				
		SI	0272-02	14				
		SI	0272-03	03				
		CS	0324-01	01				
		CS	0324-01	02				
		CS	0327-01	03				
		CS	0327-01	04				
		CS	0327-01	05				
		CS	0328-02	04				
		CS	0328-02	21				
		CS	0355-01	01				
		CS	0355-01	03				
		CS	0355-01	04				
		CS	0355-01	09				
		CS	0355-01	10				
		CS	0355-06	01				
		CS	0357-01	06				
		CS	0357-01	07				
		CS	0357-01	39				
		CS	0358-02	01				
		CS	0362-01	02				
		CS	0362-01	03				
		CS	0363-02	01				

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
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**C-F-1 Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping (Continued)**

C5.21 (Continued)	CS		0364-01	01				
	CS		0364-01	03				
	CS		0364-02	01				
	CS		0369-02	06				
	CS		0369-02	10				
	CS		0369-02	11				
	CS		0369-02	24				
	CS		0369-02	38				
	CS		0369-02	39				
	CS		0369-02	53				
	CS		0369-03	08				
	CS		0370-01	04				
	CS		0370-03	06				
	CS		0371-01	01				
	CS		0371-03	08				
	CS		0374-01	02				
	CS		0375-01	04				
	CS		0375-01	06				
	CS		0377-01	02				
	CS		0453-02	02				

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Line No.</b>	<b>Component ID</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>REL REQ</b>
<b>C-F-1 Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping (Continued)</b>								
C5.30	21/237	SI	0250-04	02	6	8	7	
		SI	0251-04	07				
		SI	0256-04	01				
		SI	0258-01	02				
		SI	0258-02	01				
		SI	0259-02	12				
		SI	0259-03	01				
		SI	0270-01	07				
		CS	0326-01	03				
		CS	0326-01	04				
		CS	0327-02	01				
		CS	0327-02	02				
		CS	0328-01	10				
		CS	0328-03	22				
		CS	0329-01	07				
		CS	0330-01	18				
		CS	0331-01	11				
		CS	0358-01	01				
		CS	0363-01	01				
		CS	0363-02	01				
		CS	0367-02	01				
C5.41	1/14	CBS	1214-02	02B	0	0	1	

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
<b>C-F-2 Pressure Retaining Welds in Carbon or Low Alloy Steel Piping</b>								
C5.51	133/399	MS	4000-01	01	33	22	82	
		MS	4000-01	02				
		MS	4000-02	04				AUG
		MS	4000-02	05				AUG
		MS	4000-02	06				AUG
		MS	4000-02	07				AUG
		MS	4000-02	08				AUG
		MS	4000-02	09				AUG
		MS	4000-02	10				AUG
		MS	4000-41	01				AUG
		MS	4000-41	02				AUG
		MS	4000-41	03				AUG
		MS	4000-41	05				AUG
		MS	4000-41	06				AUG
		MS	4000V6	01				AUG
		MS	4000V7	01				AUG
		MS	4000V8	01				AUG
		MS	4000V9	01				AUG
		MS	4000V10	01				AUG
		MS	4001-02	04				AUG
		MS	4001-02	05				AUG
		MS	4001-02	06				AUG
		MS	4001-02	07				AUG
		MS	4001-02	08				AUG
		MS	4001-02	09				AUG
		MS	4001-02	10				AUG
		MS	4001-41	01				AUG
		MS	4001-41	02				AUG
		MS	4001-41	03				AUG
		MS	4001-41	05				AUG
		MS	4001-41	06				AUG
		MS	4001V22	01				AUG
		MS	4001V23	01				AUG
		MS	4001V24	01				AUG
		MS	4001V25	01				AUG
		MS	4001V26	01				AUG
		MS	4002-02	04				AUG
		MS	4002-02	05				AUG
		MS	4002-02	06				AUG
		MS	4002-02	07				AUG

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
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**C-F-2 Pressure Retaining Welds in Carbon or Low Alloy Steel Piping (Continued)**

C5.51 (Continued)	MS	4002-02	08	AUG				
	MS	4002-02	09	AUG				
	MS	4002-02	10	AUG				
	MS	4002-02	11	AUG				
	MS	4002-02	12	AUG				
	MS	4002-36	06					
	MS	4002-37	01	AUG				
	MS	4002-37	02	AUG				
	MS	4002-37	03	AUG				
	MS	4002-37	05	AUG				
	MS	4002V36	01	AUG				
	MS	4002V37	01	AUG				
	MS	4002V38	01	AUG				
	MS	4002V39	01	AUG				
	MS	4002V40	01	AUG				
	MS	4003-02	02					
	MS	4003-02	04	AUG				
	MS	4003-02	05	AUG				
	MS	4003-02	06	AUG				
	MS	4003-02	07	AUG				
	MS	4003-02	08	AUG				
	MS	4003-02	09	AUG				
	MS	4003-02	10	AUG				
	MS	4003-02	11	AUG				
	MS	4003-02	12	AUG				
	MS	4003-36	08					
	MS	4003-37	01	AUG				
	MS	4003-37	02	AUG				
	MS	4003-37	03	AUG				
	MS	4003-37	05	AUG				
	MS	4003V50	01	AUG				
	MS	4003V51	01	AUG				
	MS	4003V52	01	AUG				
	MS	4003V53	01	AUG				
	MS	4003V54	01	AUG				
	FW	4606-03	01	AUG				
	FW	4606-03	02	AUG				
	FW	4606-03	03	AUG				

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
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**C-F-2 Pressure Retaining Welds in Carbon or Low Alloy Steel Piping (Continued)**

C5.51 (Continued)	FW		4606-03	04	AUG			
	FW		4606-03	05	AUG			
	FW		4606-03	06	AUG			
	FW		4606-03	07	AUG			
	FW		4606-03	08	AUG			
	FW		4606-03	09	AUG			
	FW		4606-03	10	AUG			
	FW		4606-03	11	AUG			
	FW		4606-03	12	AUG			
	FW		4606-04	01	AUG			
	FW		4606-04	21	AUG			
	FW		4607-03	01	AUG			
	FW		4607-03	02	AUG			
	FW		4607-03	03	AUG			
	FW		4607-03	04	AUG			
	FW		4607-03	05	AUG			
	FW		4607-03	06	AUG			
	FW		4607-03	07	AUG			
	FW		4607-03	08	AUG			
	FW		4607-03	09	AUG			
	FW		4607-03	10	AUG			
	FW		4607-03	11	AUG			
	FW		4607-03	12	AUG			
	FW		4607-04	01	AUG			
	FW		4607-04	21	AUG			
	FW		4608-03	01	AUG			
	FW		4608-03	02	AUG			
	FW		4608-03	03	AUG			
	FW		4608-03	04	AUG			
	FW		4608-03	05	AUG			
	FW		4608-03	06	AUG			
	FW		4608-03	07	AUG			
	FW		4608-03	08	AUG			
	FW		4608-03	09	AUG			
	FW		4608-03	10	AUG			
	FW		4608-03	11	AUG			
FW		4608-03	12	AUG				
FW		4608-03	13	AUG				

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
<b>C-F-2 Pressure Retaining Welds in Carbon or Low Alloy Steel Piping (Continued)</b>								
C5.51 (Continued)		FW	4608-04	01	AUG			
		FW	4608-04	21	AUG			
		FW	4609-03	01	AUG			
		FW	4609-03	02	AUG			
		FW	4609-03	03	AUG			
		FW	4609-03	04	AUG			
		FW	4609-03	05	AUG			
		FW	4609-03	06	AUG			
		FW	4609-03	07	AUG			
		FW	4609-03	08	AUG			
		FW	4609-03	09	AUG			
		FW	4609-03	10	AUG			
		FW	4609-03	11	AUG			
		FW	4609-03	12	AUG			
		FW	4609-03	13	AUG			
		FW	4609-04	01	AUG			
		FW	4609-04	21	AUG			
C5.81	24/44	MS	4000-02	02B	AUG	14	0	10
		MS	4000-02	03B	AUG			
		MS	4000-41	10B				
		MS	4000-41	11B				
		MS	4001-02	02B	AUG			
		MS	4001-02	03B	AUG			
		MS	4001-41	03B				
		MS	4001-41	04B				
		MS	4002-02	02B	AUG			
		MS	4002-02	03B	AUG			
		MS	4003-02	02B	AUG			
		MS	4003-02	03B	AUG			

