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10CFR50.55a

2130-04-20337

December 20, 2004

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Oyster Creek Generating Station
Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Submittal of Program for the Fourth Ten-Year Interval Inservice Inspection Program

Reference: Letter from R. J. Laufer (U. S. Nuclear Regulatory Commission) to J. L. Skolds (AmerGen Energy Company, LLC) dated September 26, 2003

In accordance with the ASME Boiler and Pressure Vessel Code, Section XI, IWA-1400(c), "Owners Responsibilities," attached for your information is a copy of the Fourth Ten-Year Interval Inservice Inspection (ISI) Program for Oyster Creek Generating Station (OCGS). The Fourth Ten-Year Interval ISI Program complies with the 1995 Edition (through 1996 Addenda) of the ASME, Section XI Code. The relief requests for this interval were approved in the referenced letter.

If you have any questions or require additional information, please contact Mr. Tom Loomis (610-765-5510).

Very truly yours,

D. P. Helker

David P. Helker
Manager, Licensing
AmerGen Energy Company, LLC

Attachment 1 - Oyster Creek Generating Station Fourth Ten-Year Interval Inservice Inspection Program

cc: S. J. Collins, Administrator, USNRC, Region I (w/attachment)
P. S. Tam, USNRC Senior Resident Inspector (w/attachment)
R. J. Summers, Senior Project Manager, USNRC (w/attachment)
File No. 03068

A047

ATTACHMENT 1

OYSTER CREEK GENERATING STATION
FOURTH TEN-YEAR INTERVAL INSERVICE INSPECTION PROGRAM

OYSTER CREEK GENERATING STATION

ISI PROGRAM PLAN
FOURTH TEN-YEAR INSPECTION INTERVAL

Commercial Service Date:

12/08/69

Oyster Creek Generating Station
Route 9 South, Lacey Township
Forked River, New Jersey 08731

AmerGen Energy Company, LLC

REVISION CONTROL SHEET

TITLE: ISI Program Plan Document
Fourth Ten-Year Inspection Interval
Oyster Creek Generating Station

DOCUMENT NUMBER: OC-1 PROGRAM PLAN REVISION: 1

PREPARED: Rich Ostrowski
Washington Group International
ISI Engineer

REVIEWED: Greg Hartlaft
ISI Program Engineer

REVISED: Edward J. Maloney
Alion – ITS Operations

APPROVED: Thomas A. Powell
Manager, Programs

Each time this document is revised, the following table should be completed to provide a detailed record of the revision history. The major changes should be outlined within the table. Editorial and formatting revisions are not required to be logged. The signatures above apply only to the changes made in the revision noted. If historical signatures are required, station archives will need to be retrieved.

Revision	Date	Revision Summary
0	10/15/02	Initial issuance
1	09/30/04	• Revised page numbering per site Program Manager request.
		• Incorporated changes required in response to CAP O2004-1736 which is based on the deficiencies and recommendations of Focused Area Self-Assessment (FASA) Report on the Oyster Creek ISI Program, dated April 26-29, 2004. The changes include, but were not limited to the following:
		o Added conditions to Section 2.2.1 for use of selected cases as required by either 10 CFR 50.55a or Regulatory Position C.2 of Regulatory Guide 1.147, Revision 13.
		o Added descriptions of augmented examination requirements to sub-section 2.2, including:
		- NUREG-0619, "BWR Feedwater Nozzle and CRD Return Line Nozzle Cracking" examinations

Revision	Date	Revision Summary
		- Class 2 Thin Wall piping examinations.
		- Reference to BTP MEB 3-1 was deleted based on a RAI response to NRC in GPUN Letter C321-94-2044 dated April 7, 1994 which stated, in part, that '...welds addressed by MEB 3-1 are already included in the examinations performed to meet Generic Letter 88-01, and in light of the fact that these examinations have been previously determined by the NRC staff to be acceptable, no additional examinations to address BTP MEB 3-1 would contribute to the overall safe operation of the Oyster Creek Nuclear Generating Station."
		- Approved Relief for snubber examinations and functional tests.
		o Revised Section 3, Table 2.2-15 to incorporate the conditions imposed by NRC in their authorization of Relief Request OC-02-02 for the Reactor Pressure Vessel support skirt knuckle weld.
		o Revised Section 3, Tables 2.2-13 and 3.2-7 to address deletion of surface exams where permitted by NRC authorized Relief Request OC-02-01.
		• Additional editorial and format changes were made, where required.

Note: This ISI Program Plan (Sections 1-3 inclusive) is controlled by the Oyster Creek Generating Station's Engineering Programs Group.

REVISION SUMMARY

Section	Subsection	Effective Pages	Revision	Date
1		i to viii	1	09-30-04
1	1.0	1-1 to 1-9	1	09-30-04
1	2.0	1-10 to 1-24	1	09-30-04
		(See Page 1-23 for effective pages and revision status of each individual technical approach)		
1	3.0	1-25 to 1-27	1	09-30-04
1	4.0	1-28 to 1-29	1	09-30-04
1	5.0	1-30 to 1-31	1	09-30-04
1	6.0	1-32	1	09-30-04
1	7.0	1-33 to 1-44	1	09-30-04
1	8.0	1-45 to 1-46	1	09-30-04
2	1.0	2-1 to 2-2	1	09-30-04
2	2.0	2-3 to 2-4	1	09-30-04
2	3.0	2-5 to 2-9	1	09-30-04
2	4.0	2-10 to 2-48	1	09-30-04
2	5.0	2-49	1	09-30-04
2	App. A	2-50 to 2-51	1	09-30-04
2	App. B	2-52 to 2-55	1	09-30-04
2	App. C	2-56 to 2-57	1	09-30-04
3	1.0	3-1 to 3-6	1	09-30-04
3	2.0	3-7 to 3-41	1	09-30-04
3	3.0	3-42 to 3-59	1	09-30-04
3	4.0	3-60 to 3-67	1	09-30-04
3	5.0	3-68 to 3-82	1	09-30-04
4		4-1 to 4-2	1	09-30-04
		(See Page 4-2 for revision status of each individual relief request)		

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REFERENCES

1) Code of Federal Regulations, Title 10, Part 50, Paragraph 50.55a, "Codes and Standards."

2) ASME Boiler and Pressure Vessel Code, Section XI, Division 1, "Inservice Inspection of Nuclear Power Plant Components," the 1992 Edition, 1992 Addenda.

3) ASME Boiler and Pressure Vessel Code, Section XI, Division 1, "Inservice Inspection of Nuclear Power Plant Components," the 1995 Edition, 1996 Addenda.

4) ASME Boiler and Pressure Vessel Code, Section III, Division 1, "Rules For Construction of Nuclear Power Plant Components," the 1995 Edition, 1996 Addenda.

5) ASME, Section I, 1965 Edition.

6) USAS B31.1, 1955 Edition, "Power Piping."

7) Regulatory Guide 1.26, Revision 3, "Quality Group Classifications and Standards for Water-, Steam-, and Radioactive Waste- Containing Components of Nuclear Power Plants."

8) Oyster Creek Nuclear Generating Station, Updated Final Safety Analysis Report.

9) Oyster Creek Nuclear Generating Station, Technical Specifications.

10) Branch Technical Position MEB 3-1, dated November 24, 1975, "High Energy Fluid Systems, Protection Against Postulated Piping Failures in Fluid Systems Outside Containment.

11) Oyster Creek Nuclear Generating Station, Operational Quality Assurance Plan.

12) Regulatory Guide 1.147, Rev 13, "Inservice Inspection Code Case Acceptability."

13) ANSI/ANS 52.1-1983, "Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plants."

14) NUREG-0313, BWRVIP-75, GL-88-01, IGSCC Examinations

15) NUREG-0822, Integrated Plant Safety Assessment

16) NUREG-0619, BWR Feedwater Nozzle and CRD Return Line Nozzle Cracking

17) Oyster Creek Fourth Ten-Year Interval Inspection Schedule.

OYSTER CREEK GENERATING STATION

SECTION 1

ISI PROGRAM BASIS

1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

Inservice Inspection (ISI) is the program of planned methods and actions utilizing the process of visual, surface or volumetric examination, for assuring the integrity of structural, and pressure retaining safety related components in accordance with the rules of codes and standards. The implementation of an ISI Program Plan is performed during the service life of a nuclear power plan expressly to detect failures, defects or discontinuities in pressure retaining components and their supports.

This ISI Program Plan details the requirements for the examination and testing of ISI Class 1, Class 2, and Class 3 pressure retaining components and component supports at Oyster Creek Generating Station (Oyster Creek). This ISI Program Plan also includes augmented inservice inspections and pressure-testing requirements committed to by Oyster Creek. At Oyster Creek, the Inservice Testing (IST) Program is maintained and implemented separately from the ISI Program.

This document represents the ISI Program Plan that shall be implemented at Oyster Creek during its fourth ten-year inspection interval. The plan was prepared in accordance with Inspection Program B of the 1995 edition of the American Standard Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, 1996 addenda, except for relief requested under the provisions of the Code of Federal Regulation (CFR), Title 10, Part 50.55a(g)(5)(iii). Pursuant to the Nuclear Regulatory Commission's (NRC) Regulatory Guide 1.26, systems and portions of systems are categorized with respect to quality groups and are presented to this document as Class 1, Class 2, and Class 3. The boundary breaks between quality groups were primarily determined by the system nuclear safety related function, a classification based on design criteria.

The Fourth Inservice Inspection Interval is effective from October 15, 2002 through October 14, 2012 for Oyster Creek.

The Fourth Inservice Inspection Interval is divided into three successive inspection periods as determined by calendar years of plant service within the inspection interval. Identified below are the period dates for the Fourth Inservice Inspection Interval as defined by Inspection Program B. In accordance with IWA-2430(d)(3), the inspection periods specified below may be decreased or extended by as much as one year to enable inspections to coincide with Oyster Creek's refueling outages.

Period 1 – October 15, 2002 through October 14, 2005
Period 2 – October 15, 2005 through October 14, 2009
Period 3 – October 15, 2009 through October 14, 2012

This document addresses the basis that was applied in determining system and component classifications. It discusses the assignment of examination methods and the scheduling of inspections. AmerGen's position on the Code and regulatory requirements pertaining to the rules governing inservice inspections is also included. Moreover, it provides a comprehensive plan that shall provide a reference and a means for making assessments of AmerGen's compliance with the Code and subsequent implementation of the ISI Program Plan during the fourth ten-year inspection interval.

The Program Plan consists of the following three sections:

Section 1, ISI Program Basis contains the general information about the program description. It provides a description of Oyster Creek, and a background of the ISI Program Plan. It contains updated program objectives, references to augmented inspection programs, and a list of documents that were used for guidance. The appendix contains the approved Code Cases AmerGen Energy LLC has chosen to invoke and relief requests for code requirements AmerGen has deemed to be impractical at Oyster Creek. In addition, Section 1 contains the Code exemptions that shall be applied to this inspection plan and the AmerGen's position on the implementation of specific code requirements.

Section 2, ISI Classification Basis contains the Boundary Classifications for Inspection Class 1, Class 2, and Class 3. Included in this section are the system descriptions for systems within the ISI Boundary and includes system summaries and function index.

Section 3, ISI Selection Basis defines AmerGen's commitments for performing visual, surface or volumetric examinations in accordance with Section XI requirements IWB-2000, IWC-2000, IWD-2000, and IWF-2000 respectively. Component tables are included which provide a tally of valves, pumps, supports and welds in piping, and other components required for examination. For the applicable Section XI examination category – item numbers, inspection requirements, and the frequency that these inspections shall be performed to are prepared on a specification form. The scheduled examinations shall primarily occur during refueling outages; however, adjustments to the schedule may possibly occur as a result of outage planning and coordinating efforts. The quantity of examinations scheduled in this plan is AmerGen's attempt to satisfy the Section XI requirements within the limits of the minimum and maximum allowed examination permitted during a 40 period. Oyster Creek's refueling outage cycles presently coincides with Section XI periods as follows: refueling outage 1R20 is within the first period, 1R21 and 1R22 are within the second period, and outages 1R23 and 1R24 are within the third and final period of the interval. However, unforeseen changes in operational cycle events may alter this original schedule. Specific identification of the components scheduled for examination is contained in the Oyster Creek Ten-Year Schedule, a separate document from this Program Plan.

1.2 Background

The construction permit for Oyster Creek was issued on December 15, 1964. The Reactor Primary System (i.e., Reactor Vessel, Reactor Recirculating Piping, Isolation Condenser and all piping, pumps, and valves up to the first isolation valve with the exception of the Feedwater System where the break is at the second isolation valve) was fabricated, inspected and tested in accordance with the ASME Boiler and Pressure Vessel Code, Section I, Power Boilers, 1962 Edition and addenda plus the Nuclear Code Cases applicable on December 11, 1963. The vessel purchase specification dated January 22, 1964 further directed the use of Section VIII – Unfired Pressure Vessels where Section 1 did not cover specific details. The piping outboard of the first isolation valves was fabricated, inspected, and tested in accordance with the code for pressure piping American Standards Association (ASA) B31.1, 1955 Edition.

The Oyster Creek plant was designed and constructed before inservice inspection rules had been developed and before Section XI came into existence. Some areas of the plant; therefore, were designed and constructed with very restricted accessibility with regard to structural steel and concrete members surrounding components which precludes the performance of some inservice examinations to the extent required by the present Code.

1.3 First Interval Program

Commercial operation of the Oyster Creek plant began on December 8, 1969, under Facility License number DPR-16 that was issued to Jersey Central Power & Light Company by the Atomic Energy Commission (AEC.) The original ISI Program Plan for the plant was defined in Table 4.3.1, "Examination Schedule of Reactor Coolant System," in Section 4 of the Technical Specifications for the plant. The program was then enhanced with Change Request No. 28 (Revisions 1, 2, 3, and 4) and finally amended by Amendment No. 34, which was approved to incorporate additional inspection requirements. The requirements of Table 4.3.1 did not reference any codes or standards as obligatory requirements. Change Request No. 28; however, did represent the guidelines used for inservice inspection at Oyster Creek during the last 5 years of the first ten-year inspection interval. This program paralleled, to the maximum extent practical, the requirements set forth in the 1971 Edition of Section XI through the summer 1973 Addenda.

1.4 Second Interval Program

As required by 10 CFR 50.55a(g), the ISI Program Plan for the second ten-year interval was updated. The effective edition of the Code with regard to the second ten-year interval was the 1974 Edition through the summer 1975 Addenda. The start date for the second ten-year interval was December 8, 1979.

Oyster Creek underwent a major refueling and maintenance outage during 1983 and 1984 that lasted twenty-two months. In GPUN's letter dated May 20, 1988, GPUN requested a change to the ending date for the second ten-year inservice inspection interval. Subsection IWA-2400, "Inspection Intervals," of Section XI of the ASME Code, 1974 Edition, through the summer 1975 Addenda states that "for plants that are out of service continuously for one year or more, an inspection interval may be extended for an equivalent period." The NRC staff evaluated the request and in a letter dated March 6. 1989, the NRC staff concluded that Oyster Creek's second ten-year inservice inspection interval may be extended twenty-two months to end on October 14, 1991.

During the final refueling outage 13R, certain pressure tests were not completed. For this reason, it was necessary for GPUN to take an extension in order to satisfy the interval requirements. The necessary extension was five months, which ends the second interval on March 14, 1992.

1.5 Third Interval Program

As required by 10 CFR 50.55a(g), GPUN Corporation performed a review of the ISI Program Plan requirements to the provisions of 10 CFR 50.55a. The ISI Program Plan was developed and implemented in accordance with the requirements of ASME, Section XI, 1986 Edition commencing on March 15, 1992.

After refueling outage 16R, the GPUN considered selling Oyster Creek. When the sale appeared not to be an option, the GPUN began to focus on plant decommissioning. Refueling outage 17R was expected to be the last refueling outage for Oyster Creek so all projects were either dropped, reduced in scope, or deferred in the case of ISI examination to refueling outage 18R should the sale occur.

On August 2, 2000, Oyster Creek was sold to AmerGen Energy LLC. Outage planning had begun for the next scheduled refueling outage 18R. It was recognized that the number of ISI examinations could not be managed safely in the outage. The ISI interval was extended by seven months in accordance with ASME, Section XI, IWA-2430, to include refueling outage 19R in order to accommodate the ISI overflow. The necessary extension was seven months, which ends the third interval on October 14, 2002.

1.6 Requirements for ISI Program Plan Updates

Paragraph 50.55a(g)(1)(ii) of 10 CFR 50 requires that inservice inspections be conducted in successive 120-month intervals throughout the service life of the facility. The examination programs shall comply with the requirements in editions and addenda of the ASME, Section XI code in effect no more than 12 months prior to the start of each 120-month interval. This ISI Program Plan update, prepared for the Oyster Creek plant defines the inservice inspection requirements for the fourth ten-year 120-month interval beginning on October 15, 2002. The ASME, Section XI, 1995 Edition with 1996 Addenda is the latest approved edition and shall be the Code of record for examination, pressure test, repair, and replacement requirements.

Figure 1-1 summarizes the Oyster Creek Inservice Inspection compliance for the first, second, and third intervals.

FIGURE 1-1
OYSTER CREEK'S INSERVICE INSPECTION COMPLIANCE

TEN-YEAR INTERVAL	INSERVICE INSPECTION GUIDELINES	YEARS
First (1-5)	Oyster Creek Technical Specification	1969 - 1974
(6-10)	Sect. XI, 1971 Edition through Summer 1973 Addendum	1975 – 1979
Second	Sect. XI, 1974 Edition through Summer 1975 Addendum	1979 – 1992
Third	Sect. XI. 1986 Edition	1992 – 2002
Fourth	Sect. XI. 1995 Edition through 1996 Addendum	2002 – 2012 or (End of License 2009)

1.7 Program Basis Documents

The following documents were utilized and/or referenced in the development of the Oyster Creek ISI Program Plan:

1.7.1 Licensing Documents

1.7.1.1 Technical Specification

The Technical Specification, Section 4.3.B for Oyster Creek states that, "ISI of ASME Code Class 1, Class 2, and Class 3 systems and components, shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code, and applicable Addenda as required by 10 CFR, Section 50.55a(g), except where specific written relief has been granted by the NRC pursuant to 10 CFR, Section 50.55a(g)(6)(c)."

This ISI Program Plan update doesn't create a conflict with the Technical Specification where the requirements of the ASME codes would make it necessary to amend the Technical Specifications in order to bring it into compliance with 10 CFR 50.55a.

1.7.1.2 Operational Quality Assurance Plan

The Operational Quality Assurance Plan describes the formal and comprehensive plan to ensure compliance with 10 CFR 50, Appendix B and describes the administrative organizations.

1.7.1.3 Updated Final Safety Analysis Report

The Oyster Creek's Updated Final Safety Analysis Report defines the design bases and system descriptions and was used in accordance with the regulatory rules and guidelines for determining ISI system boundaries. The FSAR was used as the basis for characterizing the ISI system description as it refers to those systems which are required to: (1) permit the safe and orderly shutdown of the reactor, (2) mitigate the consequences of an accident, or (3) limit the radiation dose at the plant site boundary.

1.7.2 Regulatory Documents

1.7.2.1 10 CFR 50 for ISI Group Classification, Group A and for Codes and Standards.

1.7.2.2 Regulatory Guide 1.26 for ISI Quality Group Classification Groups B, C, and D.

1.7.2.3 NUREG-0822 for noting those exceptions to 10 CFR 50, Appendix A and to assure the ISI Program Plan continues to comply with refined engineering safeguard evaluations.

1.7.2.4 BWRVIP-75 for augmented examination of stainless steel welds that were susceptible to Intergranular Stress Corrosion Cracking.

1.7.2.5 NUREG-0619 for augmented examinations of Feedwater Nozzles and Control Rod Drive Return Nozzle determined to be susceptible to thermal fatigue cracking.

1.7.3 Codes and Standards

1.7.3.1 ASME Section I, 1965 Edition, the original design and construction code for Reactor Vessel and connecting piping out to the first isolation valve, to the second isolation valve on the Feedwater System, and all of the Isolation Condenser System.

1.7.3.2 ANSI B31.1, 1955 Edition, original design and construction code for piping outboard of the Reactor Vessel past the first isolation valve and past the second isolation valve for the Feedwater System.

1.7.3.3 ASME Section III for repairs, replacements, and modifications of components and/or systems classified as Nuclear Safety related if the original Code couldn't be used.

1.7.3.4 ASME Section XI, 1995 Edition, 1996 Addenda, Rules for Inservice Inspection of Nuclear Power Plant Components.

1.7.3.5 ANSI/ANS 52.1 – 1983, Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plant.

1.8 Code Cases

Per 10 CFR 50.55a, ASME Code Cases that have been determined to be suitable for use in ISI Program Plans by the NRC are listed in Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability – ASME, Section XI, Division 1." In addition, 10 CFR 50.55a typically references Code Cases, which are approved for use and may be used. The approved Code Cases in Regulatory Guide 1.147, and those specifically referenced in the body of 10 CFR 50.55a, which are being used, are included in Section 2.1.1. The latest version of Regulatory Guide 1.147 issued, as of June, 2003 is Revision 13. As this guide is revised, newly approved Code Cases should be assessed for plan implementation at Oyster Creek.

The use of other Code Cases (than those listed in Regulatory Guide 1.147) may be authorized by the Director of the Office of Nuclear Reactor Regulation upon request pursuant to 10 CFR 50.55a(a)(3). Code Cases not approved for use in Regulatory Guide 1.147, which are being utilized by Oyster Creek through a Relief Request, are summarized in the appropriate program section of this document (3.0, 4.0, or 5.0) and the associated Relief Requests are included in Section 8.0.

1.9 Relief Requests

In accordance with 10 CFR 50.55a, when a licensee proposes alternatives to ASME, Section XI requirements, which provide an acceptable level of quality and safety; determines compliance with ASME, Section XI requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety; or determines that specific ASME, Section XI requirements for inservice inspection are impractical, the licensee shall notify the NRC and submit information to support the determination.

The submittal of this information will be referred to in this document as a "Relief Request" or "Request for Relief." Relief Requests for the fourth interval are included in Section 8.0 of this document. The Relief Request format utilized includes a section with the heading **"BASIS FOR RELIEF."** The text of the Relief Requests contained in Section 8.0 will demonstrate that: the proposed alternatives provide an acceptable level of quality and safety per 10 CFR 50.55a(a)(3)(i); or compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety per 10 CFR 50.55a(a)(3)(ii); or the code requirements are considered impractical per 10 CFR 50.55a(g)(5)(iii).

Per 10 CFR 50.55a paragraphs (a)(3) and (g)(6)(i), the Director of the Office of Nuclear Reactor Regulation will evaluate Relief Requests and "may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility."