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
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**C-F-2 Pressure Retaining Welds in Carbon or Low Alloy Steel Piping (Continued)**

C5.81 (Continued)	FW		4606-03	01B	AUG			
	FW		4606-03	02B	AUG			
	FW		4606-03	03B	AUG			
	FW		4607-03	01B	AUG			
	FW		4607-03	02B	AUG			
	FW		4607-03	03B	AUG			
	FW		4608-03	01B	AUG			
	FW		4608-03	02B	AUG			
	FW		4608-03	03B	AUG			
	FW		4609-03	01B	AUG			
	FW		4609-03	02B	AUG			
	FW		4609-03	03B	AUG			

**C-H All Pressure Retaining Components**

The requirements of this category are met as described by the Pressure Test Plan - Appendix D

**D-A Welded Attachments for Vessels, Piping, Pumps, and Valves**

D1.20	92/92	CC	1-0751-SG-002		31	31	30
		CC	1-0751-SG-005				
		CC	1-0751-SG-007				
		CC	1-0751-SG-009				
		CC	1-0751-SG-013				
		CC	1-0761-SG-003				
		CC	1-0761-SG-008				
		CC	1-0772-SG-022				
		CC	1-0777-RG-004				
		CC	1-0777-RG-007				
		CC	1-0777-SG-001				
		CC	1-0777-SG-011				
		CC	1-0777-SG-012				
		CC	1-0777-SG-020				
		CC	1-0777-SG-021				
		CC	1-0777-SH-002				
		CC	1-0779-SG-025				
		CC	1-0782-RG-009				
		CC	1-0784-RG-005				

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Line No.</b>	<b>Component ID</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>REL REQ</b>
<b>D-A Welded Attachments for Vessels, Piping, Pumps, and Valves (Continued)</b>								
D1.20 (Continued)		CC	1-0784-SV-003					
		CC	1-0794-RG-001					
		CC	1-0794-SG-004					
		CC	1-0794-SG-008					
		CC	1-0794-SG-009					
		CC	1-0795-SG-008					
		CC	1-0795-SG-010					
		CC	1-0797-SG-002					
		CC	1-0797-SG-004					
		CC	1-0797-SG-005					
		CC	1-0797-SG-007					
		CC	1-0797-SG-009					
		CC	1-0797-SG-010					
		CC	1-0797-SG-011					
		CC	1-0797-SG-012					
		CC	1-0827-SG-001					
		CC	1-0827-SG-003					
		CC	1-0827-SG-011					
		CC	1-0827-SG-018					
		CC	1-0827-SG-019					
		CC	1-0828-RG-010					
		CC	1-0829-RG-005					
		CC	1-0833-RG-010					
		CC	1-0833-SV-003					
		CC	1-0835-RG-006					
		CC	1-0835-SV-002					
		CC	1-0838-SG-003					
		CC	1-0838-SG-008					
		SF	1-1703-RG-003					
		SF	1-1703-SG-006					
		SF	1-1703-SG-008					
		SW	1-1801-SG-002					

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
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**D-A Welded Attachments for Vessels, Piping, Pumps, and Valves (Continued)**

D1.20 (Continued)	SW		1-1801-SG-004					
	SW		1-1802-RG-009					
	SW		1-1802-SG-005					
	SW		1-1806-RG-001					
	SW		1-1808-RG-001					
	SW		1-1810-SG-007					
	SW		1-1810-SG-023					
	SW		1-1811-RG-001					
	SW		1-1812-SG-004					
	SW		1-1812-SG-016					
	SW		1-1812-SG-026					
	SW		1-1813-RG-004					
	SW		1-1818-A-008					
	SW		1-1818-SG-003					
	SW		1-1818-SG-007					
	SW		1-1818-SG-013					
	SW		1-1820-SG-004					
	SW		1-1820-SG-006					
	SW		1-1827-SG-009					
	SW		1-1833-SG-002					
	SW		1-1833-SG-006					
	MS		1-4000-SG-072					
	DG		1-4397-SG-001					
	DG		1-4397-SG-003					
	DG		1-4398-SG-004					
	DG		1-4400-SG-001					
	DG		1-4400-SG-003					
	DG		1-4401-SG-001					
	DG		1-4401-SG-004					
	DG		1-4403-SG-003					
	DG		1-4403-SG-005					
	DG		1-4405-A-001A					

**Appendix B**  
**Class 1 and Class 2 Component Plan and Schedule**

EX Item	Exams	Sys	Line No.	Component ID	P1	P2	P3	REL REQ
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**D-A Welded Attachments for Vessels, Piping, Pumps, and Valves (Continued)**

D1.20 (Continued)	DG		1-4405-SG-002A					
	DG		1-4405-SG-006					
	DG		1-4408-SG-001					
	DG		1-4415-A-003A					
	DG		1-4415-SG-005					
	DG		1-4416-SG-003					
	DG		1-4417-A-002A					
	DG		1-4417-SG-006					
	DG		1-4420-SG-001					

**F-A Supports**

The requirements of this category are met as described by the Component Support Plan and Schedule - Appendix C

## **Appendix C**

### **COMPONENT SUPPORT PLAN AND SCHEDULE**

**Appendix C**  
**COMPONENT SUPPORT PLAN AND SCHEDULE**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Support Number</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>
<b>F-A Supports</b>						
F1.10	65/257	CS	1-0328-SG-037	22	22	21
		CS	1-0330-RG-030			
		CS	1-0343-A-013			
		CS	1-0343-RG-014			
		CS	1-0343-SG-010			
		CS	1-0343-SG-018			
		CS	1-0365-RG-004			
		CS	1-0365-SG-010			
		CS	1-0365-SH-006			
		CS	1-0366-SG-017			
		CS	1-0368-SG-012			
		RC	1-0013-SV-003			
		RC	1-0021-A-019			
		RC	1-0021-RG-018			
		RC	1-0021-SG-006			
		RC	1-0021-SG-017			
		RC	1-0021-SV-009			
		RC	1-0048-RG-004			
		RC	1-0048-RG-019			
		RC	1-0048-RG-024			
		RC	1-0048-SG-006			
		RC	1-0048-SV-026			
		RC	1-0049-SG-004			
		RC	1-0058-SG-005			
		RC	1-0058-SV-003			
		RC	1-0075-RG-001			
		RC	1-0080-SG-005			
		RC	1-0093-SV-001			
		RC	1-0097-A-007			
		RC	1-0097-SG-009			

**Appendix C**  
**COMPONENT SUPPORT PLAN AND SCHEDULE**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Support Number</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>
<b>F-A Supports (Continued)</b>						
F1.10 (Continued)		RC	1-0097-SH-011			
		RC	1-0097-SV-001			
		RH	1-0155-SG-004			
		RH	1-0155-SV-020			
		RH	1-0158-SG-026			
		RH	1-0160-SG-005			
		RH	1-0160-SG-010			
		RH	1-0162-SG-004			
		RH	1-0163-SG-003			
		RH	1-0180-SG-008			
		SI	1-0201-SG-003			
		SI	1-0202-SG-004			
		SI	1-0202-SG-008			
		SI	1-0203-SG-005			
		SI	1-0203-SV-013			
		SI	1-0204-SG-004			
		SI	1-0204-SG-005			
		SI	1-0204-SG-008			
		SI	1-0204-SV-013			
		SI	1-0251-SG-005			
		SI	1-0251-SG-008			
		SI	1-0251-SV-001			
		SI	1-0261-SG-009			
		SI	1-0272-A-009			
		SI	1-0272-SG-004			
		SI	1-0272-SG-006			
		SI	1-0272-SG-011			
		SI	1-0273-SG-007			
		SI	1-0273-SG-017			
		SI	1-0274-A-013			