2.0 BASIS FOR ISI PROGRAM PLAN

2.1 ASME, Section XI Examination Requirements

As required by the CFRs, Title 10, Part 50, Section 55a, (10 CFR 50.55a), this program was developed in accordance with the requirements detailed in the 1995 Edition, 1996 Addenda, of the ASME Boiler and Pressure Vessel Code, Section XI, Division 1, Subsections IWA, IWB, IWC, IWD, IWF, Mandatory Appendices, and Inspection Program B of IWA-2432.

2.1.1 ASME, Section XI Code Cases

As referenced by 10 CFR 50.55a and allowed by NRC Regulatory Guide 1.147, Revision 13, the following Code Cases are being incorporated into the Oyster Creek ISI Program:

N-416-2 Alternative Pressure Test Requirements for Welded Repairs or Installation of Replacement Items by Welding, Class 1, Class 2, and Class 3, Section XI, Division 1.

N-460 Alternative Examination Coverage for Class 1 and Class 2 Welds, Section XI, Division 1.

N-463-1 Evaluation Procedure and Acceptance Criteria for Flaws in Class 1 Ferritic Piping That Exceed the Acceptance Standards of IWB-3514.2, Section XI, Division 1.

N494-3 Pipe Specific Evaluation Procedure and Acceptance Criteria for Flaws in Class 1 Ferritic Piping That Exceeds the Acceptance Standards of IWB-3514.2, Section XI, Division 1.

N-504-2 Alternative Rules for Repair of Class 1, Class 2, and Class 3 Austenitic Stainless Steel Piping, Section XI, Division 1.

N-513 Evaluation Criteria for Temporary Acceptance of Flaws in Class 3 Piping.

N-522 Pressure Testing of Containment Penetration Piping, Section XI, Division 1.

N-523-2 Mechanical Clamping Devices for Class 2 and Class 3 Piping.

N-532-1	Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000 and IWA-6000, Section XI, Division 1.
N-534	Alternative Requirements for Pneumatic Pressure Testing, Section XI, Division 1.
N-546	Alternative Requirements for Qualification of VT-2 Examination Personnel, Section XI, Division 1.
N-566-1	Corrective Action for Leakage at Bolted Connections, Section XI, Division 1
N-598	Alternative Requirements to Required Percentages of Examinations, Section XI, Division 1

N-609	Alternative Requirements to Stressed-Based Selection Criteria for Category B-J Welds, Section XI, Division 1.
N-623	Deferral of Inspections of Shell-to-Flange and Head-to-Flange Welds of a Reactor Vessel, Section XI, Division 1.
N-624	Successive Examinations, Section XI, Division 1.

Additional Code Cases may be invoked in the future based on new plan requirements or revisions to Regulatory Guide 1.147. Any Code Cases invoked in the future shall be in accordance with those approved for use in the latest published revision of Regulatory Guide 1.147 or 10 CFR 50.55a.

2.2 Augmented Examination Requirements

Paragraph 50.55a(g)(6)(ii) of 10 CFR 50 states that the commission may require the licensee to follow an augmented ISI Program Plan when it deems that additional assurance of structural reliability is necessary. This update defines "Augmented Inspection" as a term applied to all examinations or testing performed which exceeds the specific requirements defined in ASME, Section XI. Augmented inservice inspections shall be performed when specific directives are issued by regulatory authorities and/or implemented voluntarily by AmerGen in the interest of increased plant operational safety and reliability. This ISI update references the regulatory required inspection programs that fall within the scope of ASME, Section XI components. The following is a list of those augmented inspection programs that are implemented at Oyster Creek: IGSCC Examinations in accordance with BWRVIP-75, vendor documents (e.g., GE SILS,) and Examination of Thin Wall Piping on Class 2 Piping.

2.3 The Quality Group Classification and System Safety Classes

In compliance with the ASME Code, Section XI, IWA-1400(a), AmerGen has determined the appropriate code class(es) for each component of Oyster Creek and identified the system boundaries for each class of component subject to inspection and those components exempted from examination requirements.

For ASME Class 1 (Quality Group A), the references for identifying system boundaries and components was taken from 10 CFR 50.2V, the definition for reactor coolant boundary, 10 CFR 50, Appendix A, and NUREG-0822.

For ASME Class 2 (Quality Group B) and Class 3 (Quality Group C), the reference for identifying system boundaries and components was taken from NRC Regulatory Guide 1.26, "Quality Group Classifications and Standards for Water-Steam and Radioactive Waste-Containing Components of Nuclear Power Plant."

For establishing the logical boundary breaks to include or exclude portions of systems in accordance with Section XI, IWA-1320(e), AmerGen's Safety Related Classification was used as well as ANSI/ANS-52.1, "Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plants."

AmerGen Quality Classification list was used to further evaluate systems and components in the ISI boundary based on the definitions for Safety Related, defined in the Oyster Creek Operational Quality Assurance Plan. Detailed discussions and criteria for classification and boundary justifications are located in Section 2 of this Program Plan.

The requirements of Regulatory Guide 1.26 and ANSI/ANS-52.1, Classification Criteria, are reflected in the piping classes shown on the ISI Boundary Drawings identified in Section 2.4.

2.4 Oyster Creek's Systems and Components Subject To Examination

The systems and components classified as per Paragraph 2.3 above and included in the Oyster Creek's ASME, Section XI Program are identified on the ISI Boundary Drawings listed in Tables 2.4-1, 2.4-2 and 2.4-3. The ISI Boundary Drawings are color-coded versions of Oyster Creek's Flow Diagrams. A summary of the color codings utilized for ISI Class 1, Class 2, and Class 3 components is included on each ISI Boundary Drawings.

Tables 2.4-1, 2.4-2, and 2.4-3 summarize the ASME Class 1, Class 2, and Class 3 system boundaries, respectively. The system descriptions and boundary justifications are contained in Section 2 of this document.

TABLE 2.4-1
CLASS 1 SYSTEM BOUNDARY DRAWINGS

System	ISI Boundary Drawing
Isolation Condenser	GE 148F262
Core Spray	GE 885D781
Poison	GE 148F723
Shutdown Cooling	GE148F711
Cleanup	GE 148F444
Head Cooling	GE 237F798
Recirculation	GE 237E487
Control Rod Drive Return	GE 237E487
Main Steam	BR 2002, Sheet 1
Feedwater	BR 2003

TABLE 2.4-2
CLASS 2 SYSTEM BOUNDARY DRAWINGS

System	ISI Boundary Drawing
Isolation Condenser	GE 148F262
Core Spray	GE 885D781
Automatic Depressuration	BR 2002, Sheet 1
Poison	GE 148F723
Shutdown Cooling	GE148F711
Scram Discharge	GE 197E871
Hydraulic Control Units	GE 197E871
Containment Spray	GE 148F740
Main Steam	BR 2002, Sheet 2
Feedwater	BR 2003
Demineralized Water Transfer	BR 2004, Sheet 1
Closed Cooling Water	BR 2006, Sheet 3
Drywell Floor & Equipment Drains	JC 147434, Sheets 2 and 3

TABLE 2.4-3
CLASS 3 SYSTEM BOUNDARY DRAWINGS

System	ISI Boundary Drawing
Isolation Condenser	GE 148F262
Fuel Pool Cooling	GE 237E756
Condensate Transfer	BR 2004, Sheet 2
Service Water	BR 2005, Sheet 2
Emergency Service Water	BR 2005, Sheet 4
Closed Cooling Water	BR 2006, Sheets 1, 2, 3, and 7

2.5 Oyster Creek's Nonexempt ISI Class Components and Component Supports

Oyster Creek's ISI Class 1, Class 2, and Class 3 nonexempt components which require inspection are those which have not been exempted under the criteria of Section XI, Subarticles IWB-1220, IWC-1220, and IWD-1220. These components fall within the ISI Boundary Drawings listed in Tables 2.4-1, 2.4-2, and 2.4-3.

The Isometric and Component Drawings included in Table 2.5-1 identify all nonexempt ISI Class 1 and Class 2 components and component supports at Oyster Creek.

A summary of Oyster Creek's, Section XI, nonexempt components and component supports is included in Section 7.0.

TABLE 2.5-1
OYSTER CREEK GENERATING STATION'S
ISI ISOMETRIC AND COMPONENT DRAWINGS

DRAWING NUMBER	TITLE
ISOLATION CONDENSER SYSTEM (NE)	
GU 3E-211-A2-1000 SH 1	ISI configuration drawing isolation condenser
GU 3E-211-A2-1000 SH 2	ISI configuration drawing isolation condenser
GU 3E-211-A2-1000 SH 3	ISI configuration drawing isolation condenser
GU 3E-211-A2-1000 SH 4	ISI configuration drawing isolation condenser
GU 3E-211-A2-1000 SH 5	ISI configuration drawing isolation condenser
GU 3E-211-A2-1000 SH 6	ISI configuration drawing isolation condenser
GU 3E-211-A2-1000 SH 7	ISI configuration drawing isolation condenser
FEEDWATER SYSTEM (RF)	
GU 3E-422-A2-1000 SH 1	ISI configuration drawing feedwater
GU 3E-422-A2-1000 SH 2	ISI configuration drawing feedwater
GU 3E-422-A2-1000 SH 3	ISI configuration drawing feedwater
GU 3E-422-A2-1000 SH 4	ISI configuration drawing feedwater supports
AUTOMATIC DEPRESSURIZATION SYSTEM (NZ)	
GU 3E-212-A2-1001 SH 1	ISI configuration drawing automatic depressurization system
GU 3E-212-A2-1001 SH 2	ISI configuration drawing automatic depressurization system

TABLE 2.5-1 (CONT.)
OYSTER CREEK GENERATING STATION'S
ISI ISOMETRIC AND COMPONENT DRAWINGS

DRAWING NUMBER	TITLE
FUEL POOL COOLING SYSTEM (NN)	
GU 3E-251-A2-1000 SH 1	ISI configuration drawing fuel pool cooling system
GU 3E-251-A2-1000 SH 2	ISI configuration drawing fuel pool cooling system
GU 3E-251-A2-1000 SH 3	ISI configuration drawing fuel pool cooling system supports
MAIN STEAM SYSTEM (MS)	
GU 3E-411-A2-1000 SH 1	ISI configuration drawing main steam system
GU 3E-411-A2-1000 SH 2	ISI configuration drawing main steam system
GU 3E-411-A2-1000 SH 3	ISI configuration drawing main steam system
GU 3E-411-A2-1000 SH 4	ISI configuration drawing main steam system
GU 3E-411-A2-1000 SH 5	ISI configuration drawing main steam system
GU 3E-411-A2-1000 SH 6	ISI configuration drawing main steam system
GU 3E-411-A2-1000 SH 7	ISI configuration drawing main steam system
GU 3E-411-A2-1000 SH 8	ISI configuration drawing main steam system
GU 3E-411-A2-1000 SH 9	ISI configuration drawing main steam system supports
CONTAINMENT SPRAY SYSTEM (NQ)	
GU 3E-241-A2-1000 SH 1	ISI configuration drawing containment spray system
GU 3E-241-A2-1000 SH 2	ISI configuration drawing containment spray system
GU 3E-241-A2-1000 SH 3	ISI configuration drawing containment spray system
GU 3E-241-A2-1000 SH 4	ISI configuration drawing containment spray system
GU 3E-241-A2-1000 SH 5	ISI configuration drawing containment spray system
GU 3E-241-A2-1000 SH 6	ISI configuration drawing containment spray system
GU 3E-241-A2-1000 SH 7	ISI configuration drawing containment spray system
GU 3E-241-A2-1000 SH 8	ISI configuration drawing containment spray system
GU 3E-241-A2-1000 SH 9	ISI configuration drawing containment spray system
GU 3E-241-A2-1000 SH 10	ISI configuration drawing containment spray system
GU 3E-241-A2-1000 SH 11	ISI configuration drawing containment spray system
GU 3E-241-A2-1000 SH 12	ISI configuration drawing containment spray system

TABLE 2.5-1 (CONT.)
OYSTER CREEK GENERATING STATION'S
ISI ISOMETRIC AND COMPONENT DRAWINGS

DRAWING NUMBER	TITLE
DEMINERALIZED WATER TREATMENT SYSTEM (WD)	
GU 3E-523-A2-1000 SH 1	ISI configuration drawing demineralized water treatment system
REACTOR RECIRCULATION SYSTEM (NG)	
GU 3E-223-A2-1000 SH 1	ISI configuration drawing reactor recirculation system
GU 3E-223-A2-1000 SH 2	ISI configuration drawing reactor recirculation system
GU 3E-223-A2-1000 SH 3	ISI configuration drawing reactor recirculation system
GU 3E-223-A2-1000 SH 4	ISI configuration drawing reactor recirculation system
GU 3E-223-A2-1000 SH 5	ISI configuration drawing reactor recirculation system
GU 3E-223-A2-1000 SH 6	ISI configuration drawing reactor recirculation system
LIQUID POISON SYSTEM (NP)	
GU 3E-213-A2-1000 SH 1	ISI configuration drawing poison system
GU 3E-213-A2-1000 SH 2	ISI configuration drawing poison system supports
SHUTDOWN COOLING SYSTEM (NU)	
GU 3E-214-A2-1000 SH 1	ISI configuration drawing shutdown cooling system
GU 3E-214-A2-1000 SH 2	ISI configuration drawing shutdown cooling system
GU 3E-214-A2-1000 SH 3	ISI configuration drawing shutdown cooling system
GU 3E-214-A2-1000 SH 4	ISI configuration drawing shutdown cooling system
GU 3E-214-A2-1000 SH 5	ISI configuration drawing shutdown cooling system
REACTOR BUILDING CLOSED COOLING WATER SYSTEM (CC)	
GU 3E-541-A2-1000 SH 1	ISI configuration drawing reactor building closed cooling water system
GU 3E-541-A2-1000 SH 2	ISI configuration drawing reactor building closed cooling water system
GU 3E-541-A2-1000 SH 3	ISI configuration drawing reactor building closed cooling water system
GU 3E-541-A2-1000 SH 4	ISI configuration drawing reactor building closed cooling water system

TABLE 2.5-1 (CONT.)
OYSTER CREEK GENERATING STATION'S
ISI ISOMETRIC AND COMPONENT DRAWINGS

DRAWING NUMBER	TITLE
CORE SPRAY SYSTEM (NZ)	
GU 3E-212-A2-1000 SH 1	ISI configuration drawing core spray system
GU 3E-212-A2-1000 SH 2	ISI configuration drawing core spray system
GU 3E-212-A2-1000 SH 3	ISI configuration drawing core spray system
GU 3E-212-A2-1000 SH 4	ISI configuration drawing core spray system
GU 3E-212-A2-1000 SH 5	ISI configuration drawing core spray system
GU 3E-212-A2-1000 SH 6	ISI configuration drawing core spray system
GU 3E-212-A2-1000 SH 7	ISI configuration drawing core spray system
GU 3E-212-A2-1000 SH 8	ISI configuration drawing core spray system
GU 3E-212-A2-1000 SH 9	ISI configuration drawing core spray system
GU 3E-212-A2-1000 SH 10	ISI configuration drawing core spray system
GU 3E-212-A2-1000 SH 11	ISI configuration drawing core spray system
GU 3E-212-A2-1000 SH 12	ISI configuration drawing core spray system
CONDENSATE TRANSFER SYSTEM (CH)	
GU 3E-424-A2-1000 SH 1	ISI configuration drawing condensate transfer system
GU 3E-424-A2-1000 SH 2	ISI configuration drawing condensate transfer system
GU 3E-424-A2-1000 SH 3	ISI configuration drawing condensate transfer system
CLEAN UP DEMINERALIZER SYSTEM (ND)	
GU 3E-215-A2-1001 SH 1	ISI configuration drawing clean up demineralizer system
GU 3E-215-A2-1001 SH 2	ISI configuration drawing clean up demineralizer system
GU 3E-215-A2-1001 SH 3	ISI configuration drawing clean up demineralizer system
REACTOR HEAD COOLING SYSTEM (RHC)	
GU 3E-216-A2-1000 SH 1	ISI configuration drawing reactor head cooling system

TABLE 2.5-1 (CONT.)
OYSTER CREEK GENERATING STATION'S
ISI ISOMETRIC AND COMPONENT DRAWINGS

DRAWING NUMBER	TITLE
SCRAM DISCHARGE VOLUME SYSTEM (NC)	
GU 3E-225-A2-1000 SH 2	ISI configuration drawing scram discharge volume system
GU 3E-225-A2-1000 SH 3	ISI configuration drawing scram discharge volume system
GU 3E-225-A2-1001 SH 1	SDV north side ISI configuration drawing
GU 3E-225-A2-1001 SH 2	SDV south side ISI configuration drawing
CONTROL ROD DRIVE SYSTEM (NC)	
GU 3E-225-A2-1000 SH 1	ISI configuration drawing control rod drive system
GU 3E-225-A2-1000 SH 4	ISI configuration drawing control rod drive system
REACTOR VESSEL LOWER HEAD	
GU 3E-222-A2-1000	Lower Head coordinates location ISI configuration
SERVICE WATER SYSTEM (SW)	
GU 3E-531-A2-1000 SH 1	ISI configuration drawing service water piping
GU 3E-531-A2-1000 SH 2	ISI configuration drawing service water system supports
EMERGENCY SERVICE WATER SYSTEM (ESW)	
GU 3E-532-A2-1000 SH 1	ISI configuration drawing emergency service water system
GU 3E-532-A2-1000 SH 2	ISI configuration drawing emergency service water system
GU 3E-532-A2-1000 SH 3	ISI configuration drawing emergency service water system
DRYWELL FLOOR AND EQUIPMENT (NZ)	
GU 3E-573-A2-1000 SH 1	ISI configuration drawing drywell floor and equipment
GU 3E-573-A2-1000 SH 2	ISI configuration drawing drywell floor and equipment

2.6 Oyster Creek's Exempt ISI Class Components and Component Supports

The Oyster Creek's ISI Class 1, Class 2, and Class 3 components that are exempt from examination are those which meet the criteria of Section XI, Subarticles IWB-1220, IWC-1220, IWD-1220, and IWF-1230. These components are shown on the ISI Boundary Drawings and color-coded accordingly.

2.7 Technical Approach and Positions

When the requirements of ASME, Section XI are not easily interpreted, Oyster Creek has reviewed general licensing/regulatory requirements and industry practice to determine a practical method of implementing the Code requirements. The technical approach and position documents contained in this section have been provided to clarify Oyster Creek's implementation of ASME, Section XI requirements for inservice inspection and system pressure testing. An index which summarizes each technical approach/position is included in Tables 2.7-1 and 2.7-2. This section is reserved for site-specific issues. Corporate policy statements will be tracked and maintained by the corporate staff.

TABLE 2.7-1
INSERVICE INSPECTION TECHNICAL APPROACH AND POSITIONS INDEX

Position Number	Page(s)	Revision Date	Status	Description of Technical Approach
PT-01	1	0	Incorporated	Class 2 Ferritic piping flaw evaluation

TABLE 2.7-2
SYSTEM PRESSURE TESTING TECHNICAL APPROACH AND POSITIONS INDEX

Position Number	Page(s)	Revision Date	Status	Description of Technical Approach
N/A				

TECHNICAL APPROACH AND POSITION NUMBER: PT-01
REVISION 0
(Page 1 of 1)

COMPONENT IDENTIFICATION

ASME Class: 2
References: IWC-3600
Description: Use of IWB-3650 and Appendix H

CODE REQUIREMENT

IWC-3610 references the use of IWB-3610 for criteria to evaluate flaws in ferritic components

POSITION

IWC-3122.3 of Section XI 1995 Edition, through 1995 Addenda states that a component whose examination detects flaws that exceed the acceptance standards of Table IWC-3410-1 is acceptable for continued service without a repair/replacement activity if an analytical evaluation , meets the acceptance criteria of IWC-3600. Table IWC-3410-1 subsequently refers to the acceptance standards of IWC-3514 for ferritic components. IWC-3514 which is in the course of preparation allows the Class I standards of IWB-3514 to be applied.

Likewise, the analytical evaluation criteria for Class 2 is in the course of preparation and references use of the Class 1 evaluation criteria contained in IWB-3610. IWB-3610 is a subsubarticle of IWB-3600, and references the Acceptance Criteria for Ferritic Steel Components 4 in. and greater in thickness which would not Apply to Oyster Creek piping welds. However, IWB-3650, of Section XI 1995 Edition, through 1996 Addenda which has been approved for use by CFR 50-55a provides Evaluation Procedures and Acceptance Criteria for Flaws in Ferritic Piping.

It is AmerGen's position that use of the Class 1 Acceptance criteria also includes the use of the analytical criteria for Section XI, 1995 edition, through 1996 Addenda for Class 2 ferritic piping welds when reference to IWB-3610 is made. This is based primarily on the fact that the criteria was prepared and approved by technical experts on the ASME Code committee, and subsequently the 1995 Edition, through 1996 Addenda was approved for use by the NRC without exception for these specific Code requirements. In addition, as stated previously IWC-3122.3 allows the use of an analytical evaluation to accept a component for continued service.

3.0 COMPONENT ISI PLAN

The Oyster Creek Component ISI Program Plan includes ASME, Section XI nonexempt pressure retaining welds, pressure retaining bolting, welded attachments, pump casings, valve bodies, reactor vessel interior, reactor vessel welded core support structures, reactor vessel interior attachments, reactor vessel removable core support structures of ISI Class 1, Class 2, and Class 3 components that meet the criteria of IWA-1300. These components are identified on the ISI Boundary Drawings listed in Tables 2.4-1, 2.4-2, and 2.4-3. This ISI Program Plan also includes component augmented inservice inspection examinations specified by documents other than ASME, Section XI.

3.1 Oyster Creek's Nonexempt ISI Class Components

The Oyster Creek's ISI Class 1, Class 2, and Class 3 components identified in P&IDs are those which do not meet the criteria of ASME, Section XI, Subarticles IWB-1220, IWC-1220, and IWD-1220, respectively.

3.1.1 Identification of ISI Class 1, Class 2, and Class 3 Nonexempt Components

ISI Class 1, Class 2, and Class 3 components are identified on the ISI Isometric and Component Drawings listed in Table 2.5-1. Welded attachments are identified by controlled Oyster Creek component support drawings.

3.2 Oyster Creek's Exempt ISI Class Components

The Oyster Creek ISI Class 1, Class 2, and Class 3 components that are exempt from examination are those which meet the criteria of ASME, Section XI, Subarticles IWB-1220, IWC-1220, and IWD-1220, respectively. Specifically, the following ASME, Section XI exemptions were utilized in the development of the Oyster Creek Component ISI Program Plan.

3.2.1 ISI Class 1 Exempt Components[5]

<u>IWB-1220, Components Exempt from Examination</u> - The following components (or parts of components) are exempted from the volumetric and surface examination requirements of IWB-2500:

(a) components[1,2] that are connected to the reactor coolant system and part of the reactor coolant pressure boundary[3], 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;

(2) components and their connections in piping[4] of NPS 1 and smaller;

(c) reactor vessel head connections and associated piping, NPS 2 and smaller, made inaccessible by control rod drive penetrations.