**Appendix C**  
**COMPONENT SUPPORT PLAN AND SCHEDULE**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Support Number</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>
<b>F-A Supports (Continued)</b>						
F1.10 (Continued)		SI	1-0274-SG-004			
		SI	1-0274-SG-017			
		SI	1-0275-A-014			
		SI	1-0275-SG-003			
		SI	1-0275-SG-007			
		SI	1-0275-SG-021			
F1.20	121/796	CBS	1-1207-RG-009	40	41	40
		CBS	1-1208-SG-003			
		CBS	1-1208-SG-005			
		CBS	1-1208-SV-006			
		CBS	1-1212-RG-003			
		CBS	1-1212-RG-005			
		CBS	1-1212-SG-004			
		CBS	1-1213-RG-001			
		CBS	1-1213-RG-005			
		CBS	1-1213-SV-002			
		CBS	1-1216-SG-058			
		CBS	1-1216-SG-060			
		CC	1-0866-SG-001			
		CS	1-0324-A-003			
		CS	1-0325-SH-002			
		CS	1-0327-A-011			
		CS	1-0327-SG-003			
		CS	1-0327-SH-012			
		CS	1-0328-RG-010			
		CS	1-0328-SG-003			
		CS	1-0328-SG-025			
		CS	1-0328-SV-030			
		CS	1-0329-A-021			

**Appendix C**  
**COMPONENT SUPPORT PLAN AND SCHEDULE**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Support Number</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>
<b>F-A Supports</b>						
F1.20 (Continued)		CS	1-0329-SG-011			
		CS	1-0330-A-025			
		CS	1-0330-SG-011			
		CS	1-0331-A-012			
		CS	1-0355-A-007			
		CS	1-0355-RG-001			
		CS	1-0355-SG-012			
		CS	1-0355-SG-026			
		CS	1-0357-A-014			
		CS	1-0358-A-007			
		CS	1-0358-A-024			
		CS	1-0358-RG-002			
		CS	1-0358-SG-010			
		CS	1-0358-SV-020			
		CS	1-0360-A-030			
		CS	1-0360-RG-036			
		CS	1-0360-SG-009			
		CS	1-0360-SG-017			
		CS	1-0360-SG-026			
		CS	1-0360-SV-019			
		CS	1-0362-SV-002			
		CS	1-0363-A-005			
		CS	1-0363-SV-004			
		CS	1-0364-A-007			
		CS	1-0364-SV-002			
		CS	1-0364-SV-011			
		CS	1-0366-A-014			
		CS	1-0366-SG-010			
		CS	1-0368-A-008			
		CS	1-0369-A-008			

# **Appendix C** **COMPONENT SUPPORT PLAN AND SCHEDULE**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Support Number</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>
<b>F-A Supports (Continued)</b>						
F1.20 (Continued)		CS	1-0369-RG-022			
		CS	1-0369-RG-023			
		CS	1-0369-SG-010			
		CS	1-0369-SH-018			
		CS	1-0370-RG-004			
		CS	1-0370-RG-005			
		CS	1-0370-SV-003			
		CS	1-0371-SV-004			
		CS	1-0375-A-006			
		CS	1-0375-SV-010			
		CS	1-0375-SV-012			
		CS	1-0473-A-002			
		FW	1-4606-SV-012			
		FW	1-4607-A-034			
		FW	1-4607-SC-009A			
		FW	1-4607-SV-005A			
		FW	1-4608-SG-001A			
		FW	1-4609-RG-003A			
		FW	1-4609-SV-012			
		MS	1-4000-A-027			
		MS	1-4000-TG-013			
		MS	1-4001-SV-009A			
		MS	1-4002-RG-010A			
		MS	1-4002-SC-004			
		MS	1-4002-SG-015A			
		MS	1-4002-SV-009A			
		MS	1-4003-A-028			
		MS	1-4003-SG-008			
		MS	1-4003-SV-009A			
		MS	1-4003-TG-013			

**Appendix C**  
**COMPONENT SUPPORT PLAN AND SCHEDULE**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Support Number</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>
<b>F-A Supports (Continued)</b>						
F1.20 (Continued)		RC	1-0013-SG-013			
		RC	1-0013-SV-020			
		RC	1-0058-SV-020			
		RH	1-0155-SG-013			
		RH	1-0155-SG-024			
		RH	1-0155-SV-027			
		RH	1-0157-RG-005			
		RH	1-0157-SG-001			
		RH	1-0157-SH-017			
		RH	1-0158-A-020			
		RH	1-0158-SG-015			
		RH	1-0158-SG-023			
		RH	1-0158-SV-002			
		RH	1-0159-SG-005			
		RH	1-0160-SG-018			
		RH	1-0162-SG-001			
		RH	1-0167-SG-003			
		RH	1-0179-SV-005			
		SI	1-0201-SG-002			
		SI	1-0250-A-019			
		SI	1-0250-SG-004A			
		SI	1-0250-SG-005			
		SI	1-0251-A-015			
		SI	1-0251-SG-019			
		SI	1-0251-SG-029			
		SI	1-0256-A-021			
		SI	1-0256-SG-005			
		SI	1-0256-SG-013			
		SI	1-0258-A-010			
		SI	1-0259-A-012			

**Appendix C**  
**COMPONENT SUPPORT PLAN AND SCHEDULE**

<b>EX Item</b>	<b>Exams</b>	<b>Sys</b>	<b>Support Number</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>
<b>F-A Supports (Continued)</b>						
F1.20 (Continued)		SI	1-0260-A-006			
		SI	1-0261-SG-003			
		SI	1-0261-SG-004			
		SI	1-0270-A-003			
		SI	1-0272-A-017			
		SI	1-0272-RG-019			
		SI	1-0272-SG-020			
		SI	1-0274-SG-007			
F1.30	11/90	CC	1-0751-SG-005	3	5	3
		CC	1-0777-SG-001			
		CC	1-0784-RG-005			
		CC	1-0797-SG-002			
		CC	1-0797-SG-007			
		DG	1-4397-SG-003			
		DG	1-4405-A-001A			
		MS	1-4000-SG-072			
		SF	1-1703-SG-008			
		SW	1-1812-SG-004			
		SW	1-1813-RG-004			
F1.40	4/4	MS	STM,GEN,SUPTS	1	2	1
		RC	(RC) PMP SUPTS			
		RC	PRESSURIZER SUPTS			
		RC	RX NOZZ SUPTS			

## Appendix C

### ISI Snubbers Examined Under Technical Requirements Program 5.5

Note: The following list is the entire population of ISI snubbers (148) examined per TRP 5.5.

<b>ASME Class</b>	<b>Sys</b>	<b>Support Number</b>
1	CS	1-0343-RM-003
	CS	1-0343-RM-004
	CS	1-0343-RM-007
	CS	1-0365-RM-003
	CS	1-0366-RM-018
	CS	1-0368-RM-011
	MS	1-MS-RM-SGA-A
	MS	1-MS-RM-SGA-B
	MS	1-MS-RM-SGA-C
	MS	1-MS-RM-SGA-D
	MS	1-MS-RM-SGA-E
	MS	1-MS-RM-SGB-A
	MS	1-MS-RM-SGB-B
	MS	1-MS-RM-SGB-C
	MS	1-MS-RM-SGB-D
	MS	1-MS-RM-SGB-E
	MS	1-MS-RM-SGC-A
	MS	1-MS-RM-SGC-B
	MS	1-MS-RM-SGC-C
	MS	1-MS-RM-SGC-D
	MS	1-MS-RM-SGC-E
	MS	1-MS-RM-SGD-A
	MS	1-MS-RM-SGD-B
	MS	1-MS-RM-SGD-C
	MS	1-MS-RM-SGD-D
	MS	1-MS-RM-SGD-E
	RC	1-0013-RM-001
	RC	1-0013-RM-006
	RC	1-0013-RM-021
	RC	1-0021-RM-002
	RC	1-0021-RM-004 BOT

## Appendix C

### ISI Snubbers Examined Under Technical Requirements Program 5.5

ASME Class	Sys	Support Number
1	RC	1-0021-RM-004 TOP
	RC	1-0021-RM-007 BOT
	RC	1-0021-RM-007 TOP
	RC	1-0021-RM-011
	RC	1-0021-RM-012
	RC	1-0021-RM-024
	RC	1-0021-RM-026
	RC	1-0048-RM-001
	RC	1-0048-RM-025
	RC	1-0048-RM-027
	RC	1-0048-RM-028
	RC	1-0048-RM-030
	RC	1-0049-RM-002
	RC	1-0049-RM-003
	RC	1-0058-RM-001
	RC	1-0058-RM-006
	RC	1-0058-RM-021
	RC	1-0097-RM-004
	RC	1-0097-RM-022
	RC	1-0097-RM-023
	RH	1-0155-RM-005
	RH	1-0155-RM-031
	RH	1-0158-RM-031
	RH	1-0158-RM-035
	RH	1-0160-RM-008
	RH	1-0160-RM-024
	RH	1-0162-RM-005
	RH	1-0162-RM-008
	RH	1-0163-RM-008
	RH	1-0163-RM-012
	RH	1-0180-RM-006

## Appendix C

### ISI Snubbers Examined Under Technical Requirements Program 5.5

ASME Class	Sys	Support Number
1	RH	1-0180-RM-011
	SI	1-0201-RM-007
	SI	1-0201-RM-009
	SI	1-0201-RM-010
	SI	1-0201-RM-014
	SI	1-0201-RM-015
	SI	1-0202-RM-007
	SI	1-0202-RM-009
	SI	1-0202-RM-010
	SI	1-0202-RM-014
	SI	1-0202-RM-015
	SI	1-0203-RM-007
	SI	1-0203-RM-009
	SI	1-0203-RM-010
	SI	1-0203-RM-011
	SI	1-0203-RM-014
	SI	1-0203-RM-015
	SI	1-0204-RM-007 BOT
	SI	1-0204-RM-007 TOP
	SI	1-0204-RM-009
	SI	1-0204-RM-010
	SI	1-0204-RM-011
	SI	1-0204-RM-014
	SI	1-0204-RM-015
	SI	1-0251-RM-006
	SI	1-0251-RM-040
	SI	1-0261-RM-008
	SI	1-0272-RM-007
	SI	1-0273-RM-016
	SI	1-0274-RM-016
	SI	1-0275-RM-017

## Appendix C

### ISI Snubbers Examined Under Technical Requirements Program 5.5

ASME Class	Sys	Support Number
2	CS	1-0355-RM-031 BOT
		1-0355-RM-031 TOP
		1-0355-RM-033
		1-0355-RM-034
		1-0369-RM-021
		1-0375-RM-011
	FW	1-4606-RM-005B
		1-4606-RM-007A
		1-4606-RM-008A
		1-4607-RM-005B
		1-4607-RM-007
		1-4607-RM-008A
		1-4608-RM-005B
		1-4608-RM-007
		1-4608-RM-008A
		1-4609-RM-005B
		1-4609-RM-007A
		1-4609-RM-008A
	MS	1-4000-RM-005
		1-4000-RM-006
		1-4000-RM-009
		1-4000-RM-010 BOT
		1-4001-RM-010 TOP
		1-4001-RM-005
		1-4001-RM-006
		1-4001-RM-009
		1-4001-RM-010 BOT
		1-4001-RM-010 TOP
		1-4002-RM-005
		1-4002-RM-006
		1-4002-RM-009

## Appendix C

### ISI Snubbers Examined Under Technical Requirements Program 5.5

ASME Class	Sys	Support Number
2	MS	1-4002-RM-010
		1-4002-RM-024
		1-4003-RM-005
		1-4003-RM-006
		1-4003-RM-009
		1-4003-RM-010
		1-4003-RM-024
	RH	1-0155-RM-017
		1-0155-RM-025A
		1-0158-RM-005
		1-0160-RM-006
		1-0180-RM-003
	SB	1-1310-RM-052 N
		1-1310-RM-052 S
	SI	1-0256-RM-018
		1-0256-RM-019
		1-0260-RM-005
		1-0270-RM-007
3	CC	1-0784-RM-006
		1-0835-RM-005 HOR
		1-0835-RM-005 VER
	DG	1-4403-RM-002 N
		1-4403-RM-002 S
	MS	1-4001-RM-059

## **Appendix D**

### **PRESSURE TEST PLAN**

## Appendix D

### PRESSURE TEST PLAN

The following System Leakage Tests are Seabrook Station procedures which are conducted as specified in Article IWA-5110(a) of the 1995 Edition through the 1996 Addenda of ASME Section XI.

#### Examination Category B-P, All Pressure Retaining Components

Procedure	Test
EX1810.101	Class 1 Reactor Coolant System Leakage Test

#### Examination Category C-H, All Pressure Retaining Components

Procedure	Test
EX1810.201	Containment Spray Train A ISI System Leakage Test
EX1810.202	Containment Spray Train B ISI System Leakage Test
EX1810.203	Reactor Water Storage Tank and Spray Additive Tank ISI System Leakage Test
EX1810.204	Volume Control Tank ISI System Leakage Test
EX1810.206	Charging ISI System Leakage Test
EX1810.207	Residual Heat Removal Train A ISI System Leakage Test
EX1810.208	Residual Heat Removal Train B ISI System Leakage Test
EX1810.209	Spent Fuel Pool Cleanup ISI System Leakage Test
EX1810.210	Safety Injection Train A ISI System Leakage Test
EX1810.211	Safety Injection Train B ISI System Leakage Test
EX1810.213	Feedwater ISI System Leakage Test
EX1810.214	Instrument Air Penetration Piping ISI System Leakage Test
EX1810.215	Vent Gas Penetration Piping ISI System Leakage Test
EX1810.216	Low Head Injection ISI System Leakage Test
EX1810.217	Service Air Penetration Piping ISI System Leakage Test
EX1810.218	Reactor Make-Up Water Penetration Piping ISI System Leakage Test
EX1810.221	Fire Protection Penetration Piping ISI System Leakage Test
EX1810.222	Combustible Gas Control ISI System Leakage Test
EX1810.223	Main Steam Loops A & D ISI System Leakage Test
EX1810.224	Main Steam Loops B & C ISI System Leakage Test
EX1810.225	Steam Generator Blowdown ISI System Leakage Test
EX1810.226	Waste Liquid Drain Penetration Piping ISI System Leakage Test
EX1810.227	Waste Liquid Drain Sump Penetration Piping ISI System Leakage Test
EX1810.229	Charging Letdown ISI System Leakage Test

## **Appendix D**

### **PRESSURE TEST PLAN**

#### **Examination Category D-B, All Pressure Retaining Components**

<b>Procedure</b>	<b>Test</b>
EX1810.301	Service Water Train A ISI System Leakage Test
EX1810.302	Service Water Train B ISI System Leakage Test
EX1810.303	Primary Component Cooling Loop B ISI System Leakage Test
EX1810.304	Primary Component Cooling Loop A ISI System Leakage Test
EX1810.305	Primary Component Cooling Thermal Barrier ISI System Leakage Test
EX1810.306	Boric Acid Transfer ISI System Leakage Test
EX1810.309	Spent Fuel Pool Cooling ISI System Leakage Test
EX1810.310	Emergency Feedwater Pump ISI System Leakage Test
EX1810.313	Diesel Generator "B" Cooling Water ISI System Leakage Test
EX1810.314	Diesel Generator "B" Starting Air ISI System Leakage Test
EX1810.315	Diesel Generator "A" Starting Air ISI System Leakage Test
EX1810.316	Diesel Generator "A" Cooling Water ISI System Leakage Test
EX1810.317	Main Steam Supply to Emergency Feedwater ISI System Leakage Test
EX1810.318	Diesel Generator "A" Fuel Oil ISI System Leakage Test
EX1810.319	Diesel Generator "B" Fuel Oil ISI System Leakage Test
EX1810.320	Diesel Generator "A" Lube Oil ISI System Leakage Test
EX1810.321	Diesel Generator "B" Lube Oil ISI System Leakage Test