NOTES:

1. *Refer to 10 CFR 50, Section 50.55a(c)(2), revised March 15, 1984.*
2. *The exemptions from examination in IWC-1220 may be applied to those components permitted to be Class 2 in lieu of Class 1 by the regulatory authority having jurisdiction at the plant site.*
3. *Reactor coolant pressure boundary is defined in 10 CFR 50, Section 50.2(v); revised January 1, 1975.*
4. *In piping is defined as having one inlet and one outlet pipe, each of which shall be NPS 1 or smaller.*
5. *Reference IWB-1220, 1989 Edition, Section XI per 10 CFR 50.55a(b)(2)(xi).*

3.2.2 ISI Class 2 Exempt Components

IWC-1220, Components Exempt from Examination – The following components or parts of components are exempted from the volumetric and surface examination requirements of IWC-2500:

IWC-1221, Components Within RHR, ECC, and CHR Systems or Portions of Systems.

(a) For systems:

(1) piping NPS 4 and smaller; and

(2) vessels, pumps, and valves and their connections in piping[2] NPS 4 and smaller.

(b) 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.

IWC-1222, Components Within Systems or Portions of Systems Other Than RHR, ECC, and CHR Systems[1]

(a) Piping NPS 4 and smaller

(b) Vessels, pumps, and valves and their connections in piping[2] NPS 4 and smaller.

(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.

IWC-1223, Inaccessible Welds

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.

NOTES:

1. *RHR, ECC, and CHR systems are the Residual Heat Removal, Emergency Core Cooling, and Containment Heat Removal Systems, respectively.*

2. *In piping is defined as having a cumulative inlet and a cumulative outlet pipe cross-sectional area, neither of which exceeds the nominal OD cross-sectional area of the designated size.*

3.2.3 ISI Class 3 Exempt Components

IWD-1220, Components Exempt from Examination

The following components or parts of components are exempted from the VT-1 visual examination requirements of IWD-2500:

(a) for systems:

(1) piping NPS 4 and smaller; and

(2) vessels, pumps, and valves and their connections in piping[1] NPS 4 and smaller.

(b) 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; and

(c) 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.

NOTES:

1. In piping is defined as having a cumulative inlet and cumulative outlet pipe cross-sectional area, neither of which exceeds the nominal OD cross-sectional area of the designated size.

3.3 Augmented Examination Requirements

Augmented examination requirements are those examinations that are performed above and beyond the requirements of ASME, Section XI. A summary of those examinations performed by Oyster Creek that are not specifically addressed by ASME, Section XI, or the examinations that will be performed in addition to the requirements of the Code on a routine basis during the Fourth Inspection Interval is identified in the Inservice Inspection Summary Table 7.0-1.

3.4 ASME, Section XI Code Cases Utilized

The alternate rules of the Code Cases identified by 10 CFR 50.55a or listed in Regulatory Guide 1.147 may be used during the course of examinations performed in the Fourth Inspection Interval. Also, other Code Cases not listed in the Regulatory Guide that have been approved for use through Relief Requests (see Section 8.0) will be implemented in the Fourth Interval Program. The following is a summary of Code Cases that will be applied to components at Oyster Creek during the Fourth Inspection Interval.

3.4.1 Examination coverage for Class 1 and Class 2 welds will be in accordance with Code Case N-460.

3.4.2 Alternative rules for repair of Class1, Class 2, and Class 3 austenitic stainless steel piping in accordance with Code Case N-504-2.

3.4.3 Evaluation criteria for temporary acceptance of flaws in Class 3 piping in accordance with Code Case N-513.

3.4.4 Mechanical clamping devices for Class 2 and Class 3 piping in accordance with Code Case N-523-2.

3.4.5 Evaluation Procedure and acceptance Criteria for Flaws in Class 1 Ferritic Piping That Exceed the Acceptance Standards of IWB-3514.2 in accordance with Code Case N-463-1.

3.4.6 Pipe Specific Evaluation Procedure and acceptance Criteria for Flaws in class 1 Ferritic Piping That Exceeds the Acceptance Standards of IWB-3514.2 in accordance with Code case N-494-3.

3.5 Requests for Relief from ASME, Section XI Requirements

In accordance with 10 CFR 50.55a(g)(5), there are areas that have been identified where ASME, Section XI code requirements are impractical at Oyster Creek. As a result, relief has been requested from certain code requirements and alternative methods and/or rules have been established.

3.5.1 Component Requests for Relief not addressing Code Case utilization include:

RR No.	Subject
OC-02-01	Surface examination of welds
OC-02-02	Limited examination of reactor vessel support skirt
Alternative No. VIII-2	Annual Ultrasonic Training (PDI)

4.0 COMPONENT SUPPORT ISI PROGRAM PLAN

The Oyster Creek Component Support Program includes the supports of Section XI nonexempt ISI Class 1, Class 2, and Class 3 and MC components as described in Section 3.0.

4.1 Oyster Creek's Nonexempt ISI Class Component Supports

The Oyster Creek ISI Class 1, Class 2, and Class 3 nonexempt component supports are those which do not meet the criteria of ASME, Section XI, Subarticle IWF-1230. A summary of Oyster Creek's ASME, Section XI nonexempt component supports is included in Section 7.0.

4.1.1 Identification of ISI Class 1, Class 2, and Class 3 Nonexempt Component Supports

ISI Class 1, Class 2, and Class 3 component supports are identified on the ISI Isometrics and Component Drawings listed in Table 2.5-1. Supports are identified by controlled Oyster Creek Component Support Drawings.

4.2 Oyster Creek's Exempt ISI Class Component Supports

The Oyster Creek Class 1, Class 2, and Class 3 component supports that are exempt from examination are those which meet the criteria of Subarticle IWF-1230. Specifically, the following ASME, Section XI exemptions were utilized in the development of the Oyster Creek ISI Program Plan for component supports.

4.2.1 ISI Class 1, Class 2, and Class 3 Exempt Component Supports

A. <u>IWF, Supports Exempt from Examination</u>

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.

4.3 Augmented Examination Requirements

4.3.1 Currently, no component support augmented inservice inspection requirements are included in the Oyster Creek's ISI Program Plan.

4.4 ASME, Section XI Code Cases Utilized

4.4.1 Currently, no Code Cases are utilized in the Oyster Creek ISI Program Plan for component supports.

4.5 Requests for Relief from ASME, Section XI Requirements

4.5.1 Pursuant to 10 CFR 50.55a(a)(3)(i), an alternative is being requested to perform snubber examinations and tests in accordance with the requirements of Oyster Creek Technical Specifications (TS) 3.5.A.8 & 4.5.M.

4.6 Snubber Examination and Testing Requirements

4.6.1 Snubber Visual Inspection and Testing is performed in accordance with Oyster Creek Technical Specifications (TS) Sections 3.5.A.8 and 4.5.M.

5.0 SYSTEM PRESSURE TESTING ISI PLAN

The Oyster Creek Pressure Testing (SPT) Program includes all pressure retaining nonexempt and exempt Section XI, ISI Class 1, Class 2, and Class 3 components, with the exception of those specifically excluded by Articles IWA-, IWB-, IWC-, and IWD-5000, and Table IWB-2500-1, Category B-P; Table IWC-2500-1, Category C-H; and Table IWD-2500-1, Category D-B.

The SPT Program performs system pressure tests and visual inspections (VT-2) on the ISI Class 1, Class 2, and Class 3 pressure retaining components to verify system and component structural integrity. This program conducts periodic pressure tests at refueling outage or inspection period frequencies. In addition to the ASME, Section XI requirements, Oyster Creek's SPT Program Plan also includes augmented examination commitments.

All components subject to ASME, Section XI System Pressure Testing and Augmented Pressure Testing are shown on the color-coded ISI Boundary Sketches listed in Tables 2.4-1, 2-4.2, and 2-4.3.

5.1 Augmented Pressure Testing Requirements

Augmented pressure testing examinations are those examinations that are performed above and beyond the requirements of ASME, Section XI. Below is a summary of those examinations performed by Oyster Creek that are not specifically addressed by ASME, Section XI, or the examinations that will be performed in addition to the requirements of the Code on a routine basis during the Fourth Inspection Interval.

5.1.1 Currently, no augmented inservice inspection requirements are included in the Oyster Creek's SPT Program Plan.

5.2 ASME, Section XI Code Cases Utilized

The alternate rules of the Code Cases listed in Regulatory Guide 1.147 may be used during the course of examinations performed in the Third Inspection Interval. Also, other Code Cases not listed in the Regulatory Guide that have been approved for use through Relief Requests (see Section 8.0) will be implemented in the Fourth Interval Program. The following is a summary of Code Cases that will be applied to pressure testing at Oyster Creek during the Fourth Inspection Interval.

5.2.1 System pressure testing of welded Repairs and Replacements of Class 1, Class 2, and Class 3 components will be performed per Code Case N-416-2.

5.2.2 Alternate system pressure testing requirements of Class 2 containment components (those attached to nonclassed piping which is outside the scope of Section XI) may be performed in accordance with Code Case N-522.

5.2.3 Alternative Requirements for Pneumatic Pressure Testing, Section XI, Division 1, per N-534.

5.2.4 Alternative Requirements for Qualification of VT-2 Examination Personnel, Section XI, Division 1, per N-546.

5.2.5 Corrective Action for Leakage at Bolted Connections, Section XI, Division 1, per N-566-1

5.3 Requests for Relief from ASME, Section XI Requirements

In accordance with 10 CFR 50.55a(g)(5), there are areas that have been identified where ASME, Section XI code requirements are impractical at Oyster Creek. As a result, relief has been requested from certain code requirements and alternative methods and/or rules have been established.

5.3.1 System Pressure Test Requests for Relief not addressing Code Case utilization include:

RR No.	Subject
OC-02-03	Alternative for hydrostatic test of Class 3 systems

6.0 CONTAINMENT ISI PLAN

The Containment ISI Program Plan per IWE is not included in this document except for Relief Requests. The Relief Requests have been included for numbering, tracking, and submittal purposes. A program addressing inspection requirements of this subsection is maintained in a separate document titled, "10 Year Containment (IWE) Inservice Inspection Program Plan and Basis, Oyster Creek Generating Station," Rev. 0.

7.0 INSERVICE INSPECTION SUMMARY TABLES

The following Table 7.0-1 provides a summary of the ASME, Section XI component, component support, and system pressure testing as well as augmented examinations and tests for the Fourth Interval at Oyster Creek. If a particular Category and Item Number does not apply to Oyster Creek, it is not included in this table.

The format of the Inservice Inspection Summary Tables is as depicted below and provides the following information:

Examination Category	Item Number	Description	Exam Requirements	Total Number of Components by System	Relief Request/ TA&P Number	Notes
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Examination Category and Examination Category Description:

Provides the examination category and description as identified in ASME, Section XI, Tables IWB-2500-1, IWC-2500-1, IWD-2500-1, and IWF-2500-1. Only those examination categories applicable to Oyster Creek are identified.

In addition to the ASME, Section XI Categories, Category "N/A" was developed to identify Augmented ISI examinations and other Oyster Creek commitments.

(2) Item Number:

Provides the item number as identified in ASME, Section XI, Tables IWB-2500-1, IWC-2500-1, IWD-2500-1, and IWF-2500-1. Only those item numbers applicable to Oyster Creek are identified.

(3) Item Number Description:

Provides the description as identified in ASME, Section XI, Tables IWB-2500-1, IWC-2500-1, IWD-2500-1, and IWF-2500-1.

(4) Exam Requirements:

Provides the examination method(s) required by ASME, Section XI, Tables IWB-2500-1, IWC-2500-1, IWD-2500-1, and IWF-2500-1.

(5) Total Number of Components by System

Provides the system designator (abbreviations). See Section 2, Table 2.5-1, for an explanation of these system abbreviation designators.

This column also provides the number of components within a particular system for that Item Number.

(6) Relief Request/Technical Approach & Position (TA&P) Number

Provides a listing of Relief Request/TA&P numbers applicable to the ASME, Section XI Item Number. If a Relief Request/TA&P number is identified, see the corresponding Relief Request in Section 8.0 or the technical approach and position in Section 2.7. If a Relief Request/TA&P Number is generic to all components, the Number is not listed in these tables.

(7) Notes

Provides a listing of program notes applicable to the ASME, Section XI Item Number. If a program note number is identified, see the corresponding program note in Section 9.0.

OYSTER CREEK GENERATING STATION
INSERVICE INSPECTION SUMMARY TABLE 7.0-1

Examination Category	Item Number	Description	Exam Requirements	Total Number of Components by System	Relief Request/ TA&P Number	Notes
B-A Pressure Retaining Welds in Reactor Vessel	B1.11	Circumferential Shell Welds	Volumetric	4	R-18	Note 6
	B1.12	Longitudinal Shell Welds	Volumetric	12		Note 7
	B1.21	Circumferential Head Welds	Volumetric	3		Note 8
	B1.22	Meridional Head Welds	Volumetric	22		Note 8
	B1.30	Shell-to-Flange Weld	Volumetric	1		
	B1.40	Head-to-Flange Weld	Volumetric & Surface	1		
B-D Full Penetration Welds of Nozzles in Vessels	B3.90	Nozzle-to-Vessel Welds, Reactor Vessel	Volumetric	24		
	B3.100	Nozzle Inside Radius Section, Reactor Vessel	Volumetric	24		Note 9
B-F Pressure Retaining Dissimilar Metal Welds In Vessel Nozzles	B5.10	Dissimilar Metal Nozzle-to-Safe End Butt Welds NPS 4" or Larger, Reactor Vessel	Volumetric & Surface	23		
	B5.20	Dissimilar Metal Nozzle-to-Safe End Butt Welds Less Than 4" NPS, Reactor Vessel	Surface	2		
B-G-1 Pressure Retaining Bolting, Greater Than 2 in. In Diameter	B6.10	Reactor Vessel Closure Head Nuts	Visual VT-1	64		
	B6.20	Reactor Vessel Closure Studs, in Place	Volumetric	60		
	B6.30	Reactor Vessel Closure Studs, when Removed	Volumetric & Surface	4		Note 13
	B6.40	Threads in Reactor Vessel Flange	Volumetric	64		
	B6.50	Reactor Vessel Closure Washers, Bushings	Visual, VT-1	64 (sets)		
	B6.180	Bolts & Studs in Pumps	Volumetric	NG 5 (16)		Note 1
	B6.190	Flange Surface, when Disassemble, in Pumps	Visual, VT-1	NG 5 (16)		Note 1
	B6.200	Nuts, Bushings, Washers	Visual, VT-1	NG 5 (16)		Note 1
B-G-2 Pressure Retaining Bolting, 2 in. and Less In Diameter	B7.50	Bolts, Studs, & Nuts in Piping	Visual, VT-1	14		Note 2
	B7.60	Bolts, Studs, & Nuts in Pumps	Visual, VT-1	NG 5 (24)		Note2
	B7.70	Bolts, Studs, & Nuts in Valves	Visual, VT-1	72		Note 2

OYSTER CREEK GENERATING STATION
INSERVICE INSPECTION SUMMARY TABLE 7.0-1 (CONT.)

Examination Category	Item Number	Description	Exam Requirements	Total Number of Components by System	Relief Request/ TA&P Number	Notes
B-J Pressure Retaining Welds in Piping	B9.11	Circumferential Welds in Piping NPS 4 or Larger	Volumetric & Surface	NE – 53	OC-02-01	Code Case N-609
				NZ – 71	OC-02-01	
				NU – 82	OC-02-01	
				ND – 52		
				RHC – 11	OC-02-01	
				NG – 79	OC-02-01	
				MS – 60		
				RF – 59		
				MV-3		
				NC- 1		
	B9.21	Circumferential Welds in Piping Less than NPS 4	Surface	ND – 2		Code Case N-609
				RHC – 1 +3		3 R/Head Vent
				NG – 5		
				NC – 37		
				MS-2		
	B9.31	Branch Pipe Connection Welds NPS 4 or Larger	Volumetric & Surface	NU – 3		Code Case N-609
				NG – 2		
				MS – 20		
	B9.32	Branch Pipe Connection Welds Less than NPS 4	Surface	NU – 3		Code Case N-609
				NG – 22		
				MS – 3		
	B9.40	Socket Welds	Surface	NP – 45		Code Case N-609
				ND – 2		
				RHC – 45		
				MV – 25		
				NG – 60		
				MS – 50		
B-K Welded Attachments For Vessels, Piping, Pumps, and Valves	B10.10	Welded Attachments, Pressure Vessels	Surface	10	OC-02-02	
	B10.20	Welded Attachments, Piping	Surface	RF-27, MS-21, NG-36, RHC-1, ND-7, NU-21, NZ-15,NE-18	146	10% IWF-2510 (50 welded attach. selected)

OYSTER CREEK GENERATING STATION
INSERVICE INSPECTION SUMMARY TABLE 7.0-1 (CONT.)

Examination Category	Item Number	Description	Exam Requirements	Total Number of Components by System	Relief Request/ TA&P Number	Notes
B-K (Cont.)	B10.30	Welded Attachments, Pumps	Surface	40		10% IWF-2510 (8 selected)
	B10.40	Welded Attachments, Valves	Surface	NG 20 MS 2		10% IWF-2510 (6 selected)
B-L-2 Pump Casings	B12.20	Pump Casing, Internal Surface	Visual, VT-3	NG – 5		Note 3
B-M-1 Valve Bodies	B12.40	Valve Body Welds 4" NPS or Greater	Volumetric Surface (Aug)	(EMRV) 5		Note 11
B-M-2 Valve Bodies	B12.50	Valve Bodies, Exceeding NPS 4	Visual, VT-3	72		Note 3
B-N-1 Interior of Reactor Vessel	B13.10	Vessel Interior	Visual, VT-3	1		
B-N-2 Welded Core Support Structures and Interior Attachment to Reactor Vessels	B13.20	Interior Attachments Within Beltline Region	Visual, VT-1	9		
	B13.30	Interior Attachments Beyond Beltline Region	Visual, VT-3	51		
	B13.40	Core Support Structure	Visual, VT-3	4		
B-O Pressure Retaining Welds in Control Rod Housings	B14.10	Welds in CRD Housing	Surface	28		Note 12
B-P All Pressure Retaining Components (Periodic)	B15.10	RPV – System Leakage Test – Reactor Vessel	Visual, VT-2	1		Each Refueling Outage
	B15.50	System Leakage Test – Piping		All		Each Refueling Outage
	B15.60	System Leakage Test – Pumps		All		Each Refueling Outage
	B15.70	System Leakage Test – Valves		All		Each Refueling Outage

OYSTER CREEK GENERATING STATION
INSERVICE INSPECTION SUMMARY TABLE 7.0-1 (CONT.)

Examination Category	Item Number	Description	Exam Requirements	Total Number of Components by System	Relief Request/ TA&P Number	Notes
C-A Pressure Retaining Welds In Pressure Vessels	C1.10	Shell Circumferential Welds	Volumetric	NQ – 8		
	C1.30	Tubesheet-to-Head Welds	Volumetric	NE – 8		
C-B Pressure Retaining Nozzle Welds in Vessels	C2.21	Nozzle-to-Shell (or Head) Welds in Vessels Greater than ½" Nominal Thickness, without Reinforcing Plate)	Volumetric & Surface	NE – 8		Note Distribution
	C2.22	Nozzle Inside Radius Section in Vessels Greater than ½" Nominal Thickness, without Reinforcing Plate	Volumetric	NE – 8	(12 " size exclusion)	Note Distribution
	C2.31	Reinforcing Plate Welds to Nozzle and Vessel, in Vessels Greater Than ½" Nominal Thickness, with Reinforcing Plate	Surface	NQ - 8		Note Distribution
	C2.33	Nozzle-to-Shell (or Head) Welds when inside of Vessel is Inaccessible in Vessels Greater Than ½" Nominal Thickness, with Reinforcing Plate	Visual, VT-2	NQ – 8		Each Inspection period
C-C Welded Attachments For Vessels, Piping, Pumps, and Valves	C3.10	Welded Attachment to Vessel	Surface	16		Four per HX
	C3.20	Welded Attachments to Piping	Surface	NE 32		10% of IWF-2510 (23 selected)
				NZ 59		
				NQ 62		
				RF 10		
	C3.30	Welded Attachments to Pumps	Surface	NZ 8		10% of IWF-2510 (4 selected)
				NQ 4		
C-D Pressure Retaining Bolting Greater Than 2" in Diameter	C4.20	Bolts and Studs Piping	Volumetric	RF – 2		Two Flow Elements
C-F-1 Pressure Retaining Welds In Austenitic Stainless Steel or High Alloy Piping	C5.11	Circumferential Welds in Austenitic Stainless Steel or High Alloy Piping ≥3/8" Nominal Wall Thickness for Piping > NPS 4	Volumetric & Surface	NE – 79	OC-02-01	
				NZ – 12	OC-02-01	

OYSTER CREEK GENERATING STATION
INSERVICE INSPECTION SUMMARY TABLE 7.0-1 (CONT.)

Examination Category	Item Number	Description	Exam Requirements	Total Number of Components by System	Relief Request/ TA&P Number	Notes
C-F-2 Pressure Retaining Welds In Carbon or Low Alloy Steel Piping	C5.51	Circumferential Welds in Carbon or Low Alloy Steel Piping ≥3/8" Nominal Wall Thickness for Piping >NPS 4	Volumetric & Surface	NZ – 74		
				NC – 48		
				NQ – 231		
				RF – 52		
	C5.81	Pipe Branch Connections of Branch Piping NPS ≥2, Circumferential Weld	Surface	RF – 2		
	C5.90	Augmented	Volumetric & Surface	NZ 267		
				NQ 70		
				WD 2		
				CC 23		
C-H All Pressure Retaining Components (Periodic)	C7.10	System Leakage Test, Pressure Vessel	Visual, VT-2	All		Each Inspection Period
	C7.30	System Leakage Test, Piping		All		Each Inspection Period
	C7.50	System Leakage Test, Pumps		All		Each Inspection Period
	C7.70	System Leakage Test, Valves		All		Each Inspection Period

OYSTER CREEK GENERATING STATION
INSERVICE INSPECTION SUMMARY TABLE 7.0-1 (CONT.)

Examination Category	Item Number	Description	Exam Requirements	Total Number of Components by System	Relief Request/ TA&P Number	Notes
D-A Welded Attachments For Vessels, Piping Pumps, and Valves	D1.10	Pressure Vessel Welded Attachments	Visual, VT-1	NE 9		
				CH 1		
				CC 4		
				NN 6		
	D1.20	Piping Welded Attachments	Visual, VT-1	ESW 14		
				CC 46		
				SW 7		
				NN 9		
	D1.30	Pump Welded Attachments	Visual, VT-1	CH 2		
				CC 2		
				NN 8		
				SW 2		
				ESW 4		
D-B All Pressure Retaining Components	D2.10	System Leakage Test, Pressure Vessels	Visual, VT-2	All	OC-02-03	Each Inspection Period
	D2.30	System Leakage Test, Piping		All	OC-02-02	Each Inspection Period
	D2.50	System Leakage Test, Pumps		All	OC-02-03	Each Inspection Period
	D2.70	System Leakage Test, Valves		All	OC-02-03	Each Inspection Period

OYSTER CREEK GENERATING STATION
INSERVICE INSPECTION SUMMARY TABLE 7.0-1 (CONT.)