## **Appendix E**

### **AUGMENTED REQUIREMENT DESCRIPTIONS**

## **Appendix E**

### **AUGMENTED REQUIREMENT DESCRIPTIONS**

#### Break Exclusion Piping

The Updated Final Safety Analysis Report (UFSAR), Section 6.6.8, contains a commitment for an augmented inservice inspection program to protect against postulated pipe failures in certain high energy lines penetrating the containment building. This inspection supplements the examination requirements for Code Class 2 components and is described in the Code Class 2 examination portion of this ISI Program.

As stated in UFSAR Section 6.6.8, the Main Steam and Feedwater system piping between the first pipe whip restraint inside containment and the five-degree restraint outside containment is subject to augmented inservice inspection.

The augmented inspection consists of examination of essentially 100% of the longitudinal and circumferential piping welds within the defined boundaries during each inspection interval. The augmented lines are as follows:

FW-4606-03-18"	MS-4000-02-30"
FW-4606-04-16"	MS-4000-41-30"
FW-4607-03-18"	MS-4001-02-30"
FW-4607-04-16"	MS-4001-41-30"
FW-4608-03-18"	MS-4002-02-30"
FW-4608-04-16"	MS-4002-37-30"
FW-4609-03-18"	MS-4003-02-30"
FW-4609-04-16"	MS-4003-37-30"

#### Reactor Coolant Pump Flywheels

Technical Specification 4.4.10 states in part that each reactor coolant pump flywheel shall be inspected per the recommendations of Regulatory Guide 1.14, Revision 1, August 1975.

Regulatory Guide 1.14 provides the following two examinations:

1. An in-place ultrasonic volumetric examination of the areas higher stress concentration at the bore and keyway at approximately 3-year intervals, during the refueling or maintenance shutdown coinciding with the inservice inspection schedule as required by Section XI of the ASME Code.
2. A surface examination of all exposed surfaces and complete ultrasonic volumetric examination at approximately 10-year intervals, during the plant shutdown coinciding with the inservice inspection schedule as required by Section XI of the ASME Code.

### Snubber Examinations

Snubbers within the Inservice Inspection Program, Examination Category F-A, are examined in accordance with the criteria established in the Technical Requirements Program 5.5. This population of snubbers is included in Appendix C for reference.

## **Appendix F**

### **RELIEF REQUESTS, ALTERNATIVE REQUESTS, AND NRC CORRESPONDENCE**

## Appendix F: Relief Requests

### **Seabrook Nuclear Power Station Unit No. 1** **Relief From Inservice Inspection Requirements** **2IR-1, Revision 0**

Sheet 1 of 3

#### Components For Which Relief Is Requested:

Six Reactor Vessel Welds

#### Component Identification:

RC RPV 103-101  
RC RPV 101-101  
RC RPV 107-121-A  
RC RPV 107-121-D  
RC RPV 107-121-E  
RC RPV 107-121-H

#### ASME Code Class:

1

#### ASME Section XI Examination Category:

Table IWB-2500-1 Category B-A, Item No. B1.21  
Table IWB-2500-1 Category B-A, Item No. B1.40  
Table IWB-2500-1 Category B-D, Item No. B3.90

#### ASME Section XI Code Requirements:

ASME Section XI, 1995 Edition through the 1996 Addenda, Table IWB – 2500-1, Category B-A, Pressure Retaining Welds in Reactor Vessel, and Category B-D, Full Penetration Welded Nozzles in Vessels, require examination of essentially 100% of the weld.

North Atlantic has adopted ASME Code Case N-460, Alternative Examination Coverage for Class 1 and Class 2 Welds. This Code Case provides the alternative requirement when the entire examination volume or area cannot be examined due to interference by another component or part geometry, a reduction in examination coverage on any Class 1 or Class 2 weld may be accepted provided the reduction in coverage for that weld is less than 10%.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1** **Relief From Inservice Inspection Requirements** **2IR-1, Revision 0**

Sheet 2 of 3

#### **Basis and Justification for the Granting of Relief:**

Pursuant to 10CFR50.55a(g)(5)(iii), North Atlantic has determined that, due to design and geometric configuration, it is impractical to meet the Code required 100% coverage of Section XI or the alternative examination coverage requirements of Code Case N-460 on welds identified in Table 1.

#### **RPV Pressure Retaining Welds**

As required by ASME Section XI, Table IWB-2500-1, Category B-A, these welds receive a volumetric examination. Weld RC RPV 103-101 has limited coverage due to design (physical obstruction). The limitation is due to interference of the control rod drive (CRD) shield that limits examination to one side of the weld and the reactor vessel head lifting lugs, which cover the weld. Weld RC PRV 101-101 has limited coverage due to the close proximity of the weld to the reactor vessel head flange. The weld is sufficiently close such that only a one sided ultrasonic examination is possible. The surface examination of this weld is fully achievable.

#### **Nozzle Welds**

As required by ASME Section XI, Table IWB-2500-1, Category B-D, these welds receive a volumetric examination. The four welds listed in Table 1 have limited coverage due to the geometric configuration of the nozzle knuckle region.

In addition to the limited volumetric examination, the welds identified in Table 1 are subject to VT-2 visual examination conducted during the system leakage test each refueling outage as specified in Table IWB-2500-1, Examination Category B-P of the 1995 Edition through the 1996 Addenda of ASME Section XI.

North Atlantic believes that the volumetric examination coverage achieved, previous acceptable results of VT-2 visual examinations and examinations performed on welds with similar design, there is reasonable assurance of continued structural integrity of these welds, and an acceptable level of quality and safety is maintained.

#### **Alternate Examinations**

There are no alternate examinations proposed. Volumetric examination of the subject welds will be completed to the maximum extent practical.

#### **Applicability**

This Relief Request is applicable to the Second Ten-Year Interval Inservice Inspection Program.

## APPENDIX F: Relief Requests

**Seabrook Nuclear Power Station Unit No. 1**  
**Relief From Inservice Inspection Requirements**  
**2IR-1, Revision 0**

Sheet 3 of 3

Table 1  
Reactor Vessel Welds

<u>Weld Identification</u>	<u>Code Item/number</u>	<u>Limitation</u>	<u>CRV Coverage</u>
RC RPV 103-101	B 1.21	One-sided exam due to CRD Shield. Obstruction due to lifting lugs.	50%
RC RPV 101-101	B 1.40	One-sided exam due to CRD Shield. Obstruction due to lifting lugs.	50%
RC RPV 107-121-A	B 3.90	Geometric configuration of the nozzle knuckle region.	69%
RC RPV 107-121-D	B 3.90	Geometric configuration of the nozzle knuckle region.	69%
RC RPV 107-121-E	B 3.90	Geometric configuration of the nozzle knuckle region.	69%
RC RPV 107-121-H	B 3.90	Geometric configuration of the nozzle knuckle region.	69%

## Appendix F: Relief Requests

**Seabrook Nuclear Power Station Unit No. 1**  
**Relief From Inservice Inspection Requirements**  
**2IR-2, Revision 0**

Sheet 1 of 4

Components For Which Relief Is Requested:

Seven Pressurizer Welds  
Three Steam Generator Welds

Component Identification:

RC E-10 01	RC E-11A SEAM-1
RC E-10 A-NZ	RC E-11A 2A-NZ
RC E-10 B-NZ	RC E-11A 2B-NZ
RC E-10 C-NZ	
RC E-10 D-NZ	
RC E-10 S-NZ	
RC E-10 SP-NZ	

ASME Code Class:

1

ASME Section XI Examination Category:

Table IWB-2500-1 Category B-B, Item No. B2.11  
Table IWB-2500-1 Category B-B, Item No. B2.40  
Table IWB-2500-1 Category B-D, Item No. B3.110  
Table IWB-2500-1 Category B-D, Item No. B3.130

ASME Section XI Code Requirements:

ASME Section XI, 1995 Edition through the 1996 Addenda, Table IWB – 2500-1, Category B-B, Pressure Retaining Welds in Vessels Other Than Reactor Vessels, and Category B-D, Full Penetration Welded Nozzles in Vessels, require examination of essentially 100% of the weld.