Examination Category	Item Number	Description	Exam Requirements	Total Number of Components by System	Relief Request/ TA&P Number	Notes
F-A Component Supports	F1.10	Class 1 Piping Supports	Visual, VT-3	NE 32		
				NZ 17		
				NP 14		
				ND 17		
				NU 27		
				RHC 5		
				NG 100		
				NC 18		
				MS 25		
				RF 30		
	F1.20	Class 2 Piping Supports	Visual, VT-3	NE 48		
				NZ 131		
				NU 3		
				NC 26		
				NQ 146		
				MS 2		
				RF 17		
				CC 7		
	F1.30	Class 3 Piping Supports	Visual, VT-3	NN 75		
				CH 25		
				SW 22		
				ESW 83		
				CC 80		

OYSTER CREEK GENERATING STATION
INSERVICE INSPECTION SUMMARY TABLE 7.0-1 (CONT.)

Examination Category	Item Number	Description	Exam Requirements	Total Number of Components by System	Relief Request/ TA&P Number	Notes
F-A Component Supports	F1.40	Supports Other Than Piping Supports (Class 1, Class 2, & Class 3)	Visual, VT-3	NE 6		Condenser (2)
				RX 9		Skirt & Lateral supports
				NQ 16		H/X (4)
				NN 10		H/X 3
				CH 1		Tank
				CC 4		H/X (2)
				TORUS 1		Support
				NU-6		H/X (2)
				NZ 8		8 Pumps
				NU 3		3 Valves
				NG 30		5 Valves 5 Pumps
				NQ 4		4 Pumps
				NN 4		4 Pumps
				MS 2		2 Valves
				CH 2		2 Pumps
				SW 2		2 Pumps
				ESW 4		4 Pumps
				CC 2		2 Pumps
				NE 6		6 Valves

OYSTER CREEK GENERATING STATION
INSERVICE INSPECTION SUMMARY TABLE 7.0-1 (CONT.)

Examination Category	Item Number	Description	Exam Requirements	Total Number of Components by System	Relief Request/ TA&P Number	Notes
N/A Augmented Components	BWRVIP -75	IGSCC Examinations	Volumetric	NG 89		See OC-PLAN-02
				RWCU 49		
				NU 14		
				NE 122		
				RHC 7		
				NZ 27		

8.0 RELIEF REQUESTS FROM ASME, SECTION XI

This section contains Relief Requests written per 10 CFR 50.55a(a)(3)(i) for situations where alternatives to ASME, Section XI requirements provide an acceptable level of quality and safety; per 10 CFR 50.55a(a)(3)(ii) for situations where compliance with ASME, Section XI requirements results in a hardship or an unusual difficulty without a compensating increase in the level of quality and safety; and per 10 CFR 50.55a(g)(5)(iii) for situations where ASME, Section XI requirements are considered impractical.

The following NRC guidance was utilized to determine the correct 10 CFR 50.55a paragraph citing for Oyster Creek's Relief Requests. 10 CFR 50.55a(a)(3)(i) and 10 CFR 50.55a(a)(3)(ii) provide alternatives to the requirements of Section XI, while 10 CFR 50.55a(g)(5)(iii) recognizes situational impracticalities.

10 CFR 50.55a(a)(3)(i): Cited in Relief Requests when alternatives to the ASME, Section XI requirements which provide an acceptable level of quality and safety are proposed. Examples are Relief Requests, which propose alternative NDE methods and/or examination frequency.

10 CFR 50.55a(a)(3)(ii): Cited in Relief Requests when compliance with the ASME, Section XI requirements is deemed to be a hardship or unusual difficulty without a compensating increase in the level of quality and safety. Examples of hardship and/or unusual difficulty include, but are not limited to, excessive radiation exposure, disassembly of components solely to provide access for examinations, and development of sophisticated tooling that would result in only minimal increases in examination coverage.

10 CFR 50.55a(g)(5)(iii): Cited in Relief Requests when conformance with ASME, Section XI requirements is deemed impractical. Examples of impractical requirements are situations where the component would have to be redesigned, or replaced to enable the required inspection to be performed.

An index for Oyster Creek's Relief Requests is included in Table 8.0.

The following Relief Requests are subject to change throughout the inspection interval.

TABLE 8.0
RELIEF REQUEST INDEX

Relief Request	Status[2]	Description Of Relief Request/ NRC Approval Summary[1]
OC-02-01	Drafted	Surface examination of welds
OC-02-02	Drafted	Limited examination of reactor vessel support skirt
OC-02-03	Drafted	Alternative for hydrostatic test of Class 3 systems
OC-ALT-VIII-1	Drafted	Appendix VIII annual training

TABLE 8.0 (CONT.)
RELIEF REQUEST INDEX

Relief Request	Status[2]	Description Of Relief Request/ NRC Approval Summary[1]
R-18	Granted (Remaining term of existing license)	Examination of reactor vessel circumferential shell welds per 10 CFR 50.55a(g)(6)(ii)(A)

Note 1: The NRC grants Relief Requests pursuant to 10 CFR 50.55a(g)(6)(i) when Code requirements cannot be met and proposed alternatives do not meet the criteria of 10 CFR 50.55(a)(3). The NRC authorizes Relief Requests pursuant to 10 CFR 50.55a(a)(3)(i) if the proposed alternatives would provide an acceptable level of quality and safety or under (3)(ii) if compliance with the specified requirements would result in hardship or unusual difficulties without a compensating increase in the level of safety.

Note 2: Relief Request Status Options: Authorized – Approved for use in an NRC SER (See Note 1); Granted – Approved for use in an NRC SER (See Note 1); Authorized Conditionally – Approved for use in an NRC SER which imposes certain conditions; Granted Conditionally – Approved for use in an NRC SER which imposes certain conditions; Denied – Use denied in an NRC SER; Expired – Approval for relief has expired; Withdrawn – Relief has been withdrawn by the station; Not Required – The NRC has deemed the relief unnecessary in an SER or RAI; Cancelled – Relief has been cancelled by the station prior to issue; Drafted – Drafted relief awaiting submittal and/or pending approval;

9.0 ISI PROGRAM PLAN NOTES

ISI Program Plan Notes provide Oyster Creek specific implementation practices for ISI requirements.

The ISI Program Notes Index provides a listing of program notes applicable to the ASME, Section XI Item Number. If a program note number is identified, see the corresponding program note in Section 7.0, Table 7.0-1.

Table 9.0 provides the index and a summary of each note.

TABLE 9.0
ISI PROGRAM NOTES INDEX

Note #	Note Summary	Revision
1	B-G-1 Bolting examination selection	0
2	B-G-2 Bolting examination selection	0
3	Volumetric examination of studs	0
4	Class 3 leakage test hold times	0
5	Class 1,2, and 3 exemptions	0
6	Reactor circumferential shell weld coverage	0
7	Reactor longitudinal shell weld coverage extent	0
8	Inaccessibility of lower head welds	0
9	Feedwater and CRD Nozzle inspection per 0619	0
10	Longitudinal weld inspection	0
11	Augmented EMRV Surface examination	0
12	CRD weld surface examination	0

NOTE 1

Table IWB-2500-1, Examination Category B-G-1, Note 3 allows limiting pressure retaining bolting examinations to those components selected for examination under Examination Categories B-B, B-J, B-L-2 and B-M-2.

NOTE 2

Table IWB-2500-1, Examination Category B-G-2, Note 2 allows limiting pressure retaining bolting connections to those components selected for examination under Examination Categories B-B, B-J, B-L-2, and B-M-2.

NOTE 3

Table IWB-2500-1, Examination Category B-L-2 and B-M-2, Note 2 limits examination to when a pump or valve is disassembled for maintenance, repair, or volumetric examination.

NOTE 4

The following hold times for Class 3 system leakage tests are imposed per the relief request:

- For insulated systems, a four hour hold time would be required at system operating pressure and temperature.
- For non-insulated systems a hold time of 10 minutes would be required at system operating pressure and temperature.

NOTE 5

It is the intent of this program update to invoke the exemptions allowed by IWB-1220, IWC-1220, IWD-1220, and IWF-1230 as delineated in Section 2, ISI Classification Basis of this document.

NOTE 6

Perform incidental examination of the intersecting circumferential shell weld to the maximum extent possible based on accessibility during performance of longitudinal shell weld examination.

NOTE 7

If the coverages identified in the relief request are unable to be met the relief request will need to be resubmitted for approval.

NOTE 8

Lower head welds inaccessible below skirt due to control rod drives and instrumentation penetration interference. VT-2 visual examination each refueling outage

NOTE 9

Feedwater and CRD Nozzle inspection per NUREG 0619

NOTE 10

Inspect intersecting longitudinal weld

NOTE 11

Augmented surface examination for limited volumetric examination

NOTE 12

Section XI allows either volumetric or surface examination. Oyster Creek will perform surface examination.

NOTE 13

Four studs located in the cattle chute area are removed for refueling

OYSTER CREEK NUCLEAR GENERATING STATION

SECTION 2

ISI CLASSIFICATION BASIS

1.0 INTRODUCTION

This section of the Program Plan establishes the basis for the classification of safety related, pressure retaining, fluid systems and components (those containing water, steam, air, oil, etc.) for the Oyster Creek ISI Program. As discussed in this document, the ISI Program Plan scope consists of those inspection and testing requirements mandated by ASME, Section XI and Augmented ISI requirements, such as those included in the Oyster Creek licensing commitments. Examination and testing requirements are contained in Oyster Creek's ISI Program Plan (Section 1), while specific examination selection criteria and schedules are detailed in the ISI Selection Document (Section 3) of this document.

Safety related systems and components are those that are relied upon to remain functional during or following a design basis event to assure:

- the integrity of the reactor coolant pressure boundary,
- the capability to shut down the reactor and maintain it in a safe shutdown condition, or
- the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the applicable guideline exposures set forth in 10 CFR 100.11.

For the purpose of determining which systems and components are required to shut down the reactor and maintain it in a safe shutdown condition, a unit is considered in safe shutdown with: (1) the reactivity of the reactor kept to a margin below criticality, consistent with technical specifications; (2) the core decay heat removed at a controlled rate, sufficient to prevent core or Reactor Coolant System thermal design limits from being exceeded; (3) radioactive material releases controlled to keep the doses within prescribed limits; and (4) operation within design limits of structures, systems, and components necessary to maintain these conditions.

Once this safety related criteria is applied, components within the reactor coolant pressure boundary (RCPB), as defined by 10 CFR 50.2[1] and not excluded from Class 1 requirements by 10 CFR 50.55a(c)(2)(i) or (ii), are designated as Class 1. Those RCPB components excluded from Class 1 requirements per 10 CFR 50.55a(c)(2)(i) or (ii) are designated Class 2 per Regulatory Guide 1.26, Paragraph C.1. The remaining safety related components are evaluated for Class 2 or Class 3 designation in accordance with the guidelines of Regulatory Guide 1.26, ANSI/ANS-52.1-1983. Per Regulatory Guide 1.26, Paragraphs A and B, the ASME Class 2 and Class 3 boundaries are limited to safety-related systems and components. ANSI/ANS-52.1-1983 provides classification criteria specific to the functional requirements of BWR fluid systems related to nuclear safety or to potential release of radioactivity. Oyster Creek is only committed to and licensed in accordance with the rules and regulations of 10 CFR 50, and Regulatory Guide 1.26.

For the purpose of defining the Fourth Ten-Year Interval ISI Classifications, Revision 3 of Regulatory Guide 1.26 and ANSI/ANS-52.1-1983 are utilized at Oyster Creek. Compliance with Revision 3 of Regulatory Guide 1.26 was committed to in the Oyster Creek Quality Assurance Plan.

The use of this document in conjunction with the plant ISI Boundary Drawings details the specific components which are required to be included in the ASME, Section XI program and, in general, the examinations and tests required by ASME, Section XI, Subsections IWA, IWB, IWC, IWD, and IWF, as well as Augmented ISI requirements imposed on or committed to by AmerGen Energy Company, LLC.

Included in this basis document is the information regarding Containment Inservice Inspection for Subsection IWE. The Containment Inservice Inspection Program is required per 10 CFR 50.55a(b)(2)(ix)(E) and 10 CFR 50.55a(b)(2)(x)(A) using the 1992 Edition with the 1992 Addenda of the ASME code.

For detailed discussion of the ISI Classification process at Oyster Creek, see Sections 2.0 and 3.0 of this document.

Note 1:

Reactor coolant pressure boundary means all those pressure-containing components of boiling and pressurized water-cooled nuclear power reactors, such as pressure vessels, piping, pumps, and valves, which are:

(1) Part of the reactor coolant system, or

(2) Connected to the reactor coolant system, up to and including any and all of the following:
   - (i) The outermost containment isolation valve in system piping which penetrates primary reactor containment,
   - (ii) The second of two valves normally closed during normal reactor operation in system piping which does not penetrate primary reactor containment,
   - (iii) The reactor coolant system safety and relief valves.

For nuclear reactors of the direct cycle boiling water type, the reactor coolant system extends to and includes the outermost containment isolation valve in the main steam and feedwater piping.

2.0 BACKGROUND

I. Code of Federal Regulations Classification Criteria

According to 10 CFR 50.55a(g)(4), the specific components required to be included in an ISI Program Plan subject to ASME, Section XI inspection and testing are those components and component supports which are classified as ASME Class 1, Class 2, and Class 3. 10 CFR 50.55a(a)(3) does allow alternatives when authorized by the Director of the Office of Nuclear Reactor Regulation. The NRC may also require a licensee to follow an augmented ISI Program Plan for systems and components for which they deem an added assurance of structural reliability is necessary, per 10 CFR 50.55a(g)(6)(ii).

II. Classification Document Criteria

Criteria for classification of the RCPB are covered in 10 CFR 50.55a(c). Criteria for the classification of components not addressed in 10 CFR 50.55a is provided in Regulatory Guide 1.26 and ANSI/ANS-52.1-1983. Implementation of the ASME B&PV Code, Section XI requirements is included in the Oyster Creek Technical Specification.

III. ASME, Section XI Classification Criteria

According to the 1995 Edition, 1996 Addenda of Section XI (applicable version for Oyster Creek's fourth inspection interval), IWA-1400(a), it is the owner's responsibility to determine the appropriate Code Classes for each component and to identify the system boundaries subject to inspection. IWA-1300 states that components identified for inspection and testing shall be included in the ISI Program Plan. The selection of components for the ISI Program Plan is subject to review by the regulatory and enforcement authorities having jurisdiction at the plant site. IWA-1320(a) states that the system group classification criteria of the regulatory authorities having jurisdiction at the power plant site governs the application of the rules of Section XI. IWA-1400(a), Footnote 2, states that classification criteria are specified in 10 CFR 50. Oyster Creek complies with the requirements of Regulatory Guide 1.26 and ANSI/ANS-52.1-1983 for determining Quality Group designations.

IV. Oyster Creek ISI Program Plan Development

In accordance 10 CFR 50.55a, AmerGen Energy Company is required to update the ISI Program Plan for ASME Class 1, Class 2, and Class 3 components for Oyster Creek once every ten years (10-year intervals.) The ISI Program Plan is required to comply with the latest edition and addenda of ASME, Section XI incorporated by reference in 10 CFR 50.55a 12 months prior to the start of the interval per 10 CFR 50.55a(g)(4)(ii).

As of October 14, 2001, one year prior to the end of Interval 3 for Oyster Creek, the latest edition and addenda of ASME, Section XI referenced in 10 CFR 50.55a was the 1995 Edition, 1996 Addenda. Accordingly, the 1995 Edition, 1996 Addenda of ASME, Section XI, Subsections IWA, IWB, IWC, IWD, and IWF will be utilized for ISI Program Plan development. The ISI Program Plan details the requirements for examination and testing of ISI Class 1, Class 2, and Class 3 pressure retaining components and component supports. The ISI Program Plan also includes augmented inservice inspections and pressure testing requirements imposed on or committed to by Oyster Creek.

The requirements of 1992 Edition of ASME, Section XI with Addenda through 1992, Subsection IWE are referenced in this document regarding the inservice inspection of Metal Containment (MC) components. These ASME, Section XI rules became effective September 9, 1996, per final rule making to 10 CFR 50.55a in the Federal Register dated August 8, 1996. The program addressing inspection requirements for this subsection is maintained as a separate program.

3.0 DISCUSSION

I. ISI Boundary Classification Process – General

The ISI classification of systems and components is a two-phase process. First, classification is performed based on system/component function. After this initial bounding process, the included components are evaluated for the application of ASME, Section XI requirements and exemptions.

A. ISI Boundary Classification Process – Functional

Each safety related fluid system containing water, steam, air, oil, etc. included in the Oyster Creek FSAR was reviewed to determine which safety functions they perform during all modes of system and plant operation. Based on these safety functions, the systems and components were evaluated per the appropriate classification documents discussed in this Section and indexed accordingly as Quality Group A (ASME Class 1), Quality Group B (ASME Class 2), Quality Group C (ASME Class 3). The systems and components which are typically included in the ASME, Section XI program are those that are nuclear safety related and designed ASME Class 1, Class 2, or Class 3.

The details of this functional bounding are included in the Notes section of the ISI Boundary Drawing and for the most part, follow classifications such that Quality Group A/ASME Class 1 component ISI is per ASME, Section XI, Subsection IWB, Quality Group B/ASME Class 2 component ISI is per ASME, Section XI, Subsection IWC, and Quality Group C/ASME Class 3 component ISI is per ASME, Section XI, Subsection IWD. Deviations from this ISI Classification scheme will be specifically noted on the applicable ISI Boundary Drawings.

When a particular group of components has been identified as performing a Quality Group A, Quality Group B, or Quality Group C function, the components are further reviewed to assure the interfaces (boundary valves and boundary barriers) meet the criteria of 10 CFR 50.2, 10 CFR 50.55a(c)(2), Regulatory Guide 1.26, Footnote 4, Regulatory Guide 1.26, C.1.d, or ANSI/ANS-52.1-1983. The valve positions shown on the P&IDs were assumed to be the normal positions during system operation. All boundaries for ISI systems and components are noted on the ISI Boundary Drawings.

1. Classification Documents

The documents employed for system/component functional classification include:

- 10 CFR 50.55a, Codes and Standards – Sections 50.55a(c), (d), and (e), reference 10 CFR 50.2 and Regulatory Guide 1.26 for the classification of Quality Group A, and Quality Groups B and C components, respectively. 10 CFR 50.55a, Footnote 9, specifically invokes Regulatory Guide 1.26.

- 10 CFR 50.2, Reactor Coolant Pressure Boundary Definition – This section of the CFR provides a detailed definition for components within the reactor coolant pressure boundary. In previous issues of The Code of Federal Regulations, this definition was provided in Section 50.2(v).

- Regulatory Guide 1.26, Revision 3, Quality Group Classifications and Standards for Water, Steam, and Radioactive Waste Containing Components of Nuclear Power Plants – This document provides criteria for the classification of Quality Group B, Quality Group C, and Quality Group D (typically non-classed) components. AmerGen has committed to Regulatory Guide 1.26, Revision 3 in the Quality Assurance Plan. References for functional classification of systems are primarily from Regulatory Guide 1.26; however, in the event that Regulatory Guide 1.26 does not include the applicable function(s), ANSI/ANS-52.1-1983 references are employed.

- ANSI/ANS-52.1-1983, Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plants – This document is a secondary reference in the event that Regulatory Guide 1.26 does not include the applicable function(s). In this case, ANSI/ANS-52.1-1983 references are utilized. Oyster Creek is not specifically committed to any requirements in ANSI/ANS-52.1-1983.

- EP-011, Oyster Creek Generating Station Procedure, " Methodology for Assigning and Maintaining the Quality Classification of Components"

- **ISI Boundary Classification Process – ASME, Section XI Application**

The second phase of the ISI Boundary Classification process is the application of the examination requirements of ASME, Section XI, detailed in Subparagraphs IWB-1210, IWC-1210, IWD-1210, and IWF-1210, and the application of the exemptions of ASME, Section XI, detailed in Subparagraphs IWB-1220, IWC-1220, IWD-1220, and IWF-1230.

The application of ASME, Section XI requirements for components included in the ISI Boundary Summaries of Section 4.1 is detailed in Subparagraph IWA-1320, for ASME Class 1 components (Quality Group A) the requirements of Subsection IWB apply, for ASME Class 2 components (Quality Group B) the requirements of Subsection IWC apply, and for ASME Class 3 (Quality Group C) the requirements Subsection IWD apply.

Specific ASME, Section XI application information is detailed in Section 4.1 of this document under the Examination Category Application portion of each ISI Boundary Summary. The ISI Classifications are also shown on each of the ISI Color-Coded Boundary Drawings (see Appendix A.)

1. Components Subject to Examination

Components (piping, pumps, valves, vessels, etc.) on the Boundary Drawings (Appendix A) which are subject to the examinations of IWB-2000 (per IWB-1210), IWC-2000 (per IWC-1210), or IWD-2000 (per IWD-1210) are summarized in each of the ISI Boundary Summaries under the subsection heading, Nonexempt Components. The supports of these components are also subject to the examination requirements of IWF-2000.

2. Components Exempt from Examination

Components within the ISI Boundary which are exempt from examination per IWB-1220, IWC-1220, or IWD-1220 and exempt from component support examination per IWF-1230 are summarized in each of the ISI Boundary Summaries under the subsection heading, Exempt Components. The summary cites the applicable ASME, Section XI exemption. Supporting information for exemptions that are based on operating temperatures and pressures or system function is also included in this section of the ISI Boundary Summary.

3. ISI Classification Technical Positions

The Technical Positions in Section 5.0 have been developed in conjunction with this document to detail implicit interpretation in ASME, Section XI relating to the exemption of ASME Class 2 and Class 3 components from examination.

4. Abbreviations and Acronyms Used in This Document

The following abbreviations and acronyms are employed in this document:

- **IBD** – ISI Boundary Drawing.
- **NDE** – Non-Destructive Examination.
- **NPS** – Nominal Pipe Size.
- **P&ID** – Piping and Instrumentation Diagram.
- **Q** – Safety Related
- **A** – Augmented Quality
- **N** – Non-Safety Related

4.0 ISI BOUNDARY SUMMARIES

For each of the ISI Boundary Drawings found to include ASME Class 1, Class 2, or Class 3 components, a summary or abstract of the pertinent classification information is included in Section 4.1.

The summaries of Section 4.1, Systems and Components Included in the ISI Program Plan, provide the following general information:

- SYSTEM – Per the ISI Boundary Drawings.
- DRAWING NUMBER – Per the ISI Boundary Drawings.

The color-coded version of the applicable flow diagram(s) identified in the reference section is referred to as the ISI Boundary Drawings. The ISI Boundary Drawings have been color-coded to identify the components subject to examination and those, which are exempt from examination. The color legend has been included on each drawing.

The ISI Boundary Summaries provided in Section 4.1 of this document provides AmerGen's basis for application of Section XI examination exemption rules. These summaries also provide system function, modes of operation, examination category application, and references used to apply these rules for each ISI Boundary Drawing as noted below.

The basis for boundaries has been identified on Boundary Drawings in notes, which appear on the drawings. Each change in Code Class indicated on the drawing has a reference to specific notes that identify the AmerGen basis for the boundary.

The following specific information is provided in the summaries:

A. CLASSIFICATION BASIS

Identifies specific basis for quality group classification and Section XI Class.

B. SYSTEM FUNCTION

Provides brief descriptions of system functions as identified in the appropriate modules of the Oyster Creek Operations Plant Manual.

C. DESCRIPTION

Provides brief descriptions of system mode(s) of operation including normal or emergency if applicable.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Each ASME Class 1, Class 2, and Class 3 component included on the ISI drawing is subject to ASME, Section XI requirements where the component is classified as non-exempt or exempt. The text of this section summarizes the ASME, Section XI requirements and exemptions by referencing the Coding Designators on drawings included in Appendix A. This section is organized by ASME Class, summarizing exempt components followed by non-exempt components.

E. REFERENCES

Applicable references such as the UFSAR, Oyster Creek Operations Manual, Drawings, and Technical Specifications are noted in this section. Specific references to Regulatory Guide use for boundary determination are found in the Boundary Drawing's specific notes.

4.1

OYSTER CREEK

ISI BOUNDARY SUMMARIES

SYSTEM COMPONENTS INCLUDED

IN THE ISI PROGRAM PLAN

4.1.1

REACTOR VESSEL
(CE 232-560)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50.2

B. SYSTEM FUNCTION

The Reactor Vessel is the central component of the reactor coolant pressure boundary. It contains the reactor core, reactor internal components, and the reactor moderator (water.) It provides a high integrity barrier against the release of radioactive materials, and a floodable volume in which the reactor core can be adequately cooled in the event of a breach in the primary system external to the Reactor Vessel.

C. DESCRIPTION

The Reactor Vessel is a vertical, cylindrical pressure vessel. The base plate material is alloy steel SA-302, Grade B modified by the addition of nickel. The vessel interior is clad with Type 304 stainless steel applied by weld overlay.

The Reactor Vessel is 805-5/16 inches tall from the bottom of the support skirt to the top of the head-vent nozzle flange face. It has an inside diameter of 213 inches and a design minimum wall thickness of the cylindrical section of 7-1/8 inches. The lower reactor head wall thickness is 8-3/4 inches. The additional structural strength provided in the bottom head is to compensate for the Control Rod Drive and Nuclear Instrument Penetrations.

The cylindrical section of the vessel consists of four cylindrical shell courses. Each shell course consists of three rolled plates, each welded together along the vertical seams. The lower head is welded to the cylindrical section. The upper head is welded to a flange (head flange) that is bolted to a mating flange (vessel flange) that is welded to the cylindrical section.

The head is bolted down using 64 studs and nuts with the studs threaded into bushings in the vessel flange.

There is a total of 245 nozzles; 213 in bottom head, 27 in cylindrical shell, 2 in flange, and 3 in closure head.

A steel skirt supports the Reactor Vessel. The top of the skirt is welded to the bottom of the vessel joint at the lower head. The base of the skirt is continuously supported by a ring girder fastened to a concrete foundation (reactor pedestal) which carries the load through the Drywell to the Reactor Building foundation slab.

The Reactor Vessel is located inside a biological shield within the Drywell. The biological shield is vertically supported by the reactor pedestal and laterally by biological shield-to-containment stabilizers. The vessel is laterally supported inside the biological shield by four vessel-to-biological-shield stabilizers.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (a), (b), and (c)

Non-Exempt: Table IWB-2500-1
Table IWF-2500-1

Augmented: NUREG-0619, "BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle"

4.1.2

MAIN STEAM SYSTEM (MS)

(BR 2002)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50.2
B	Q	Regulatory Guide 1.26, C.1.C

B. SYSTEM FUNCTION

The MS System receives steam from the Nuclear Steam Supply System and transports the steam to the high-pressure turbine and to the other steam systems. The MS System also bypasses steam to the main condenser when reactor steam generation exceed turbine steam demand.

C. DESCRIPTION

Main Steam Lines

Steam generated from the reactor leaves the vessel via two identical 24" main steam lines commonly refereed to as the North (A) or South (B) steam lines. The vessel relief valves (5) and safety valves (9) are located on the steam lines. Downstream of the Relief and Safety Valves, the steam passes through identical flow restrictors, which provide steam flow measurement and will restrict flow in the advent of a downstream pipe break.

The steam then flows past Inboard (NS03A and NS03B) and outboard (NS04A and NS04B) Isolation Valves, respectively. The steam line outboard isolation valves are located in the steam and feedwater pipe tunnel (Trunion Room) which is part of secondary containment. The steam lines exit the Trunion Room into the Turbine Building where they are merged into a 30" header or manifold used to distribute steam to the various steam supply systems.

The 30" manifold connects steam lines A and B, and distributes steam as follows:

- Four 18" lines supply the main turbine steam chest.
- A 2.5" line supplies the Auxiliary Steam System.
- A 20" line supplies the turbine bypass valves. These valves, operated by the Turbine Control System, dump steam to the condensers to control reactor pressure when steam generation is greater than turbine steam demand.

- A 5" line taps off the line to the bypass valves to supply the Shaft Sealing System.

Reactor Head Vent Line

A connection on steam line A continuously vents the reactor head through Manual Valve V-25-23; this prevents non-condensable gasses from collecting in the Reactor Vessel.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (b)

Non-Exempt: Table IWB-2500-1
Table IWF-2500-1

Secondary Side ASME, Section XI – IWC

Augmented Class 2 Table IWC-2500-1, Category C-H, "Pressure Test"

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 5.4.9, Rev. 1
2. Oyster Creek Operational Plant Manual, Module 26, Rev. 1
3. Oyster Creek ISI Boundary Drawing, 3E-411-A1-1000

4.1.3

FEEDWATER SYSTEM

(BR 2003)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50.2 NUREG-0822
B	Q	Regulatory Guide 1.26, C.1.C

B. SYSTEM FUNCTION

The Feedwater System supplies heated, demineralized water from the Condensate System to the Reactor Vessel to maintain reactor level. Additionally, the Feedwater System assists the Emergency Core Cooling Systems to maintain reactor level during accident conditions.

C. DESCRIPTION

Each of the three reactor feedwater pumps take suction from one of the intermediate pressure feedwater heaters and discharges through one of three high-pressure feedwater heaters, and Heater String Outlet Valves, V-2-10, V-2-11, and V-2-12, to a common feedwater header.

The outlet valves are where the ISI boundary begins. The header separates into two lines prior to penetrating the containment vessel. Each line contains two check valves (one outside containment and one inside containment) and a manually operated isolation valve inside containment.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (b)

Non-Exempt: Table IWB-2500-1
Table IWF-2500-1

Class 2 ASME, Section XI – IWC and IWF

Exemptions: IWC-1222 (a) and (b)

Non-Exempt: Table IWC-2500-1
Table IWF-2500-1

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 5.49, Rev. 1
2. Oyster Creek Operational Plant Manual, Module 17, Rev. 0
3. Oyster Creeks P&ID BR 2003, "Condensate & Feedwater System"
4. Oyster Creek ISI Boundary Drawing, 3E-422-A1-001

4.1.4

REACTOR RECIRCULATION SYSTEM

(GE 237F487)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50.2

B. SYSTEM FUNCTION

The Reactor Recirculation System has been designed to perform the following function:

- Provide forced circulation of reactor coolant through the core to overcome the power density limitation of the fuel.
- Provide a variable coolant (moderator) flow through the core to control reactor power without manipulation of the control rods.

C. DESCRIPTION

The Reactor Recirculation System consists of five piping loops (A, B, C, D, and E) which take suction from, and discharge to, the Reactor Vessel. Each loop contains the following major components: recirculation pump, pump suction valve, pump discharge valve, and discharge bypass valve.

The five recirculation pumps, arranged in parallel, take suction from the Reactor Vessel Downcomer Annulus through individual reactor recirculation outlet nozzles and the suction isolation valves. Pump discharge flow passes through individual discharge isolation valves, and re-enters the lower head of the reactor through five individual reactor recirculation inlet nozzles. A two-inch line containing a valve bypasses each pump discharge valve. This path allows a minimum flow during pump starting and provides a small backflow to keep an idle loop warm.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (b)

Non-Exempt: Table IWB-2500-1
Table IWF-2500-1

Augmented: Generic Letter 88-01
NUREG-0313, Rev. 2, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping"
BWRVIP-75

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 5.4
2. Oyster Creek Operational Plant Manual, Module 38A, Rev. 2
3. Oyster Creeks P&ID GE 237E798, "Recirculation System"
4. Oyster Creek ISI Boundary Drawing, 3E-223-A1-001

4.1.5

CORE SPRAY SYSTEM

(GE 885D781)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50.2
B	Q	Regulatory Guide 1.26, C.1.a.(1)

B. SYSTEM FUNCTION

The Core Spray System provides cooling water to the reactor core in the form of a low pressure spray to remove decay heat and prevent fuel clad melting following any postulated loss of coolant accident (LOCA.)

C. DESCRIPTION

The Core Spray System consists of two independent loops, System 1 and System 2. Each loop consists of two main pumps, two booster pumps, and two sets of parallel isolation valves inside and outside the Drywell.

The water supply for the system is held in the Torus Suppression Pool and is drawn through three strainers into a common header. An individual 12" pipe connected to the header supplies the suction side of each of the four main pumps.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (b)

Non-Exempt: Table IWB-2500-1
Table IWF-2500-1

Augmented: Generic Letter 88-01
NUREG-0313, Rev. 2, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping", BWRVIP-75

Class 2 ASME, Section XI – IWC and IWF

Exemptions: IWC-1221 (a)

Non-Exempt: Table IWC-2500-1
Table IWF-2500-1

Augmented: Thin wall (<3/8") piping on the discharge side of the core spray pump.

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 6.3
2. Oyster Creek Operational Plant Manual, Module 10, Rev. 0
3. Oyster Creek, P&ID GE 885D781, "Core Spray System"
4. Oyster Creek, ISI Boundary Drawing, 3E-212-A1-001

4.1.6

ISOLATION CONDENSER SYSTEM

(GE 148F262)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50.2 NUREG-0822
B	Q	Regulatory Guide 1.26, C.1.a.(1)
C	Q	Regulatory Guide 1.26, C.2.a.(1)

B. SYSTEM FUNCTION

The Isolation Condenser System in an Emergency Core Cooling System that removes core residual and decay heat and depressurizes the Reactor Vessel in the event the main condenser is not available as a heat sink.

C. DESCRIPTION

The system is comprised of two independent loops A and B. The major components for each loop are as follows: full capacity isolation condenser (1), motor-operated steam supply isolation valves (2), and motor-operated condensate return isolation valves (2).

The system operates by natural circulation with steam flowing from the Reactor Vessel through the isolation condenser tubes. The condensate returns by gravity to the Reactor Vessel through the Reactor Recirculation System, forming a closed loop.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (b)

Non-Exempt: Table IWB-2500-1
Table IWF-2500-1

Augmented: Generic Letter 88-01
NUREG-0313, Rev. 2, Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping
BWRVIP-75

Class 2 ASME, Section XI – IWC and IWF

Exemptions: IWC-1221 (a)

Non-Exempt: Table IWC-2500-1
Table IWF-2500-1

Augmented: Generic Letter 88-01
NUREG-0313, Rev. 2, Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping
BWRVIP-75

Class 3 ASME, Section XI – IWD and IWF

Exemptions: IWD-1220(a)

Non-Exempt: Table IWD-2500-1
Table IWF-2500-1

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 6.3
2. Oyster Creek Operational Plant Manual, Module 23, Rev. 0
3. Oyster Creek, P&ID GE 148F262, "Emergency Condenser"
4. Oyster Creek, ISI Boundary Drawing, 3E-211-A1-001

4.1.7

SHUTDOWN COOLING SYSTEM (SDC)

(GE 148F711)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50.2
B	Q	Regulatory Guide 1.26, C.1.b.(2)

B. SYSTEM FUNCTION

The SDC System removes decay heat during the second phase of cooldown, when reactor pressure is below 150 psig and temperature is below 350° F. The system cools the reactor form 350° F to 125° F within 36 hours after shutdown to permit vessel head removal for refueling.

The SDC System removes core decay heat while the reactor is in cold shutdown.

C. DESCRIPTION

The SDC System consists of three loops, which take suction from Recirculation Loop E through a combined suction line and discharge back to Recirculation Loop E through a combined discharge line. The major components of the SDC System are: inlet isolation valve (1) inside the Drywell, loop pump suction valves (3) outside Drywell, pumps (3), heat exchangers (3) tube side, minimum flow valves (3), loop outlet throttle valves (3), loop outlet isolation valves (3), and an outlet isolation valve (1) inside Drywell.

The SDC System is normally isolated. The system Containment Isolation Valves, V-17-19 and V-17-54, provide isolation of the SDC System loops from primary reactor pressure.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (b)

Non-Exempt: Table IWB-2500-1
Table IWF-2500-1

Augmented: Generic Letter 88-01
NUREG-0313, Rev. 2, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping"
BWRVIP-75

Class 2 ASME, Section XI – IWC

Augmented: Table IWC-2500-1, for Pressure Test Only

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 5.4.7, Rev. 0
2. Oyster Creek Operational Plant Manual, Module 45, Rev. 2
3. Oyster Creek, P&ID GE 148F711
4. Oyster Creek, ISI Boundary Drawing, 3E-214-A1-001

4.1.8

STANDBY LIQUID CONTROL SYSTEM (LIQUID POISON SYSTEM)

(GE 148F723)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50
B	Q	Regulatory Guide 1.26, C.1.b.(1)

B. SYSTEM FUNCTION

The Standby Liquid Control System must:

- Bring the reactor to a cold shutdown condition from full power steady state operating condition at any time independent of control rod capability.
- Mitigate the consequences of an anticipated transient without SCRAM event (ATWS) to ensure shutdown before unacceptable containment conditions develop.

C. DESCRIPTION

The Standby Liquid Control System consists of two independent subsystems with common suction and discharge paths. Major system components are: liquid poison tank, test tank, SLC pumps (2), SLC pump discharge accumulators (2), and explosive injection (squib) valves (2).

When system operation is required, one of two positive displacement SLC pumps draw neutron absorber solution from the Liquid Poison Tank.

The operating pump discharges through Explosive Injection Valves V-19-44 or V-19-45 and to the Reactor Vessel. An in-vessel injection sparger admits the liquid poison just below the core plate, through the lower head.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (b) and (c)

Non-Exempt: Table IWB-2500-1
Table IWF-2500-1

Class 2 ASME, Section XI – IWC and IWF

Exemptions: IWC-1222 (a), (b), and (c)
Table IWC-2500-1, Category C-C

Non-Exempt: Table IWC-2500-1, "Pressure Test"

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 9.3.5
2. Oyster Creek Operational Plant Manual, Module 46, Rev. 1
3. Oyster Creek, P&ID GE 148F723, "Liquid Poison"
4. Oyster Creek, ISI Boundary Drawing, 3E-213-A1-001

4.1.9

CONTROL ROD DRIVE HYDRAULIC (CRD)

(GE 237E487)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50.2
B	Q	Regulatory Guide 1.26, C.1.b.(1)

B. SYSTEM FUNCTION

The CRD Hydraulic System supplies and controls the pressure and flow of reactor-grade water to the hydraulic control units and the reactor head cooling flow path.

The CRD Hydraulic System supplies water pressure to individual control rod drive mechanisms for normal rod movement, scrams, and mechanism cooling.

It provides a scram discharge volume to contain the water discharged from the Control Rod Drive mechanisms during a scram and also maintains the reactor coolant pressure boundary during and after a scram until the scram is reset.

Under emergency conditions, the CRD Hydraulic System supplies low flow, high-pressure makeup to the Reactor Vessel via the CRD return nozzle.

C. DESCRIPTION

The CRD Hydraulic System supplies and controls the pressure and flow combinations to the drives through the 137 individual Hydraulic Control Units (HCU).

The CRD Hydraulic System takes water from either the Condensate Pump discharge or the Condensate Storage Tanks, pressurizes it, filters it and with three pressure stages regulates its three output pressures. The first pressure stage supplies a minimal 1400 psig, for charging the accumulators on each individual Hydraulic Control Unit. The second pressure stage is adjusted to hold a differential pressure nominally at 250 psi above reactor pressure and supplies water for normal drive operation. The third stage is adjusted to hold a differential pressure nominally at 20 psi above reactor pressure and supplies cooling water to the drives.

One HCU is supplied for each control rod drive. It consists of a Scram Subsystem, a Cooling Water Subsystem, and a Drive Control Subsystem. The Scram Subsystem provides the water and stored energy in the accumulators required for a fast insertion of the control rod. The Cooling Water Subsystem provides the cooling for each of the 137 Control Rod Drive Mechanisms. The Drive Control Subsystem, controlled by signals from the Reactor Manual Control System, provides the force for rod insertion or withdrawal during normal operations.

The Scram Discharge Volume Subsystem is used to limit the loss of and contain the Reactor Vessel water from all the drives during a scram. The scram discharge volume consists of two separate volumes, one for the north bank of 69 HCUs, and one for the south bank of 68 HCUs. During normal plant operation, the discharge volumes are empty with both the drain and vent valves open. During a scram, the discharge volumes are partly filled with the water from the discharge of the inserted drives. While scrammed, the control rod drive seal leakage continues to flow to the discharge volumes until the volume pressure equals the Reactor Vessel pressure. When the scram signal is removed, the scram valves on the HCUs may be closed and the discharge volumes may be vented and drained.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (b)

Non-Exempt: Table IWB-2500-1

Class 2 ASME, Section XI – IWC and IWF

Exemptions: IWC-1222 (a) and (b)

Non-Exempt: Table IWC-2500-1
Table IWF-2500-1

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 3.9.4.2
2. Oyster Creek Operational Plant Manual, Module II, Rev. 0
3. Oyster Creek, GE 237E487, "Control Rod Drive"
4. Oyster Creek, ISI Boundary Drawing, 3E-225-A1-001
5. Oyster Creek, ISI Boundary Drawing, 3E-225-A1-002

4.1.10

REACTOR WATER CLEANUP SYSTEM

(GE 148F444)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50.2

B. SYSTEM FUNCTION

The Reactor Cleanup System is a filtration and demineralization system for maintaining the purity of the water in the Reactor Coolant System.

The system is designed to operate during all phases of normal plant operation.

C. DESCRIPTION

Under normal operating, reactor coolant flows under reactor pressure from the suction of Reactor Recirculation Pump B and a two-inch line from the Reactor Vessel low point to the supply line. The supply line has a motor operated Isolation Valve (V-16-1) inside the Drywell and two parallel motor operated Isolation Valves (V-16-2 and V-16-4) outside. The outside isolation valves make the ASME, Section XI, Class 1 to non-class break. Flow then passes through the tube of three series-connected regenerative heat exchangers and again through the tubes of two series-connected non-regenerative heat exchangers, filtered, demineralized, and pumped through the shell side of the regenerative (3-series) to the return line. The return line has one motor operated Valve (V-16-61) outside the Drywell and a Check Valve (V-16-62) inside the Drywell. The outside isolation valve makes the non-class to ASME, Section XI, Class 1 break.

The system is normally operated continuously during all phases of reactor operation. The system is automatically isolated from the Class 1 boundary under abnormal operating conditions.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (b)

Non-Exempt: Table IWB-2500-1
Table IWF-2500-1

Augmented: Generic Letter 88-01
NUREG-0313, Rev. 2, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping"
BWRVIP-75

These inspections are also performed outside of the ISI boundary breaks for this system.

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 5.4.8, Rev. 1
2. Oyster Creek Operational Plant Manual, Module 39, Rev. 1
3. Oyster Creek, P&ID GE 148F444, "Cleanup Demineralizer System"
4. Oyster Creek, ISI Boundary Drawing, 3E-215-A1-001

4.1.11

CONTROL ROD DRIVE RETURN

(GE 237E487)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50.2

B. SYSTEM FUNCTION

See Control Rod Drive Hydraulic.

C. DESCRIPTION

See Control Rod Drive Hydraulic.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (b)

Non-Exempt: Table IWB-2500-1
Table IWF-2500-1

E. REFERENCES

See Control Rod Drive Hydraulic.

4.1.12

REACTOR HEAD COOLING

(GE 237F798)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
A	Q	10 CFR 50.2 APP.A, 55

B. SYSTEM FUNCTION

The system is designed to meet the following objectives:

- Condense steam and condensable gases in the vessel dome to assist in vessel head cooling during shutdown.
- Prevent repressurization as the vessel is flooded to levels above the vessel flange and main steam nozzles to cool the upper portions of the vessel metal.
- Provide vessel head cooling under the direct control of the Control Room Operator during shutdown, after local valve setting has been completed.
- Permit reactor pressure to be reduced to atmospheric, and vessel head temperature to be reduced to approximately 140° F without causing metal temperature differentials which would affect the integrity of the Reactor Vessel during its designed lifetime.

C. DESCRIPTION

The Reactor Head Cooling System consists of a single fog-spray nozzle located inside the top of the reactor pressure vessel head. The head spray water is supplied from the condensate storage tank by the standby CRD Hydraulic System pumps.

The Reactor Head Cooling System is connected to the vessel head nozzle by a removable two-inch stainless steel pipe spool piece. A check valve is installed as the isolation valve inside the Drywell. The isolation valve outside the Drywell is an air operated globe valve which is remotely controlled from the Control Room and which will close automatically from an isolation signal.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWB and IWF

Exemptions: IWB-1220 (b)

Non-Exempt: Table IWB-2500-1
Table IWF-2500-1

Augmented: Generic Letter 88-01
NUREG-0313, Rev. 2, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping"
BWRVIP-75

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 5.4.11, Rev. 1
2. Oyster Creek Operational Plant Manual,
3. Oyster Creek, P&ID GE 237E487, "Control Rod Drive"
4. Oyster Creek, ISI Boundary Drawing 3E-216-A1-001

4.1.13

AUTOMATIC DEPRESSURIZATION SYSTEM (ADS)

(BR 2002)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
B	Q	Regulatory Guide 1.26, C.1.a.(1)

B. SYSTEM FUNCTION

The ADS provides for a controlled blowdown of the primary system to rapidly reduce pressure during a small pipe break. This depressurization permits Core Spray System injection prior to uncovering the fuel, when Reactor Vessel pressure is below 285 psig. In addition, the electromatic relief valves (EMRVs) of the ADS open on an overpressurization condition to avoid unnecessary safety valve actuation during plant transients that result in a pressure increase.