North Atlantic has adopted ASME Code Case N-460, Alternative Examination Coverage for Class 1 and Class 2 Welds. This Code Case provides the alternative requirement when the entire examination volume or area cannot be examined due to interference by another component or part geometry, a reduction in examination coverage on any Class 1 or Class 2 weld may be accepted provided the reduction in coverage for that weld is less than 10%.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1** **Relief From Inservice Inspection Requirements** **2IR-2, Revision 0**

Sheet 2 of 4

#### **Basis and Justification for the Granting of Relief:**

Pursuant to 10CFR50.55a(g)(5)(iii), North Atlantic has determined that, due to design and geometric configuration, it is impractical to meet the Code required 100% coverage of Section XI or the alternative examination coverage requirements of Code Case N-460 on welds identified in Table 1.

#### **Pressurizer**

As required by ASME Section XI, Table IWB-2500-1, Category B-B and B-D, these welds receive a volumetric examination. Weld RC E-10 01 has limited coverage due to design (physical obstruction) and geometric configuration. Located just above and below the weld are 8 nonstructural attachments (NB-4435) used during manufacturing. Removal of these attachments by grinding is impractical and could negatively effect the Pressurizer vessel. There are also 5 – 1” diameter instrumentation nozzles located 6” above the weld centerline, which limits coverage. In addition, the transition geometry from the lower head to shell further limits coverage. Nozzle welds RC E-10 A-NZ through RC E-10 SP-NZ have limited coverage due to the nozzle to shell geometry and ID cladding. Table 1 lists each specific weld and its associated coverage.

#### **Steam Generators**

As required by ASME Section XI, Table IWB-2500-1, Category B-B and B-D, these welds receive a volumetric examination. Weld RC E-11A SEAM-1 has limited coverage due to physical constraints of the steam generator supports. Welds RC E-11A 2A-NZ and RC E-11A 2B-NZ have limited coverage due to the nozzle to shell geometry and the ID cladding. Table 1 lists each specific weld and its associated coverage.

In addition to the limited volumetric examination, the welds identified in the attached table are subject to VT-2 visual examination conducted during the system leakage test each refueling outage as specified in Table IWB-2500-1, Examination Category B-P of the 1995 Edition through the 1996 Addenda of ASME Section XI.

North Atlantic believes that previous acceptable results of volumetric examination coverage achieved, of VT-2 visual examinations and examinations performed on welds with similar design, there is reasonable assurance of continued structural integrity of these welds, and an acceptable level of quality and safety is maintained.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1**

#### **Relief From Inservice Inspection Requirements**

##### **2IR-2, Revision 0**

Sheet 3 of 4

##### **Alternate Examinations**

There are no alternate examinations proposed. Volumetric examination of the subject welds will be completed to the maximum extent practical.

##### **Applicability**

This Relief Request is applicable to the Second Ten-Year Interval Inservice Inspection Program.

## Appendix F: Relief Requests

**Seabrook Nuclear Power Station Unit No. 1**  
**Relief From Inservice Inspection Requirements**  
**2IR-2, Revision 0**

Sheet 4 of 4

Table 1  
Nozzle and Circumferential Welds

<u>Weld Identification</u>	<u>Code Item/number</u>	<u>Limitation</u>	<u>CRV Coverage</u>
RC E-10 01	B 2.11	OD interference.	80%
RC E-10 A-NZ	B3.110	Nozzle to shell geometry and ID cladding.	67%
RC E-10 B-NZ	B3.110	Nozzle to shell geometry and ID cladding.	55%
RC E-10 C-NZ	B3.110	Nozzle to shell geometry and ID cladding.	53%
RC E-10 D-NZ	B3.110	Nozzle to shell geometry and ID cladding.	77%
RC E-10 S-NZ	B3.110	Nozzle to shell geometry and ID cladding.	63%
RC E-10 SP-NZ	B3.110	Nozzle to shell geometry and ID cladding.	72%
RC E-11A SEAM-1	B 2.40	Steam generator supports.	78%
RC E-11A 2A-NZ	B 3.130	Nozzle to shell geometry and ID cladding.	84%
RC E-11A 2B-NZ	B 3.130	Nozzle to shell geometry and ID cladding.	84%

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1** **Relief From Inservice Inspection Requirements** **2IR-3, Revision 0**

Sheet 1 of 1

This Relief Request has been included but intentionally left blank in order to maintain a numbering system used during the First Ten-Year Inservice Inspection Interval. Piping welds previously listed in this Relief Request for the First Ten-Year ISI Interval will now be included in the Risk-Informed Inservice Inspection Program for Class 1 piping.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1** **Relief From Inservice Inspection Requirements** **2IR-4, Revision 0**

Sheet 1 of 2

#### **Components For Which Relief Is Requested:**

Excess Letdown Heat Exchanger Shell Circumferential Weld (CS E-3 C)  
Steam Generator Main Steam Outlet Nozzle Inner Radius (RC E-11A 16-IR)

#### **ASME Code Class:**

2

#### **ASME Section XI Examination Category:**

Table IWC-2500-1 Category C-A, Item No. C1.10 - Shell Circumferential Welds  
Table IWC-2500-1 Category C-B, Item No. C2.22 – Nozzle Inside Radius Section

#### **ASME Section XI Code Requirements:**

ASME Section XI, 1995 Edition through the 1996 Addenda, Table IWC-2500-1 Category C-A, Item No. C1.10 - Shell Circumferential Welds requires that circumferential shell welds at gross structural discontinuities be volumetrically examined. Note 1 identifies that the examinations include essentially 100% of the weld length.

ASME Section XI, 1995 Edition through the 1996 Addenda, Table IWC-2500-1 Category C-B, Item No. C2.22 – Nozzle Inside Radius Section requires that the inner radius sections of all nozzles at terminal ends of piping runs be volumetrically examined.

#### **Basis and Justification for the Granting of Relief:**

Pursuant to 10CFR50.55a(g)(5)(iii), North Atlantic has determined that due to design and geometry, the examination requirement of "essentially 100%" of the weld length as specified in Table IWC-2500-1 Category C-A, Item No. C1.10 for weld CS E-3 C is impractical to meet. The examination coverage of this weld is limited to 43% due to vessel head to flange geometry and permanent physical obstruction. As depicted on drawing 1-NHY-650000, the heat exchanger head is directly welded to a flange. The inlet and outlet connections are located on the head, but adjoin the weld. This creates a limitation such that the transducers can only scan from the head side of the weld and can only cover the area between the inlet and outlet connections.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1**

#### **Relief From Inservice Inspection Requirements**

##### **2IR-4, Revision 0**

Sheet 2 of 2

Coverage for Excess Letdown heat exchanger weld CS E-3 C was the conducted to the maximum extent practical with the design geometry and obstructions in place and is representative of the entire weld. This weld is also subject to VT-2 visual examination each inspection period as specified in Table IWC-2500-1, Examination Category C-H of the 1995 Edition through the 1996 Addenda of ASME Section XI. The coverage obtained on this weld and the associated pressure testing performed provides reasonable assurance of continued structural integrity of this weld.

Pursuant to 10CFR50.55a(g)(5)(iii), North Atlantic has determined that due to design and geometry, the volumetric examination requirement for nozzle inside radius sections of all nozzles at terminal ends of piping runs as specified in Table IWC-2500-1 Category C-B, Item No. C2.22 for weld RC E-11A 16-IR is impractical to meet. The steam generator main steam outlet nozzle is somewhat typical of a dropout nozzle, which is welded to the head. It is unlike a forged dropout, which has an inner radius transition. The main steam outlet nozzle contains a flow limiter device within the bore of the nozzle. This device makes a square transition to the nozzle making it ultrasonically impractical to examine and hence the 0% coverage assigned.

The steam generator main steam outlet nozzle weld is examined in accordance with Code requirements. In addition, a VT-2 examination associated with the system pressure test is performed on this weld each inspection period as specified in Table IWC-2500-1, Examination Category C-H of the 1995 Edition through the 1996 Addenda of ASME Section XI. Though the geometry of this nozzle is such that a true inner radius does not exist and cannot be examined, the examinations conducted on the nozzle weld provide reasonable assurance of the continued structural integrity of this nozzle.

#### **Alternative Examination:**

No alternate examination of inner radius section RC E-11A 16-IR is proposed.

No alternative examination for weld CS E-3 C is proposed.

#### **Applicability**

This Relief Request is applicable to the Second Ten-Year Interval Inservice Inspection Program.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1**

#### **Relief From Inservice Inspection Requirements**

##### **2IR-5, Revision 0**

Sheet 1 of 1

This Relief Request has been included but intentionally left blank in order to maintain a numbering system used during the First Ten-Year Inservice Inspection Interval. This Relief Request has been deleted.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1** **Relief From Inservice Inspection Requirements** **2IR-6, Revision 0**

Sheet 1 of 2

#### **Components For Which Relief Is Requested:**

Two Residual Heat Removal Heat Exchanger Nozzle To Shell Welds

#### **Component Identification:**

RH E-9B NZA-B  
RH E-9B NZB-B

#### **ASME Code Class:**

2

#### **ASME Section XI Examination Category:**

Table IWC-2500-1 Category C-B, Item No. C2.30

#### **ASME Section XI Code Requirement:**

ASME B&PV Code Section XI, 1995 Edition through the 1996 Addenda, Table IWC-2500-1, Item No. C2.31 requires a surface examination. Item No. C2.33 requires a VT-2 visual examination of the nozzle to shell welds as well as evidence of leakage examination per Item No. C2.33 Note 5.

#### **Basis and Justification for the Granting of Relief:**

Pursuant to 10CFR50.55a(a)(3)(i), relief is requested from performing the Code required surface examination, the VT-2 visual examination and evidence of leakage examination as directed in Table IWC-2500-1, Item Nos. C2.31 and C2.33 utilizing referenced Figure No. IWC-2500-4(c), and item No C2.33 Note 5.

The RHR Heat Exchanger Nozzle configuration is such that it does not conform to the referenced examination Figure No. IWC-2500-4(c). The inside of the vessel is inaccessible and the reinforcing plate is on the inside. Furthermore, the reinforcing plate does not possess a tell tale hole to verify evidence of leakage while the vessel is undergoing the system pressure test as required by Item No. C2.33 Note 5.

## Appendix F: Relief Requests

### **Seabrook Nuclear Power Station Unit No. 1** **Relief From Inservice Inspection Requirements** **2IR-6, Revision 0**

Sheet 2 of 2

North Atlantic believes that performing the Alternate Examinations provides reasonable assurance that unallowable inservice flaws have not developed in the subject RHR Heat Exchanger Nozzle to Shell Welds. Furthermore, performing the Alternative Examinations provides reasonable assurance that development of unallowable inservice flaws will be detected and repaired prior to return of the RHR Heat Exchanger to service. Thus, an acceptable level of quality and safety will have been achieved, and allowing the proposed alternative examinations in lieu of the Code requirement will not endanger public health and safety.

#### **Alternative Examinations**

- Perform a volumetric examination of the nozzle to shell welds.
- Perform a 100% surface examination of the nozzle to shell welds.
- Perform an inservice system leakage test and VT-2 visual examination per Table IWC-2500-1, Category C-H of the nozzle to shell welds.

The Alternate Examinations meet and exceed the required examinations of Code Category C-B, Item No. C2.30. It exceeds the requirements, as volumetric examination is not required due to the inside of the vessel being inaccessible. The technicality is that the examinations can be performed, but the nozzle to shell configuration is such that they cannot be performed in accordance with reference Figure IWC-2500-4(c) and Note 5 in Code Category C-B Item No. C2.30.

#### **Applicability**

This Relief Request is applicable to the Second Ten-Year Interval Inservice Inspection Program.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1** **Relief From Inservice Inspection Requirements** **2IR-7, Revision 0**

Sheet 1 of 1

This Relief Request has been included but intentionally left blank in order to maintain a numbering system used during the First Ten-Year Inservice Inspection Interval. This Relief Request has been deleted.

## **Appendix F: Relief Request**

### **Seabrook Nuclear Power Station Unit No. 1**

#### **Relief From Inservice Inspection Requirements**

##### **2IR-8, Revision 0**

Sheet 1 of 1

This Relief Request has been included but intentionally left blank in order to maintain a numbering system used during the First Ten-Year Inservice Inspection Interval. This Relief Request has been deleted.

## **Appendix F: Relief Request**

### **Seabrook Nuclear Power Station Unit No. 1**

#### **Alternative Request From Inservice Inspection Requirements**

##### **2IR-9**

Sheet 1 of 1

This Alternative Request has been included but intentionally left blank in order to maintain a numbering system used during the First Ten-Year Inservice Inspection Interval. This Alternative Request has been deleted.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1** **Relief From Inservice Inspection Requirements** **2IR-10, Revision 0**

Sheet 1 of 3

#### **Components For Which Relief Is Requested:**

Reactor Vessel Lower Head to Lower Shell Circumferential Weld (RC RPV 104-141)  
Reactor Vessel Lower Head Circumferential Weld (RC RPV 102-151)

#### **ASME Code Class:**

1

#### **ASME Section XI Examination Category:**

Table IWB-2500-1 Category B-A, Item No. B1.11 - Circumferential Shell Welds  
Table IWB-2500-1 Category B-A, Item No. B1.21 - Circumferential Head Welds

#### **ASME Section XI Code Requirements:**

1995 Edition through the 1996 Addenda of Section XI of the ASME Boiler and Pressure Vessel Code:

Table IWB-2500-1 Category B-A, Item No. B1.11 - Circumferential Shell Welds requires that all circumferential shell welds be volumetrically examined. Note 2 identifies that the examination include essentially 100% of the weld length.

Table IWB-2500-1 Category B-A, Item No. B1.21 - Circumferential Head Welds requires that the accessible length of all welds be volumetrically examined. Note 2 identifies that the inspection include essentially 100% of the weld length.

#### **Basis and Justification for the Granting of Relief:**

Pursuant to 10CFR50.55a(g)(5)(iii), North Atlantic has determined that it is impractical to meet the "essentially 100%" of the weld length requirements of Table IWB-2500-1 Category B-A, Item No. B1.11 and B1.21 of the ASME Boiler and Pressure Vessel Code for welds RC RPV 104-141 and RC RPV 102-151 respectively.

The Seabrook Station reactor vessel is a typical 4-loop Westinghouse Pressurized Water Reactor design. Located within the reactor vessel are certain obstructions that may limit the amount of ultrasonic examination coverage that can be achieved for certain welds.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1** **Relief From Inservice Inspection Requirements** **2IR-10, Revision 0**

Sheet 2 of 3

During the examination of the reactor vessel for the First Ten-Year Inservice Inspection Interval (conducted during the period of April 14, 1999 through April 19, 1999) it was determined that the required "essentially 100%" examination coverage for the Reactor Vessel Lower Head to Lower Shell Circumferential Weld (RC RPV 104-141) and Reactor Vessel Lower Head Circumferential Weld (RC RPV 102-151) could not be achieved.