C. DESCRIPTION

When actuated, ADS opens five EMRVs, to rapidly reduce system pressure. Steam flows directly from the main steam lines, through the EMRVs and Discharge Piping Systems. There are two Discharge Piping Systems, one for three EMRVs on the south main steam header and one for two EMRVs on the north header. Each discharge pipe terminated in from the EMRVs down to the torus during normal operations. It is for this reason that the components are to be exempted from schedule Section XI volumetric and surface examinations.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 2 ASME, Section XI – IWC and IWF

Exemption: IWC-1221 (d)

Non-Exempt: Table IWF-2500-1

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 6.3, Rev. 0
2. Oyster Creek Operational Plant Manual, Module 05, Rev. 1
3. Oyster Creeks P&ID BR 2002, "Main Steam System"
4. Oyster Creek ISI Boundary Drawing, 3E-411-A1-001

4.1.14

CONTAINMENT SPRAY SYSTEM

(GE 148F740)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
B	Q	Regulatory Guide 1.26, C.1.a.(2)

B. SYSTEM FUNCTION

The Containment Spray System is designed to reduce containment pressure and temperature following a design basis LOCA, by removing thermal energy from the containment atmosphere. This system also serves to limit offsite doses by reducing the pressure differential between the containment atmosphere and the external environment.

C. DESCRIPTION

The Containment Spray System consists of two redundant loops which deliver water from the Torus Suppression Pool to the spray headers in the Drywell and the torus. Each loop consists of two pumps in parallel, two heat exchangers in parallel, and two Drywell spray header and a torus spray header.

The water supply for the system is held in the torus and is drawn through three strainers into a common header. The header also feeds the Core Spray System's main pumps. Water is pumped from the suppression pool through the suction strainers to the heat exchangers, shell side, sprayed into the containment and flows by gravity back into the Suppression Pool via the vent headers. The water spray removes latent and sensible heat from the Drywell. The heat is rejected to the Emergency Service Water System via the containment spray heat exchanger.

The piping sections from Valves V-21-5 and V-21-11 to the Drywell spray header and from Valves V-21-13, V-21-15, V-21-17, and V-21-18 to the Torus header are open-ended during normal operation. It is for this reason that the components are exempted from scheduled volumetric and surface examinations.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 2 ASME, Section XI – IWC and IWF

Exemptions: IWC-1221 (a), and (d)

Non-Exempt: Table IWC-2500-1
Table IWF-2500-1

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 6.2
2. Oyster Creek Operational Plant Manual, Module 9, Rev. 1
3. Oyster Creek, P&ID GE 148F740, "Containment Spray System"
4. Oyster Creek ISI Boundary Drawing, 3E-241-A1-001

4.1.15

REACTOR BUILDING CLOSED COOLING WATER SYSTEM (RBCCW)

(BR 2006)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
B	Q	Penetrate Containment
C	Q	Regulatory Guide 1.26, C.2.a.(4)

B. SYSTEM FUNCTION

The RBCCW System supplies cooling water in the temperature range of 70° F to 105° F to reactor plant auxiliary equipment in the Reactor Building, Drywell, and old Radwaste Facility during all modes of plant operation.

C. DESCRIPTION

The RBCCW System is a Closed-Loop Cooling Water System containing the following major components: RBCCW pumps (2), RBCCW heat exchangers (2), surge tank, chemical injection pump, chemical mixing tank, Drywell isolation valves (4), and cooling loads shown below.

Reactor Building Components	Drywell Components
Shutdown Cooling Heat Exchangers (3)	Reactor Recirculation Pump and Motor Coolers (5)
Shutdown Cooling Pumps (3)	Drywell Cooling Units (5 With 1 Spare)
Non-Regenerative Heat Exchanger (2)	Drywell Equipment Drain Tank (1)
Cleanup Recirculation Pump Coolers (2)	
Cleanup Auxiliary Pump Cooler (1)	
Precoat Pump Cooler (1)	
Tunnel Recirculation Fans and Corner Room Coolers (2)	
Core Spray Pumps (2)	
Containment Spray Pumps (2)	
Reactor Building Equipment Drain Tank (1)	

RBCCW System flows into and from the Drywell passes through containment Isolation Valves V-5-147, V-5-165, V-5-166, and V-5-167, which provide leak-tight isolation of the Drywell upon actuation of a primary containment isolation signal. Valves V-5-165 and V-5-166 are located inside the Drywell, and Valves V-5-147 and V-5-167 are located outside the Drywell in the Reactor Building. RBCCW System flow branches inside the Drywell to supply individual components, then recombines and exits the Drywell.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 2 ASME, Section XI – IWC and IWF

Exemptions: IWC-1222 (a), (b), and (c)

Non-Exempt: Table IWC-2500-1
Table IWF-2500-1

Class 3 ASME, Section XI – IWD and IWF

Exemptions: IWD-1220(a)

Non-Exempt: Table IWD-2500-1
Table IWF-2500-1

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 9.2
2. Oyster Creek Operational Plant Manual, Module 35, Rev. 0
3. Oyster Creek, P&ID BR 2006, "Reactor Building Closed Cooling Water System"
4. Oyster Creek, ISI Boundary Drawing 3E-541-A1-001

4.1.16

EMERGENCY SERVICE WATER SYSTEM (ESW)

(BR 2005)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
C	Q	Regulatory Guide 1.26, C.2.a.(2)

B. SYSTEM FUNCTION

The ESW System provides cooling water to the containment spray heat exchangers and represents the heat sink for the energy released in a Loss of Coolant Action.

C. DESCRIPTION

The Emergency Service Water System consists of two identical loops, 1 and 2.

Each loop contains the following major components: emergency service water pumps (2), containment spray heat exchangers (2), and containment spray heat exchangers outlet valve (1).

The pumps take suction in the intake structure from the canal and discharge to the containment spray heat exchanger, through an expansion pipe, pump discharge check valves, a combined discharge header, and the heat exchanger combined inlet header. System flow is through the tubes of the heat exchanger to cool containment spray counterflow through the shell. Water is discharged from the heat exchangers back to the canal.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 3 ASME, Section XI – IWD and IWF

Exemption: IWD-1220(a)

Non-Exempt: Table IWD-2500-1
Table IWF-2500-1

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 6.2
2. Oyster Creek Operational Plant Manual, Module 09, Rev. 1
3. Oyster Creek, P&ID BR 2005, "Reactor & Turbine Building Service Water System"
4. Oyster Creek, ISI Boundary Drawing 3E-532-A1-001

4.1.17

SERVICE WATER SYSTEM (SWS)

(BR 2005)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
C	Q	Regulatory Guide 1.26, C.2.a.(4)

B. SYSTEM FUNCTION

The SWS performs the following functions:

- Provides seawater cooling to the tube side of the two RBCCW heat exchangers during normal plant operation.
- Provides seawater cooling to the tube side of the two TBCCW heat exchangers when the Circulating Water System (CWS) is shutdown.
- Provides a manual backup supply of seal water to the CWS pumps when their normal seal water supply is unavailable.
- Maintains the ESW side of the containment spray heat exchangers full.

C. DESCRIPTION

The SWS is an open-loop system consisting of the following major components: service water pumps (2), seal well, and associated piping and manually operated valves. The two service water pumps take suction from the intake structure and discharge to a common header. This header supplies the two RBCCW heat exchangers. Each heat exchanger discharges to a common header; this header discharges to the seal well, and discharges to the plant's discharge canal.

A two-inch line supplies keep-full pressure to the ESW System. Keeping full pressure maintains the ESW System pressurized and full of water to prevent water hammer and air binding of heat exchangers and piping within the ESW System.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 1 ASME, Section XI – IWD and IWF

Exemptions: IWD-1220(a)

Non-Exempt: Table IWD-2500-1
Table IWF-2500-1

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 9.2
2. Oyster Creek Operational Plant Manual, Module 44, Rev. 0
3. Oyster Creek, P&ID BR 2005, "Reactor & Turbine Building Service Water System"
4. Oyster Creek, ISI Boundary Drawing 3E-531-A1-001

4.1.18

CONDENSATE TRANSFER SYSTEM

(BR 2004)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
C	Q	Regulatory Guide 1.26, C.2.a.(1)

B. SYSTEM FUNCTION

The Condensate Transfer System provides condensate to the Control Rod Drive System and is one source of makeup for the isolation condenser.

C. DESCRIPTION

The Condensate Storage Tank (CST) is a 525,000-gallon tank that provides bulk storage of condensate for use throughout the plant. Two condensate transfer pumps take suction on a common header for the CST and exits the Chlorination Building and flows to the Turbine, Reactor, and Old Radwaste Building. In the Reactor Building the Condensate Transfer System supplies isolation condenser makeup water during emergency situations.

The CST provides a normal and supply volume to the Control Rod Drive Hydraulic System. It also provides a backup supply volume for Core Spray System in the event the torus is not available.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 3 ASME, Section XI – IWD and IWF

Exemptions: IWD-1220(a)

Non-Exempt: Table IWD-2500-1
Table IWF-2500-1

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 10.4.7
2. Oyster Creek Operational Plant Manual, Module 57, Rev. 0
3. Oyster Creek, P&ID BR 2004, "Condensate Transfer System"
4. Oyster Creek, ISI Boundary Drawing 3E-424-A1-001

4.1.19

FUEL POOL COOLING AND AUGMENTED FUEL POOL COOLING SYSTEMS

(GE 237E756)

A. CLASSIFICATION BASIS

QUALITY GROUP	QUALITY CLASSIFICATION	ISI BASIS
C	Q	Regulatory Guide 1.26, C.2.a.(4)

B. SYSTEM FUNCTION

The spent fuel storage pool stores irradiated core components, including depleted fuel assemblies.

The Fuel Pool Cooling and Augmented Fuel Pool Cooling Systems maintain the fuel pool water volume at a temperature low enough to prevent steaming and excessive thermal stress of the fuel pool floor and walls.

The Fuel Pool Cooling System maintains the quality of the water within acceptable limits to prevent loss of clarity or excessive corrosion of the pool or its contents.

C. DESCRIPTION

Fuel Pool Cooling

The Fuel Pool Cooling System consists of a single train which recirculates, cools, filters, and demineralizes fuel pool water, and if filled, reactor cavity water. The system contains the following major components: reactor cavity, spent fuel pool, equipment pool skimmer surge tanks (2), pumps (2), heat exchangers (2), filter and demineralizer.

Augmented Fuel Pool Cooling

The Augmented Spent Fuel Cooling System operates separately or in parallel with the regular fuel pool pumps and heat exchangers to provide additional cooling capability when entire core unloading is required.

The Augmented Spent Fuel Cooling System consists of two full capacity pumps in parallel and one plate-type heat exchanger.

D. EXAMINATION CATEGORY APPLICATION AND INSPECTION REQUIREMENTS

Class 3 ASME, Section XI – IWD and IWF

Exemptions: IWD-1220(a)

Non-Exempt: Table IWD-2500-1
Table IWF-2500-1

E. REFERENCES

1. Updated Final Safety Analysis Report, Section 9.1.3
2. Oyster Creek Operational Plant Manual, Module 20, Rev. 0
3. Oyster Creek, P&ID GE 237E756, "Spent Fuel Pool Cooling"
4. Oyster Creek, ISI Boundary Drawing 3E-251-A1-001

4.1.20

CONTAINMENT PENETRATIONS FOR NON NUCLEAR SAFETY RELATED PIPING SYSTEMS

(JC 147434)

A. CLASSIFICATION BASIS

Fluid System piping that penetrates the primary containment can be placed into one of two major configuration categories: (1) piping that contains reactor coolant, or (2) piping that doesn't contain reactor coolant. However, it is the function of a system that is taken into consideration more often than its configuration when making a determination for assigning ISI classifications (Class 1, Class 2, and Class 3.) Guidance for determining ISI classifications has already been established in 10 CFR 50 and Regulatory Guide 1.26 for piping systems with configurations matching Category No. 1 and in some cases for Category No. 2 if the systems were determined to be Safety related. For Category No. 2 systems that are not Safety related or do not satisfy either of the Regulatory Guide 1.26 positions, C.1 or C.2, a Class 2 classification was assigned for ISI purposes in accordance with ANSI/ANS-52.1-1983. The boundary breaks were made at the containment isolation valves and the first isolation valve inside containment. Although these systems are not Safety related in function, the piping penetration containment within the boundaries described above are classified Safety related.

B. SYSTEM FUNCTION

Containment Isolation.

C. DESCRIPTION

Demineralized Water Transfer

This system stores and supplies pure demineralized water to service equipment throughout the plant including the Condensate Storage Tank. The system is not safety-related.

Demineralized water is supplied to the Drywell through a removable spool piece at Penetration X-23. The spool piece is installed during outages when primary integrity is not required. When primary containment is required, the spool piece is removed and blank flanges are installed on both pipe ends.

Drywell Equipment Drain Tank (DWEDT)

The DWEDT is located inside the Drywell at floor level between A and E Reactor Recirculation Pumps. The DWEDT receives various equipment drains.

The contents of the tank are transferred to New Radwaste through Drywell Penetration X-21.

Drywell Floor Drain Sump 1-8 (DWFDS)

The DWFDS 1-8 is located inside the Drywell, in the CRD Housing Room under the Reactor Vessel. As a low point within the Drywell, the DWFDS receives leakage via gravity downflow.

The contents are transferred to New Radwaste through Drywell Penetration X-21.

OYSTER CREEK ISI CLASSIFICATION TECHNICAL POSITIONS

TECHNICAL POSITION NUMBER: 1

COMPONENT IDENTIFICATION

ASME Class: 1, 2, 3
References: N/A
Description: Fluid system piping that penetrates primary containment

REGULATORY AND TECHNICAL SPECIFICATION REQUIREMENTS

Reg Guide 1.26

POSITION

Reference Boundary Summary 4.1.20

APPENDIX A

OYSTER CREEK

ISI BOUNDARY DRAWINGS

APPENDIX A

INDEX OF ISI BOUNDARY DRAWINGS

DRAWING NUMBER	TITLE
GE 148F262	Emergency Conderser System
GE 885D781	Core Spray System
GE 148F723	Liquid Poison System
GE 148F711	Shutdown Cool System
GE 148F444	Clean-up Demineralizer System
GE 237E487	Reactor Head Cooling
GE 237E798	Reactor Recirculation System
GE 197E871	Hydraulic Control Unit
GE 197E871	Scram Discharge Volume
GE 148F740	Containment Spray System
GE 237E756	Fuel Pool Cooling
BR 2002	Main Steam
BR 2003	Feedwater
BR 2004	Condensate Transfer
BR 2004	Demineralized Water Transfer
BR 2005	Service Water
BR 2005	Emergency Service Water
BR 2006	Reactor Building Closed Cooling Water
JC 147434	Sump and Waste Collection

APPENDIX B

OYSTER CREEK

SYSTEMS SUMMARIES

APPENDIX B

CLASS 1 SYSTEMS SUMMARY

SYSTEM	ISI BOUNDARY DRAWING	REMARKS
Main Steam	BR 2002, Sheet 1	Class 1 to Class 2 transition at Valves V-1-9 and V-1-10.
Feedwater	BR 2003	Class 1 to Class 2 transition at Valves V-2-71 and V-2-72.
Recirculation	GE 237E487	Entire System
Core Spray	GE 885D781	Class 1 to Class 2 transition at Valves V-20-15, V-20-21, V-20-40, and V-20-41.
Isolation Condenser	GE 148F262	Class 1 to Class 2 transition at Valves V-14-31, V-14-32, V-14-34, and V-14-35.
Shutdown Cooling	GE 148F711	Class 1 to Class 2 transition at Valves V-17-1, V-17-2, V-17-3, V-17-55, V-17-56, and V-17-57.
Poison	GE 148F723	Class 1 to Class 2 transition at Valve V-19-16.
Control Rod Drive Hydraulic	GE 237E487	
Cleanup	GE 148F444	Class 1 to Non-Class transition at Valves V-16-2, V-16-3, V-16-1, V-16-61, and V-16-64.
Control Rod Drive Return	GE 237E487	Class 1 to Non-Class transition at Valve V-15-26.
Head Cooling	GE 237F798	Class 1 to Non-Class transition at Valve V-31-2.

APPENDIX B

CLASS 2 SYSTEMS SUMMARY

SYSTEM	ISI BOUNDARY DRAWING	APPLICABLE REG. GUIDE 1.26 PARAGRAPH	REMARKS
Main Steam	BR 2002, Sheet 2	C.1.C	Stop & Bypass Valve (Augmented).
Feedwater	BR 2003	C.1.C	Shutoff Valve.
Core Spray	GE 885D781	C.1.a.(1)	Emergency Core Cooling.
Isolation Condenser	GE 148F262	C.1.a.(1)	Emergency Core Cooling.
Shutdown Cooling	GE 148F711	C.1.b.(2)	Residual Heat Removal (Augmented).
Poison	GE 148F723	C.1.b.(1)	Reactor Shutdown.
Control Rod Drive Hydraulic	GE 237E487	C.1.b.(1)	Reactor Shutdown.
Automatic Depressurization	BR 2002, Sheet 1	C.1.a.(1)	Emergency Core Cooling.
Containment Spray	GE 148F740	C.1.a.(2)	Containment Heat Removal.
Closed Cooling Water	BR 2006, Sheet 3	Not Applicable	Containment Penetration.
Scram Discharge	GE 197E871	C.1.b.(1)	Reactor Shutdown.
Demineralization. Water Transfer	BR 2004, Sheet 1	Not Applicable	Containment Penetration.
Drywell Floor & Equipment Drains	JC 147434, Sheets 2, 3	Not Applicable	Containment Penetration.

APPENDIX B

CLASS 3 SYSTEMS SUMMARY

SYSTEM	ISI BOUNDARY DRAWING	APPLICABLE REG. GUIDE 1.26 PARAGRAPH	REMARKS
Isolation Condenser	148F262	C.2.a.(1)	Condensers are Class 3.
Closed Cooling Water	2006, Sheets 1, 2, 3, and 7	C.2.a.(4)	Cools Fuel Pool Cooling. Cools Shutdown Cooling.
Emergency Service Water	2005, Sheet 4	C.2.a.(2)	Primary Cooling to Containment Spray System.
Service Water	2005, Sheet 2	C.2.a.(4)	Secondary Cooling Systtem.
Condensate Transfer	2004, Sheet 2	C.2.a.(1)	Provides Makeup Cooling Water to Isolation Condensers.
Fuel Pool Cooling	237E756	C.2.a.(4)	Spent Fuel Storage.

APPENDIX C

OYSTER CREEK

SYSTEM FUNCTION INDEX

APPENDIX C

OYSTER CREEK SYSTEM FUNCTION INDEX

A. REACTOR COOLANT SYSTEM
- Reactor Vessel
- Main Steam
- Feedwater
- Reactor Recirculation

B. EMERGENCY CORE COOLING SYSTEM
- Automatic Depressurization
- Core Spray
- Isolation Condenser

C. RESIDUAL HEAT REMOVAL
- Shutdown Cooling

D. CONTAINMENT HEAT REMOVAL SYSTEM
- Containment Spray

E. REACTOR SHUTDOWN (REACTIVITY CONTROL) SYSTEMS
- Liquid Poison
- Control Rod Drive Hydraulic

F. REACTOR COOLANT AUXILIARY SYSTEMS
- Reactor Water Cleanup
- Control Rod Drive Return
- Reactor Head Cooling

G. COOLING WATER SYSTEMS
- Emergency Service Water
- Service Water
- Reactor Building Closed Cooling Water
- Condensate Transfer
- Fuel Pool Cooling

H. CONTAINMENT PENETRATION SYSTEMS
- Demineralizer Water Transfer
- Drywell Floor and Equipment Drain

OYSTER CREEK GENERATING STATION

SECTION 3

ISI SELECTION BASIS

1.0 SCHEDULING AND SELECTION PROCESS

1.1 Introduction and Overview

This section of the Program Plan defines the selection methodology, basis for selection, and components selected for examination during the Fourth Inspection Interval at Oyster Creek. Examinations at Oyster Creek are performed in accordance with the 1995 Edition, 1996 Addenda of ASME, Section XI, the Oyster Creek Fourth Interval ISI Program Plan, and the Oyster Creek Ten Year Examination Schedule.

Oyster Creek's Fourth Inservice Inspection Interval						
10/14/02	1st Period 3 Years	10/14/05	2nd Period 4 Years	10/14/09	3rd Period 3 Years	10/14/12
	1R20 10/04		1R21 10/06	1R22 10/08	1R23 10/10	1R24 10/12

All references to Section XI in this ISI Selection Document are taken from the ASME Boiler and Pressure Vessel Code, Section XI, Division 1, "Rules for Inservice Inspection of Nuclear Power Plant Components," 1995 Edition, 1996 Addenda unless otherwise stated.

This Selection Document addresses all ISI Class 1, Class 2, and Class 3 components and their supports. The attachments to this document (database generated reports and tables) provide three functions: (1) to give a summary of those components selected for examination in order to verify the Periodic inspection requirements will be met, (2) to provide an actual listing of those components scheduled for examination in Oyster Creek's Fourth Inspection interval, and (3) to document the basis for selecting certain components when a prorated or sample selection is required. (Data base generated reports are maintained in separate files)

Sections 2 through 5 of this Selection Basis Document detail specific requirements, interpretations, and links to other station programs for those components with a particular selection criteria or methodology. If a certain category of components requires examination of the entire population to be distributed across the interval, the attached reports and tables address those requirements.

1.2 Content and Revision

1.2.1 This ISI Selection Document is comprised of the following segments:

- Selection Document – provides the criteria and methodology for selecting components and component supports for examination.

- Scheduling Summary Report – documents the schedule distribution across the inspection periods.

- Interval Schedule and Exam Status Report – details each examination required to be performed during the inspection interval, including those that have been completed to date.

- Distribution Summary Table – summarizes the exam selection proration for a given code category based on system and/or item and component size for welds, and on type for supports. One of these tables is provided for each category requiring a prorated selection.

- Component Selection Table – details the exam selection proration for a given code category based on system and/or item and component size for welds, and on type for supports. This report includes all components that could be selected, all components that have been selected, and the basis for selecting each of the scheduled components. One of these tables is provided for each category requiring a prorated selection.

- Grouping Reports – organizes components of the same category into groups based on similar size, design, manufacturing method, and function. One of these tables is included for each category requiring selection by groups (i.e. B-G-2 and B-M-2.)

1.2.2 This ISI Selection Basis shall be maintained and updated throughout the inspection interval.

In the event that this Selection Basis Document, or any of its attachments, require revision during the Fourth Interval due to plant modifications, changes that alter the number of nonexempt components, or ten-year schedule updates, all affected sections (including the ISI database generated tables and reports) shall be revised to reflect the updated components and/or schedules.