The basis for relief for each weld is identified as follows:

#### **Reactor Vessel Lower Head to Lower Shell Circumferential Weld (RC RPV 104-141)**

Weld RC RPV 104-141 is situated just below the 6 core support lugs, which are fixed in-place. Each core support lug occupies about 20 degrees of space including the attachment weld. This circumferential weld was completely scanned between the core lugs and the accessible areas below the lugs in both the parallel and perpendicular directions to achieve the maximum coverage. The total scan simple average for the weld is 80% and the total scan simple average for the volume is 73%.

The completion percentage was determined by calculating the percentage of actual coverage versus the total coverage for each examination angle and for each examination direction. This was separated into weld volume and total volume. A weight factor of 0.25 was then applied to the actual percent of coverage for each angle.

#### **Reactor Vessel Lower Head Circumferential Weld (RC RPV 102-151)**

Weld RC RPV 102-151 is located in elevation at the periphery of the lower head penetrations. The weld was scanned in numerous individual segments between and around the penetrations. The end effector was guided into position by cameras and scanning parameters were established with collision avoidance to maximize coverage. The total scan simple average for the weld is 61% and the total scan simple average for volume is 61%.

The completion percentage was determined by calculating the percentage of actual coverage versus the total coverage for each examination angle and for each examination direction. This was separated into weld volume and total volume. A weight factor of 0.25 was then applied to the actual percent of coverage for each angle.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1**

#### **Relief From Inservice Inspection Requirements**

##### **2IR-10, Revision 0**

Sheet 3 of 3

Access to welds RC RPV 104-141 and RC RPV 102-151 from the outside of the reactor vessel was also evaluated and was not considered to be a viable option based on the extremely high person REM dose that would be incurred and the limited access. In order to obtain the required access to the welds, the use of staging, the removal of insulation and the preparation of the surfaces prior to performance of the examination would be required. After completion of the examination the reinstallation of the insulation and the removal of the staging would also be required. It is estimated that the total dose to obtain the additional coverage for both welds would be 40 to 48 REM.

##### **Alternative Examination:**

No additional examination of welds RC RPV 104-141 and RC RPV 102-151 will be performed. The coverage that was achieved was the maximum extent practical with the obstructions in place and is representative of the entire welds. The reactor vessel pressure boundary which includes the associated welds are pressure tested each refueling outage as specified in Table IWB-2500-1, Category B-P of the 1995 Edition through the 1996 Addenda of ASME Section XI. The volume of coverage obtained for welds RC RPV 104-141 and RC RPV 102-151 during the reactor vessel examination and the associated pressure testing performed provides reasonable assurance of the continued structural integrity of the subject welds and provides an acceptable level of quality and safety.

##### **Applicability**

This Relief Request is applicable to the Second Ten-Year Interval Inservice Inspection Program.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1 Relief From Inservice Inspection Requirements**

**2IR-11, Revision 0**

Sheet 1 of 2

#### **Components For Which Relief Is Requested:**

One Pressurizer Shell-to-Head Circumferential Weld

#### **Component Identification:**

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, 1995 Edition through the 1996 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)(iii), 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.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1**

#### **Relief From Inservice Inspection Requirements**

##### **2IR-11, Revision 0**

Sheet 2 of 2

In the First Ten-Year ISI Interval, 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%.

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 1995 Edition through the 1996 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 to the Second Ten-Year Interval Inservice Inspection Program.

## Appendix F: Relief Requests

**Seabrook Nuclear Power Station Unit No. 1**  
**Relief From Inservice Inspection Requirements**  
**2IR-12, Revision 0**

Sheet 1 of 2

Components For Which Relief Is Requested:

Four Pressurizer Welded Attachments

Component ID No:

RC E-10 A-LUG

RC E-10 B-LUG

RC E-10 C-LUG

RC E-10 D-LUG

ASME Code Class:

1

ASME Section XI Examination Category:

Table IWB-2500-1 Category B-K, Item No. B10.10

ASME Section XI Code Requirements:

ASME B&PV Code Section XI, 1995 Edition through the 1996 Addenda, Table IWB-2500-1, Examination Category B-K requires surface examination of each pressure vessel welded attachment.

Basis and Justification for the Granting of Relief:

Pursuant to 10CRF50.55a(g)(5)(iii), relief is requested from performing the surface examination on the four Pressurizer welded attachments 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 approximately three quarters of the way around. The clearance between the shield wall and the Pressurizer vessel is approximately 9½". The north end of the cubicle has greater vessel to shield wall clearance, but is where safety valve and spray piping run. Ladders or platforms do not exist to make the examination area accessible nor can any ladders be placed due to restrictions by piping, conduit and other attachments.

## **Appendix F: Relief Requests**

### **Seabrook Nuclear Power Station Unit No. 1**

#### **Relief From Inservice Inspection Requirements**

##### **2IR-12, Revision 0**

Sheet 2 of 2

The Pressurizer lugs are located on the Pressurizer at elevation 23'-6". Potential access is gained by climbing a ladder on the outside of the shield wall and entering the cubicle at the top of the Pressurizer at elevation 50'. Safety valve structural steel is used for footing as no platform exists in the cubicle. The North Atlantic Safety Department evaluated the lack of normal and emergency access/egress as an unsafe work environment.

These attachments are subject to VT-2 visual examination conducted during the system leakage test each refueling outage as specified in Table IWB-2500-1, Examination Category B-P of the 1995 Edition through the 1996 Addenda of ASME Section XI.

North Atlantic believes that based on acceptable results of VT-2 visual examinations performed during system leakage tests and on examinations performed on attachments with similar design, there is reasonable assurance of continued structural integrity of the subject attachments and an acceptable level of quality and safety is maintained.

##### **Alternative Examination:**

No alternative examination is proposed for these welded attachments.

##### **Applicability**

This Relief Request is applicable to the Second Ten-Year Interval Inservice Inspection Program.

**Enclosure 2 to NYN-00072**

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1-NHY-650000, REV. 0:  
EXCESS LETDOWN HEAT  
EXCHANGER 1-CS-E-3 ISI  
EQUIPMENT WELDS**

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RESIDUAL HEAT EXCHANGER  
1-RH-E-9A ISI EQUIPMENT  
WELDS**

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RESIDUAL HEAT EXCHANGER  
1-RH-E-9B ISI EQUIPMENT  
WELDS**

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REGENERATIVE HEAT  
EXCHANGER  
1-CS-E-2 ISI EQUIPMENT WELDS  
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1-NHY-650004, REV. 0:  
ISI EQUIPMENT WELDS  
REACTOR COOLANT PUMP  
RC-P-1A, 1B, 1C, 1D**

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ISI REACTOR COOLANT PUMP  
FLYWHEEL**

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1-NHY-650006, REV. 0:  
ISI EQUIPMENT WELDS  
PRESSURIZER RC-E-10**

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REACTOR VESSEL RC-E-1 ISI  
EQUIPMENT WELDS**

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EQUIPMENT WELDS**

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EQUIPMENT WELDS**

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EQUIPMENT WELDS**

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1-NHY-650011, REV. 0:  
ISI EQUIPMENT WELDS STEAM  
GENERATOR RC-E-11A**

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**1-NHY-650012, REV. 0:  
ISI EQUIPMENT WELDS STEAM  
GENERATOR RC-E-11A & 11B**

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ISI EQUIPMENT WELDS STEAM  
GENERATOR RC-E-11C & 11D**

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REACTOR COOLANT SYSTEM  
WELD IDENTIFICATION  
  
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REACTOR COOLANT SYSTEM  
WELD IDENTIFICATION TABLE**

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