When an examination substitution is required, the selection and scheduling requirements of this document shall be met. Substitutions should be made within the same inspection period whenever practical to minimize impact on the existing selection distribution and schedule. When the substitution is made the selection distribution and inspection schedule shall be reviewed to ensure that the requirements outlined in this document are met.

1.3 Inspection Schedule

For Class 1, Class 2, and Class 3 components and their supports subject to examination per Section XI, Subsections IWB, IWC, IWD, and IWF the required examinations in each examination category shall be completed during the inspection interval in accordance with Tables IWB(C)(D)-2412-1, as modified by Code Case N-598.

Inspection Interval	Inspection Period	Minimum Examinations Scheduled, %	Maximum Examinations Scheduled, %
4th	1	16	50
	2	50(1)	75
	3	100	100

(1) If the first period completion percentages for any examination category exceeds 34%, at least 16% of the required examinations shall be performed in the second period.

Exceptions to the above distribution percentages and examination requirements of items or welds added to the Inspection Program shall meet the requirements of Section XI, Paragraphs IWB(C)(D)2412.

1.4 ASME Section XI Scheduling Summary Report

The ASME, Section XI Scheduling Summary Report lists the total number of components (# of Comp) within each examination category and item number, and also lists the number of components selected for examination (Total Selected) during the Fourth Inspection interval. Non-deferred exams are scheduled in compliance with Program B. The Report is sorted by Category, Deferred/Non-Deferred Exams, and Item Number.

The number of components selected during each inspection period and interval is listed in the ten-year schedule in accordance with Program B requirements. The number of components selected are applicable to the specific inspection period. They are <u>not cumulative</u> across the interval.

1.5 Ten Year Interval Schedule and Examination Status Report

The Ten Year Interval Schedule and Examination Status Report is generated from the ISI Database. This report lists all the components scheduled for Section XI credit during the Fourth Inspection interval and includes component information, period and outage scheduled, examinations required, the basis for selection, and completion date and examination results (if performed.) This report also lists components requiring examination per augmented examination commitments, and additional exams required by specific relief requests. These types of exams are listed under Category "N/A" and numbered according to specific commitment drivers, (i.e., regulatory guides, FSAR sections, or technical specification references.

Components are grouped by examination category and item number, then sorted by the period and outage they are being inspected in, then the isometric and component number. Completion status is listed in the far right hand column. The *Complete* field (shown once representing "all" required exams for that component during that outage) is printed as a check box, and the *Inspection Date* and *Exam Results* (shown for "each" completed exam for that component during that outage) are listed as well.

The *Exam* field contents depend on whether or not the required examination has been marked as completed in the database. If the exam has not been marked as completed in the database, the general type of required exam is shown (e.g., UT or SURF.) If the exam has been completed and marked in the database, the specific exam performed will be shown, if identified in the database (e.g., UT-45 or MT.)

The *Selection Basis* field identifies the reason or circumstance the component was selected for examination. The following bases are used:

ADDITIONAL	Component is required to be examined based on sample expansion due to another examination revealing indications exceeding the acceptance standards.
ALL PERIODS	Component is required to be examined once per period in accordance with Section XI Code requirements.
BRANCH CONNECT	Component is selected per Section XI Code proration requirements and is a weld joining a piping run to a branch connection or fitting.
DEFERRABLE	Component is required to be examined per Section XI Code requirements but may be deferred to the third period.
DISASSEMBLY	Component is required to be examined per Section XI Code requirements but examination is only required if and when the component is disassembled.
DISSIMILAR METAL	Component is required to be examined per Section XI Code requirements when the weld is between a combination of carbon or low alloy to high alloy steel, carbon or low alloy to high nickel alloy, or high alloy steel to high nickel alloy.
HIGH STRESS	Component is required to be examined per Section XI Code requirements where the stress levels exceed: (1) primary plus secondary stress intensity range of $2.4S_m$ for ferritic and austenetic steel. (2) Cumulative usage factor *U* of 0.4
ONE OF MULTIPLE	Component is required to be examined per Section XI Code requirements but only one component out of a group of similar type is required to be examined.
PERCENTAGE	Component is required to be examined to meet the proration percentage required per Section XI Code.
RELIEF OC-02-XX	Component is required to be examined to meet the requirements of the specified relief request.

RG XX	Component is required to be examined to meet the specified requirements of Regulatory Guide XX.
SUCCESSIVE	Component is required to be reexamined based on a previous exam revealing flaw indications or relevant conditions that were evaluated as acceptable for continued service.
TERMINAL END	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
AUGMENTED	All planned examinations or testing performed which exceed the specific requirements defined in ASME Section XI.

2.0 ISI CLASS 1 COMPONENTS

2.1 Introduction and Overview

The purpose of this section is to provide the specific examination criteria for ASME, Class 1 components at Oyster Creek for the fourth ten-year inspection interval. A detailed methodology for selection and scheduling of applicable IWB-2500-1, Examination Categories has been developed to address selection and sampling requirements.

Subsection IWB of Section XI specifies that Class 1 components except those that are exempted are subject to examinations. This section describes the Code-required examinations and the program, that shall be implemented to meet those requirements.

A summary of those ASME examination categories and item numbers applicable to the Oyster Creek Fourth Ten-Year Inspection Interval are furnished in Table 2.1-1.

Section 2.2 of this basis presents the examination requirements for Class 1 components by addressing: each of the applicable examination categories listed in Table 2.1-1, the examination requirements specified in Table IWB-2500-1 of the Section XI Code and AmerGen's plan to satisfy those requirements during the fourth ten-year inspection interval.

Identification of the specific components scheduled for examination is contained in the Oyster Creek's fourth ten-year schedule, a separate document from this Program Plan.

2.2 Selection and Scheduling Methodology for Class 1 Components

This section identifies the examinations and tests required for Class 1 systems in the ISI Program and provides amplifying information regarding compliance with Section XI, Table IWB-2500-1.

The components within the ASME, Section XI, ISI boundaries, defined and described in Section 2 of this Program Plan, were grouped by component description and matched with the applicable ASME, Section XI category and item number. A count of the components by category and item number was made and examinations were scheduled based on the Code selection criteria for IWB.

Tables 2.2-1 through 2.2-32 are organized by the Class 1 examination categories specified in Table IWB-2500-1, and describe program compliance by referencing the Code requirements, identifying the type of components to be examined, defining the examination method to be used along with the frequency of examinations for completing the interval, and relief requests where applicable.

TABLE 2.1-1

CLASS 1 EXAMINATION CATEGORIES AND ITEM NUMBERS

Examination Category	Examination Item No.	Parts Examined
B-A	B1.11	Reactor Vessel Circumferential Weld
B-A	B1.12	Reactor Vessel Longitudinal Weld
B-A	B1.21	Reactor Vessel Head Circumferential Weld
B-A	B1.22	Reactor Vessel Head Meridional Welds
B-A	B1.30	Reactor Vessel Shell-to-Flange Weld
B-A	B1.40	Reactor Vessel Head-to-Flange Weld
B-B	N/A	N/A
B-D	B3.90	Reactor Vessel Nozzle to Vessel Welds
B-D	B3.100	Reactor Vessel Nozzle Inside Radius Section
B-F	B5.10	Reactor Vessel Dissimilar Metal Welds Nozzle-to-Safe End NPS 4" or Greater
B-F	B5.20	Reactor Vessel Dissimilar Metal Welds Nozzle-to-Safe End Less Than NPS 4"
B-G-1	B6.10	Reactor Vessel Closure Head Nuts
B-G-1	B6.20	Reactor Vessel Closure Head Studs in Place
B-G-1	B6.30	Reactor Vessel Closure Head Studs When Removed
B-G-1	B6.40	Reactor Vessel Threads in Flange
B-G-1	B6.50	Reactor Vessel Closure Washer, Bushings
B-G-1	B6.180	Pump Bolting
B-G-1	B6.190	Pump Flange Surface When Connection Disassembled
B-G-1	B6.200	Pumps, Nuts, Washers
B-G-2	B7.50	Piping Bolting
B-G-2	B7.60	Pump Bolting
B-G-2	B7.70	Valve Bolting
B-J	B9.11	Piping Circumferential Welds NPS 4" or Greater
B-J	B9.21	Piping Circumferential Welds Less Than NPS 4"
B-J	B9.31	Piping Branch Connection Welds NPS 4" or Greater
B-J	B9.32	Piping Branch Connection Welds Less Than NPS 4"
B-J	B9.40	Piping Socket Welds
B-K	B10.10	Welded Attachments for Vessels
B-K	B10.20	Welded Attachments for Piping
B-K	B10.30	Welded Attachments for Pumps
B-K	B10.40	Welded Attachments for Valves
B-L-1	N/A	N/A
B-L-2	B12.20	Pump Casings

TABLE 2.1-1 (CONT.)

CLASS 1 EXAMINATION CATEGORIES AND ITEM NUMBERS

B-M-1	B12.40	Pressure Retaining Welds in Valve Bodies
B-M-2	B12.50	Valve Bodies
B-N-1	B13.10	Reactor Vessel Interior
B-N-2	B13.20	Reactor Vessel Interior Attachments Within Beltline Region
B-N-2	B13.30	Reactor Vessel Interior Attachments Beyond Beltline Region
B-N-2	B13.40	Reactor Vessel Interior Core Support Structures
B-N-3	N/A	N/A
B-O	B14.10	Reactor Vessel CRD Housing Welds
B-P	Class 1 Boundary	System Pressure Test
B-Q	N/A	N/A

TABLE 2.2-1

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-A

Pressure Retaining Welds in Reactor Vessel

B. APPLICABLE ITEM NUMBERS:

B1.11 & B1.12

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. Nos. IWB-2500-1[1] IWB-2500-2	R-18 B1.11	Volumetric

D. ACCESSIBILITY OR OTHER LIMITATIONS:

These welds are inaccessible for volumetric examination from the outer diameter due to interference with the biological shield wall. The accessible portions of these welds shall be examined from ID using remote inspection equipment. An access study was performed to determine the areas that could be examined. Subsequently on outage R-19 examinations were performed and additional information was obtained regarding access. Relief request R-17 was revised accordingly to reflect access limitations.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Circumferential welds NR02-1-563, NR02-1-572, NR02-3-572, NR02-3-564
Longitudinal welds NR02-2-563A, B, C, D, E , F NR02-2-564A, B, C, , D, E, F

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

NRC Generic Letter 98-05 under 'permitted action' states BWR Licensees may request permanent relief from the Inservice Inspection requirements of 10 CFR 50.55a(g) for volumetric examination of circumferential vessel welds. Relief for the remaining term of operation under the initial license (Oyster Creek Relief Request R-18) granted by NRC via letter dated 9-14-2000.

The Oyster Creek Reactor Vessel has twelve (12) longitudinal welds in the shell regions. An ultrasonic examination of longitudinal welds shall be performed from the vessel ID using remote UT equipment.

Oyster Creek Relief Request R-17 was granted for third interval by NRC to perform limited examinations on longitudinal welds via letter dated 9-13-2000.

PERIOD	TALLY	OUTAGE
1ST		
2ND		
3RD	B1.12 (12 WELDS)	1R24

NOTE: (1) Figures IWB-2500-1 and IWB-2500-2, Section XI, 1995 Edition

TABLE 2.2-2

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-A

Pressure retaining welds in Reactor Vessel
(Head Welds)

B. APPLICABLE ITEM NUMBERS:

B1.21 & B1.22

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWB-2500-3[1]	None	Volumetric

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The top head welds are accessible for volumetric examinations. The lower head welds behind the skirt are inaccessible due to Control Rod Drive and Instrumentation Penetration interference.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Circumferential welds: NR02-1-562, NR02-2-562, NR01-2-574
Meridional welds: NR02-3-562A, NR02-3-562B, NR02-3-562C, NR02-3-562D, NR02-3-562E, NR02-3-562F, NR02-3-574A, NR02-3-574B, NR02-3-574C, NR02-3-574D, NR02-3-574E, NR02-3-574F, NR02-3-574G, NR02-3-574H, NR02-4-562A, NR02-4-562B, NR02-4-562C, NR02-4-562D, NR02-4-562E, NR02-4-562F, NR02-4-562G, NR02-4-562H.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires volumetric examination for the accessible length of all head welds. The circumferential welds on the upper head are accessible for 100% of the weld length and are scheduled for examination.

Welds in the lower head behind the skirt shall be visually examined (VT-2) during each inservice pressure test after refueling outages, as augmented.

PERIOD	TALLY	OUTAGE
1ST	B1.21 (1)	1R20
2ND	B1.22 (4 + 4)	1R21 & 1R22
3RD	B1.21 (2) B1.22 (14)	1R23

NOTE: (1) Figure IWB-2500-3, Section XI, 1995 Edition

TABLE 2.2-3

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-A

Pressure Retaining Welds in Reactor Vessel
(Shell to Flange Weld)

B. APPLICABLE ITEM NUMBERS:

B1.30

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWB-2500-4[1]	None Code Case N-623	Volumetric

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The weld is accessible for inspection from one side.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

NR02-3-563

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires volumetric examination of the Reactor Vessel Shell to Flange Weld, essentially 100% by the end of the interval. The weld shall be examined during the third period.

PERIOD	TALLY	OUTAGE
1ST		
2ND		
3RD	B1.30 (1)	1R24

NOTE: (1) Figure IWB-2500-4, Section XI, 1995 Edition

TABLE 2.2-4

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-A

Pressure Retaining Welds Reactor Vessel
(Head to Flange Weld)

B. APPLICABLE ITEM NUMBERS:

B1.40

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig No. IWB-2500-5[1]	None Code Case N-623	Volumetric & Surface

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The weld is accessible for inspection from one side.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

NR02-1-574

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires volumetric and surface examination on the closure head to flange weld essentially 100% of weld length by the end of the interval.

PERIOD	TALLY	OUTAGE
1ST	B1.40 (1)	1R20
2ND		
3RD		

NOTE: (1) Figure IWB-2500-5, Section XI, 1995 Edition

TABLE 2.2-5

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-D

Full Penetration Welds of Nozzles in Vessels
(Reactor Vessel)

B. APPLICABLE ITEM NUMBERS:

B3.90 & B3.100

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWB-2500-7[1]	None	Volumetric

D. ACCESSIBILITY OR OTHER LIMITATIONS:

Seventeen nozzles below elevation 82'-2" are surrounded by the biological shield wall making access from the OD surface difficult for manual UT inspection. See Table 2.2-8.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

See Table 2.2-6, Category B-D.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires volumetric examination of at least 25% (6) but not more than 50% (12) of the nozzles to vessel weld and inner radius by the end of the first period and the remainder of the nozzles by the end of the interval.

There are twenty-four Reactor Vessel Nozzles that apply to this examination category.

PERIOD	TALLY		OUTAGE
1ST	B3.90 (6)	B3.100 (6)	1R20
2ND	B3.90 (3)	B3.100 (3)	1R21
	B3.90 (5)	B3.100 (5)	1R22
3RD	B3.90 (5)	B3.100 (5)	1R23
	B3.90 (5)	B3.100 (5)	1R24

NOTE: (1) Figure IWB-2500-7, Section XI, 1995 Edition

TABLE 2.2-6

CATEGORY B-D

FULL PENETRATION WELDED NOZZLES IN THE REACTOR VESSEL

Nozzle Description	Quantity	Elevation
Recirculation Outlet	5	53'-9"
Recirculation Inlet	5	46'
Main Steam	2	89'
Isolation Condenser	2	84'-10"
Feedwater	4	74'-11"
CRD Hydraulic Return	1	74'-11"
Core Spray	2	73'-9"
Upper Head	3	See Note 1

Note 1: Vessel Head is removed during refueling to an accessible location.

TABLE 2.2-7

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-F

Pressure Retaining Dissimilar Metal Welds
(Reactor Vessel Nozzle to Safe End)

B. APPLICABLE ITEM NUMBERS:

B5.10 & B5.20

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWB-2500-8[1]	None	Volumetric and Surface/Surface

D. ACCESSIBILITY OR OTHER LIMITATIONS:

Seventeen nozzles below elevation 82'-2" are surrounded by the biological shield wall making access from the O.D. surface difficult for manual UT inspection. The examinations shall be performed by the automated process. See Table 2.2.6.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

See Table 2.2-6, Category B-D for the corresponding safe-ends

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a volumetric and/or surface examination of 100% of the dissimilar metal welds (nozzle safe-end welds) in the interval. The examinations may be performed co-incident with the nozzles examinations required by examination Category B-D.

Twenty-three safe-ends are scheduled for volumetric and surface examinations and the CRD return nozzle 3" is scheduled for surface only.

PERIOD	TALLY	OUTAGE
1ST	B5.10 (6)	1R20
2ND	B5.10 (3) B5.10 (5) B5.20 (1)	1R21 1R22
3RD	B5.10 (4) B5.10 (5) B5.20 (1)	1R23 1R24

NOTE: (1) Figure IWB-2500-8, Section XI, 1995 Edition

TABLE 2.2-8

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-G-1

Pressure Retaining Bolting, Greater Than 2" in Diameter
(Reactor Vessel)

B. APPLICABLE ITEM NUMBERS:

B6.10, B6.20, B6.30, B6.40, and B6.50

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWB-2500-12[1]	None	Volumetric, Surface and Visual (VT-1)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The subject areas are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Reactor Pressure Vessel Head bolting

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination of all closure head nuts, volumetric exam of all studs in place or volumetric and surface exam of all studs when removed, volumetric exams of threads in vessel flange and visual exams of closure washers and bushing. This requirement applies to the sixty-four (64) closure head-bolting assemblies. The examinations shall be performed on a complete set of bolting during the exam period. Deferral of the examinations to the end of the interval is permissible.

PERIOD	TALLY	OUTAGE
1ST	B6.20 (20), B6.10 (20), B6.40, (20), B6.50 (20)	1R20
2ND	B6.20 (20), B6.10 (20), B6.40, (20), B6.50 (20)	1R22
3RD	B6.20 (20), B6.30 (4), B6.10 (24), B6.40, (24), B6.50 (24)	1R24

NOTE: (1) Figure IWB-2500-12, Section XI, 1995 Edition

TABLE 2.2-9

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-G-1

Pressure Retaining Bolting, Greater Than 2" in Diameter
(Pump)

B. APPLICABLE ITEM NUMBERS:

B6.180, B6.190, and B6.200

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWB-2500-12[1]	None	Volumetric and Visual (VT-1)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The components are accessible for examinations.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

The components subject to examination are the bolting on Recirculation Pumps NG01-A, NG01-B, NG01-C, NG01-D, and NG01-E.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a volumetric examination on bolting greater than 2" in diameter . The bolting may be examined: (a) in place under tension, (b) when the connection is disassembled, or (3) when the bolting is removed.

For pumps, examination are limited to components selected for examination under examination category B-L-2 that in turn is limited to at least one pump in each group of pumps performing similar functions in the system. This requirement applies to the sixteen studs and nuts on each of the five reactor recirculation pumps.

One pump has been scheduled for examination during the third period. If disassembly for examination of a pump is required during the fourth interval, the flange surface shall be examined at that time.

PERIOD	TALLY	OUTAGE
1ST	TARGET OF OPPORTUNTY	
2ND	TARGET OF OPPORTUNTY	
3RD	B6.180 (1), B6.200 & B6.190 if not removed in the interval	1R24

NOTE: (1) Figure IWB-2500-12, Section XI, 1995 Edition

TABLE 2.2-10

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-G-2

Pressure Retaining Bolting, 2" and Less in Diameter
(Piping)

B. APPLICABLE ITEM NUMBERS:

B7.50

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Surface	None	Visual (VT-1)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The subject areas are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

These components are on the reactor head cooling piping and vent piping

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination on bolting 2" and less in diameter. The bolting may be examined: (1) in place under tension, (2) when the connection is disassembled, or (3) when the bolting is removed. For piping, the examinations are limited to components selected for examination under the examination category B-J, which in turn is limited to at least 25% of the total number under that joint configuration.

This requirement applies to a total number of 14 bolted joints.

PERIOD	TALLY	OUTAGE
1ST	B7.50 (5)	1R20
2ND	B7.50 (5)	1R22
3RD	B7.50 (4)	1R24

TABLE 2.2-11

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-G-2

Pressure Retaining Bolting, 2" and Less in Diameter
(Pumps)

B. APPLICABLE ITEM NUMBERS:

B7.60

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Surface	None	Visual (VT-1)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The subject areas are accessible for examination.

E .IDENTIFICATION OF AREAS TO BE EXAMINED:

The components subject to examinations are the bolting on Recirculation Pumps NG01-A, NG01-B, NG01-C, NG01-D, and NG01-E.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination on bolting 2" and less in diameter. The bolting may be examined: (1) in place under tension, (2) when the connection is disassembled, or (3) when the bolting is removed. For pumps, examinations are limited to components selected for examination under the examination category B-L-2 that in turn is limited to at least one pump in each group of pumps performing similar functions in the system.

This requirement applies to the 24 bolts on each of the five reactor recirculation pumps.

PERIOD	TALLY	OUTAGE
1ST	When disassembled for maintenance or repairs	
2ND	When disassembled for maintenance or repairs	
3RD	When disassembled for maintenance or repairs	

TABLE 2.2-12

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-G-2

Pressure Retaining Bolting, 2" and Less in Diameter
(Valves)

B. APPLICABLE ITEM NUMBERS:

B7.70

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Surface	None	Visual (VT-1)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The subject areas are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

See Table 2.2-19, Category B-M-2 for the corresponding valves.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination on bolting 2" and less in diameter. The bolting may be examined: (1) in place under tension, (2) when the connection is disassembled, or (3) when the bolting is removed. For valves, examinations are limited to components selected for examination under examination category B-M-2, which in turn is limited to at least one valve within each group of valves that are of the same size, constructional design and manufacturing method, and that perform similar functions in the system. This requirement applies to bolting on seventy two valves exceeding nominal pipe size of 4". One valve from each group in a system was selected for examination. By the end of the interval, bolting on 18 valves shall be examined. Meanwhile, during the interval, the 72 valves are scheduled for bolting examinations each cycle as a Target of Opportunity. In the event that maintenance shall be performed on the valves providing access to the bolts, an ISI examination shall be performed.

PERIOD	TALLY	OUTAGE
1ST	When disassembled for maintenance or repairs	
2ND	When disassembled for maintenance or repairs	
3RD	When disassembled for maintenance or repairs	

TABLE 2.2-13

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-J

Pressure Retaining Welds in Piping

B. APPLICABLE ITEM NUMBERS:

B9.11, B9.21, B9.31, B9.32, and B9.40

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. Nos. IWB-2500-8[1] IWB-2500-9[1] IWB-2500-10[1] IWB-2500-11[1]	OC-02-01 Code Case N609	Volumetric and/or Surface

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The subject areas are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Oyster Creek Fourth Ten-Year Schedule, Category B-J.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires:

1. A volumetric and surface examination on circumferential (item B9.11) welds in piping with an NPS of 4" or greater.
2. A surface examination on circumferential (item B9.21) welds in piping with an NPS less than 4".
3. A volumetric and surface examination on branch pipe connection welds where the branch has an NPS of 4" or greater (item B9.31).
4. A surface examination on branch pipe connection welds where the branch has an NPS less than 4" (item B9.32).
5. A surface examination on all socket welds (item B9.40).
6. Note requirements for examination of intersecting longitudinal welds (Notes 4 & 5)

(Continued on Next Page)

PERIOD	TALLY					OUTAGE
1ST	B9.11 (20)	B9.21 (4)	B9.31 (2)	B9.32 (2)	B9.40 (12)	1R20
2ND	B9.11 (24)				B9.40 (12)	1R21
	B9.11 (25)	B9.21 (5)	B9.31 (2)	B9.32 (3)	B9.40 (11)	1R22
3RD	B9.11 (24)				B9.40 (11)	1R23
	B9.11 (24)	B9.21 (4)	B9.31 (2)	B9.32 (2)	B9.40 (11)	1R24

NOTE: (1) Figures IWB-2500-8, IWB-2500-9, IWB-2500-10, and IWB-2500-11, Section XI, 1995 Edition

TABLE 2.2-13 (CONT.)

ISI CLASS 1 COMPONENT EXAMINATIONS

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED: (CONTINUED)

The selection of welds for examination shall be in accordance with Table IWB-2500-1, Category B-J, Note (1) which states as follows:

1. Examinations shall include the following:
   a. All terminal ends in each pipe or branch run connected to vessels.
   b. All terminal ends and joints in each pipe or branch run connected to other components where the stress levels exceed either of the following limits under loads associated with specific seismic events and operational conditions:
      1) Primary plus secondary stress intensity range of $2.4S_m$ for ferritic steel and austenitic steel.
      2) Cumulative usage factor U of 0.4.
   c. All dissimilar metal welds not covered under category B-F.
   d. Additional piping welds so that the total number of circumferential butt welds (or branch connection or socket welds) selected for examination equals 25% of the circumferential butt welds (or branch connection or socket welds) in the reactor coolant piping system. This total does not include welds excluded by IWB-1220. These additional welds may be located in one loop (one loop is defined for both PWR and BWR plants in the 1977 edition.)

In compliance with the weld examination selection criteria from Table IWB-2500-1, Category B-J.

a. All terminal end welds connected to the reactor vessel are scheduled for examination and shall not be substituted.
b. All carbon steel piping inside the Drywell comply with both limits of $2.4S_m$ and U<0.4. Stainless steel piping inside the Drywell is on the IGSCC schedule and shall be examined 100% within the interval.
c. All dissimilar metal welds have been categorized B-F and are scheduled for examination in accordance with Table IWB-2500-1, Category B-F requirements.
d. The total number of circumferential butt welds, branch connection welds and socket welds equal 798 (See Table 2.2-14.) The quantity of welds selected for examination this interval is 200 and is proportionally distributed among the item numbers; and where possible the initial welds from the previous interval were selected for re-examination. These welds are scheduled for volumetric (V) and or surface (S) examinations.

As an alternative to the requirements of Note 1 above Oyster Creek will use the alternatives identified in Code Case N-609

TABLE 2.2-14

CATEGORY B-J
PRESSURE RETAINING WELDS
IN CLASS 1 PIPING

Systems	Item No.					
	B9.11	B9.21	B9.31	B9.32	B9.40	**Total**
Isolation Condenser	53	0	0	0	0	**53**
Core Spray	71	0	0	0	0	**71**
Liquid Poison	0	0	0	0	45	**45**
Shutdown Cooling	82	0	3	3	0	**88**
Cleanup Demin.	52	2	0	0	2	**56**
Reactor Head Cooling	11	1	0	0	45	**57**
Reactor Head Vent	0	3	0	0	25	**28**
Reactor Recirculation	79	5	2	22	60	**168**
Control Rod Drive Return	1	37	0	0	0	**38**
Main Steam	60	2	20	3	50	**135**
Feedwater	59	0	0	0	0	**59**
Totals	**468**	**50**	**25**	**28**	**227**	**798**
25%	**117**	**12.5**	**6.25**	**7**	**56.75**	
Scheduled	**117**	**13**	**6**	**7**	**57**	**200**

TABLE 2.2-15

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-K

Welded Attachments for Vessels, Piping, Pumps, and Valves

B. APPLICABLE ITEM NUMBERS:

B10.10, B10.20, B10.30, B10.40

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWB-2500-13[1]	OC-02-02	Surface

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for examinations except for reactor vessel support skirt. (Ref Relief OC-02-02)

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Welded attachments of component supports selected for examination under IWF-2510. Oyster Creek Fourth ten-year schedule, Category B-K

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

.For vessel attachments there are eight stabilizers attached to the reactor vessel and the support skirt Section XI requires a surface examination of Class 1 welded attachments. Per Note 5 of IWB-2500-1 (Piping, Pumps and Valves), a sample of 10% of the welded attachments associated with component supports selected for examination under IWF-2510 shall be examined. Piping integral attachments shall be selected from item F1.10. A sample of 10% of the welded attachments of supports selected for examination under item F1.10 shall be examined. Fifty (50) supports with welded attachments were selected for examination under F1.10. This would require a 10% sample of 5 piping welded attachments to be examined. Eight Class 1 pump supports with welded attachments were selected for examination under IWF F1.40 which would require 1 welded pump support attachment to be inspected. Six Class 1 valve supports with welded attachments were selected under IWF 1.40 which requires 1 welded valve support to be inspected.

PERIOD	TALLY	OUTAGE
1ST	B10.20, (2) B1030, (1) B10.10 (3)	1R20
2ND	B10.20, (1), B10.10 (2)	1R22
3RD	B10.20, (2), B1040 (1), B10.10 (4)	1R24

NOTE: (1) Figure IWB-2500-15, Section XI, 1995 Edition

TABLE 2.2-16

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-L-2

Pump Casings

B. APPLICABLE ITEM NUMBERS:

B12.20

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Internal Surfaces	None	Visual (VT-3)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The component is accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

The components subject to examination are Recirculation Pumps NG01-A, NG01-B, NG01-C, NG01-D, and NG01-E.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination of the internal pressure boundary surfaces of at least one of the five recirculation pumps during the inspection interval. The examination may be performed at or near the end of the inspection interval.

A visual examination of pump casing interiors shall only be performed if a pump is disassembled for maintenance, repair or volumetric examination. The 5 pumps are scheduled each cycle for internal surface visual examination as a Target of Opportunity. This coordinates the ISI requirement with all maintenance activities.

PERIOD	TALLY	OUTAGE
1ST	When disassembled for maintenance, repair or volumetric exam	
2ND	When disassembled for maintenance or repair or volumetric exam	
3RD	When disassembled for maintenance or repair or volumetric exam	

TABLE 2.2-17

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-M-1

Pressure Retaining Welds in Valve Bodies

B. APPLICABLE ITEM NUMBERS:

B12.40

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWB-2500-17[1]	None	Volumetric

D. ACCESSIBILITY OR OTHER LIMITATIONS:

Limited examination due to valve body configuration.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

The components subject to examination are the EMRVs (V-1-173, V-1-174, V-1-175, V-1-176, and V-1-177.)

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a volumetric examination of 100% of weld length of at least on EMRV. Due to the configuration of the EMRVs, a full volumetric examination cannot be performed on any of the two welds. One valve shall be selected for examination.

Three EMRVs are removed during odd number outages, and two valves are removed during even number outages. Oyster Creek has scheduled a surface examination on surfaces of the pressure retaining welds for one valve and a visual examination for the balance.

PERIOD	TALLY	OUTAGE
1ST		
2ND		
3RD	B12.40 (1)	1R24

NOTE: (1) Figure IWB-2500-17, Section XI, 1986 Edition

TABLE 2.2-18

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-M-2

Valve Bodies

B. APPLICABLE ITEM NUMBERS:

B12.50

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Internal Surfaces	None	Visual (VT-3)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

All components are accessible.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

See Table 2.2-19, Category B-M-2.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination during the interval on the internal pressure boundary surface of at least one valve within each group of valves of the same constructional design, manufacturing method, and that performs similar functions in the system.

The examinations may be performed at or near the end of the inspection interval.

Seventy two valves exceeding nominal pipe size of 4" are in the Class 1 boundary. Eighteen valves have been categorized as candidates for this inspection requirement. Visual examination of valve body interiors will only be performed if a valve is disassembled for maintenance or repair. Meanwhile the 72 valves are scheduled for interior surface visual examination each cycle as a Target of Opportunity. In the event that maintenance shall be performed on the valves providing access to the internals, and ISI examination shall be performed. This coordinates the ISI requirements with maintenance activities.

PERIOD	TALLY	OUTAGE
1ST	When disassembled for maintenance, repair or volumetric exam	
2ND	When disassembled for maintenance, repair or volumetric exam	
3RD	When disassembled for maintenance, repair or volumetric exam	

TABLE 2.2-19

CATEGORY B-M-2
CLASS 1 VALVE BODY GROUPING

System: Isolation Condenser						
Group	Component No.	Size	Type	Manufacturer	Method	Function
A	V-14-30	10"	Gate	Anchor-Darling	Cast	Isolation
	V-14-31	10"	Gate	Anchor-Darling	Cast	Isolation
	V-14-32	10"	Gate	Anchor-Darling	Cast	Isolation
	V-14-33	10"	Gate	Anchor-Darling	Cast	Isolation
	V-14-34	10"	Gate	Anchor-Darling	Cast	Isolation
	V-14-35	10"	Gate	Anchor-Darling	Cast	Isolation
	V-14-36	10"	Gate	Anchor-Darling	Cast	Isolation
	V-14-37	10"	Gate	Anchor-Darling	Cast	Isolation

System: Isolation Condenser						
Group	Component No.	Size	Type	Manufacturer	Method	Function
B	V-14-167	10"	Gate	Anchor-Darling	Cast	Block
	V-14-170	10"	Gate	Anchor-Darling	Cast	Block

System: Core Spray						
Group	Component No.	Size	Type	Manufacturer	Method	Function
A	V-20-15	8"	Gate	Anchor-Darling	Cast	Isolation
	V-20-17	8"	Gate	Anchor-Darling	Cast	Isolation
	V-20-21	8"	Gate	Anchor-Darling	Cast	Isolation
	V-20-23	8"	Gate	Anchor-Darling	Cast	Isolation
	V-20-40	8"	Gate	Anchor-Darling	Cast	Isolation
	V-20-41	8"	Gate	Anchor-Darling	Cast	Isolation
B	V-20-150	8"	Swgck	Atwood-Morrill	Cast	Isolation
	V-20-151	8"	Swgck	Atwood-Morrill	Cast	Isolation
	V-20-152	8"	Swgck	Atwood-Morrill	Cast	Isolation
	V-20-153	8"	Swgck	Atwood-Morrill	Cast	Isolation

TABLE 2.2-19 (CONT.)

CATEGORY B-M-2
CLASS 1 VALVE BODY GROUPING

System: Shutdown Cooling						
Group	Component No.	Size	Type	Manufacturer	Method	Function
A	V-17-55	8"	Globe	Anchor-Darling	Cast	Flow Ctl
	V-17-56	8"	Globe	Anchor-Darling	Cast	Flow Ctl
	V-17-57	8"	Globe	Anchor-Darling	Cast	Flow Ctl
B	V-17-205	8"	Globe	Anchor-Darling	Cast	Isolation
	V-17-206	8"	Globe	Anchor-Darling	Cast	Isolation
C	V-17-207	8"	Globe	Velan	Forge	Isolation
D	V-17-1	10"	Gate	Anchor-Darling	Cast	Isolation
	V-17-2	10"	Gate	Anchor-Darling	Cast	Isolation
E	V-17-3	10"	Gate	Velan	Forge	Isolation
F	V-17-19	14"	Gate	Velan	Forge	Isolation
	V-17-54	14"	Gate	Velan	Forge	Isolation

System: Recirculation						
Group	Component No.	Size	Type	Manufacturer	Method	Function
A	V-37-9	26"	Gate	Crane	Cast	Isolation
	V-37-10	26"	Gate	Crane	Cast	Isolation
	V-37-20	26"	Gate	Crane	Cast	Isolation
	V-37-21	26"	Gate	Crane	Cast	Isolation
	V-37-31	26"	Gate	Crane	Cast	Isolation
	V-37-32	26"	Gate	Crane	Cast	Isolation
	V-37-42	26"	Gate	Crane	Cast	Isolation
	V-37-43	26"	Gate	Crane	Cast	Isolation
	V-37-53	26"	Gate	Crane	Cast	Isolation
	V-37-54	26"	Gate	Crane	Cast	Isolation

System: Feedwater						
Group	Component No.	Size	Type	Manufacturer	Method	Function
A	V-2-35	18"	Gate	Crane	Cast	Isolation
	V-22-36	18"	Gate	Crane	Cast	Isolation
B	V-2-71	18"	Swgck	Anchor-Darling	Cast	1-Dir Flow
	V-2-72	18"	Swgck	Anchor-Darling	Cast	1-Dir Flow
	V-2-73	18"	Swgck	Anchor-Darling	Cast	1-Dir Flow
	V-2-74	18"	Swgck	Anchor-Darling	Cast	1-Dir Flow

TABLE 2.2-19 (CONT.)

CATEGORY B-M-2
CLASS 1 VALVE BODY GROUPING

System: Cleanup Demineralizer						
Group	Component No.	Size	Type	Manufacturer	Method	Function
A	V-16-1	6"	Gate	Anchor-Darling	Cast	Isolation
	V-16-2	6"	Gate	Hirata	Cast	Isolation
	V-16-14	6"	Gate	Anchor-Darling	Cast	Isolation
	V-16-61	6"	Gate	Anchor-Darling	Cast	Isolation
	V-16-63	6"	Gate	Anchor-Darling	Cast	Isolation
B	V-16-133	6"	Gate	Velan	Forge	Isolation
C	V-16-62	6"	SwgCk	Anchor-Darling	Cast	1-Dir Flow

System: Main Steam						
Group	Component No.	Size	Type	Manufacturer	Method	Function
A	V-1-7	24"	Globe	Atwood-Morrill	Cast	Isolation
	V-1-8	24"	Globe	Atwood-Morrill	Cast	Isolation
	V-1-9	24"	Globe	Atwood-Morrill	Cast	Isolation
	V-1-10	24"	Globe	Atwood-Morrill	Cast	Isolation
B	V-1-160	6"	Relief	Consolidated	Cast	
	V-1-161	6"	Relief	Consolidated	Cast	
	V-1-162	6"	Relief	Consolidated	Cast	
	V-1-163	6"	Relief	Consolidated	Cast	Over
	V-1-164	6"	Relief	Consolidated	Cast	Pressure
	V-1-165	6"	Relief	Consolidated	Cast	Protection
	V-1-166	6"	Relief	Consolidated	Cast	
	V-1-167	6"	Relief	Consolidated	Cast	
	V-1-168	6"	Relief	Consolidated	Cast	
C	V-1-173	6"	Emrv	Consolidated	Welded	
	V-1-174	6"	Emrv	Consolidated	Welded	Over
	V-1-175	6"	Emrv	Consolidated	Welded	Pressure
	V-1-176	6"	Emrv	Consolidated	Welded	Protection
	V-1-177	6"	Emrv	Consolidated	Welded	

TABLE 2.2-20

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-N-1

Reactor Vessel Interior Surfaces

B. APPLICABLE ITEM NUMBERS:

B13.10

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Accessible Areas	None	Visual (VT-3)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

During normal refueling outages, access is restricted in the areas of the stub tubes and incore instrument housing.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

All accessible areas during the scheduled refueling outage.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination of the reactor vessel interior during normal refueling outages once each period.

PERIOD	TALLY	OUTAGE
1ST	B13.10	1R20
2ND	B13.10	1R22
3RD	B13.10	1R24

TABLE 2.2-21

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-N-2

Integrally-welded Core Support Structures and Interior Attachments to Reactor Vessel

B. APPLICABLE ITEM NUMBERS:

B13.20, B13.30, and B13.40

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Accessible welds and surfaces	None	Visual (VT-1 and VT-3)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

Accessible due to refueling schedule.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

See Table 2.2-22, Category B-N-2.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires visual examinations during each inspection interval of the vessel's interior attachments and core support structures. This examination may be performed at or near the end of the inspection period.

PERIOD	TALLY	OUTAGE
1ST	Target of opportunity	
2ND	Target of opportunity	
3RD	B13.20, B13.30, B13.40	1R24

TABLE 2.2-22

CATEGORY B-N-2
WELDED CORE SUPPORT STRUCTURES
AND INTERIOR ATTACHMENTS TO REACTOR VESSEL

Component	Method
• Lower Core Plate	VT-3
• Fuel Support Pieces	VT-3
• Control Rod Guide Tubes	VT-3
• Shroud Head and Dryer Guide Rod Bracket to Vessel Attachment Welds (3)	VT-3
• Steam Dryer Brackets to Vessel Attachment Welds (4)	VT-3
• Top Guide (Upper Core Plate)	VT-3
• Shroud	VT-3
• Shroud to Conical Support Weld	VT-3
• Conical Support to Vessel Weld	VT-3
• Conical Support	VT-3
• Clevis Assemblies (36)	VT-3
• Feedwater End Bracket Vessel to Bracket Welds (8)	VT-3
• Surveillance Sample Holder Bracket to Vessel Attachment Weld (9)	VT-1

TABLE 2.2-23

ISI CLASS 1 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY B-O

Pressure Retaining Welds in Control Rod Housings

B. APPLICABLE ITEM NUMBERS:

B14.10

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWB-2500-18[1]	None	Volumetric or Surface

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The subject areas are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Oyster Creek Third Ten-Year Schedule, Category B-O.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a volumetric or surface examination to be performed on the welds in 10% of the peripheral Control Rod Drive Housing by the end of the interval. This inspection can be performed at or near the end of the interval.

Each of the 137 CRD Housings has a flange to housing weld. There are 28 CRD Housings on the periphery. Three welds on the periphery are scheduled for surface examination.

PERIOD	TALLY	OUTAGE
1ST		
2ND		
3RD	B14.10 (10%)	1R24

NOTE: (1) Figure IWB-2500-18, Section XI, 1995 Edition

TABLE 2.2-24

ISI CLASS 1 SYSTEM TESTING

A. AREAS OF EXAMINATION: CATEGORY B-P

System Pressure Test of All Pressure Retaining Components

B. APPLICABLE ITEM NUMBERS:

B15.10, B15.50, B15.60, B15.70

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
IWA-5240	None	Visual (VT-2)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The subject areas are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

See F. below.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a system leakage test each refueling outage.

1) The pressure-retaining boundary during the system leakage test shall correspond to the reactor coolant system boundary, with all valves in the normal position, which is required for normal reactor operation startup. The VT-2 examination shall; however, extend to and include the second closed valve at the boundary extremity.

A visual examination for leaks shall be made with the reactor coolant system at pressure during each scheduled refueling outage or after major repairs have been made to the reactor coolant system.

These pressure tests are conducted in accordance with the system pressure test program.

PERIOD	TALLY	OUTAGE
1ST	Class I Boundary	1R20
2ND	Class 1 Boundary Class 1 Boundary	1R21 1R22
3RD	Class 1 Boundary Class 1 Boundary	1R23 1R24

2.3 Successive Inspections

2.3.1 The sequence of component examinations established during the first inspection interval shall be repeated during each successive inspection interval, to the extent practical.

2.3.2 If flaw indications, or relevant conditions are evaluated in accordance with IWB-3132.3 or IWB-3142.4 respectively, and the component qualifies as acceptable for continued service, the areas containing such flaw indications or relevant conditions shall be reexamined during the next three inspection periods.

2.3.3 If the reexaminations required by 2.3.2 above reveal that the flaw indications remain essentially unchanged for three successive inspection periods, the component examination schedule may revert to the original schedule of successive inspections.

2.3.4 When welded attachments are examined as a result of identified component support deformation and the results of these examinations exceed the applicable acceptance standards listed above, additional or successive examinations shall be performed when determined necessary based on an evaluation by the Owner.

2.3.5 Successive Inspections and Additional Examinations Report

When successive inspections are required to be completed in accordance with this section, the successive inspections shall be scheduled in the ISI database, and the subject report should be revised. This report shows the successive inspections completed to date for Oyster Creek's Fourth Interval and also shows those scheduled for the remainder of the interval.

2.4 Additional Examinations

2.4.1 Examinations performed in accordance with Table IWB-2500-1, except for Examination Category B-P, that reveal flaws or relevant conditions exceeding the acceptance standards of Table IWB-3410-1 shall be extended to include additional examinations during the current outage. The additional examinations shall include an additional number of welds, areas, or parts[1] included in the inspection item[2] equal to the number of welds, areas, or parts included in the inspection item that were scheduled to be performed during the present inspection period. The additional examinations shall be selected from welds, areas, or parts of similar material and service. This additional selection may require inclusion of piping systems other than the one containing the flaws or relevant conditions.

2.4.2 If the additional examinations required by 2.4.1 above reveal flaws or relevant conditions exceeding the acceptance standards of Table IWB-3410-1, the examinations shall be further extended to include additional examinations during the current outage. These additional examinations shall include the remaining number of welds, areas, or parts of similar material and service subject to the same type of flaws or relevant conditions.

2.4.3 For the inspection period following the period in which the examinations of 2.4.1 or 2.4.2 were completed, the examinations shall be performed as originally scheduled in accordance with IWB-2400.

2.4.4 If welded attachments are examined as a result of identified component support deformation, and the results of these examinations exceed the acceptance standards of Table IWB-3410-1, additional examinations shall be performed, if determined necessary, based on an evaluation by the Owner.

[1] Welds, areas, or parts are those described on intended in a particular inspection item of Table IWB-2500-1.

[2] An inspection item, as listed in Table IWB-2500-1, may comprise a number of welds, areas, or parts of a component required to be examined in accordance with the inspection plan and schedule (IWA-2420).

2.4.5 Successive Inspections and Additional Examinations Report

When additional examinations are required to be performed in accordance with this section, the additional examinations shall be scheduled in the ISI database, and the subject report should be revised. This report shows the additional examinations completed to date for Oyster Creek's Fourth Interval and also shows those scheduled for the remainder of the interval.

3.0 ISI CLASS 2 COMPONENTS

3.1 Introduction and Overview

The purpose of this section is to provide the specific examination criteria for ASME, Class 2 components at Oyster Creek for the fourth ten-year inspection interval. A detailed methodology for selection and scheduling of applicable IWC-2500-1, Examination Categories has been developed to address selection and sampling requirements.

Subsection IWC of Section XI specifies that Class 2 components except those that are exempted are subject to examinations. This section describes the Code-required examinations and the program, that shall be implemented to meet those requirements.

A summary of those ASME examination categories and item numbers applicable to the Oyster Creek Fourth Ten-Year Inspection Interval are furnished in Table 3.1-1.

Section 3.2 of this basis presents the examination requirements for Class 2 components by addressing: each of the applicable examination categories listed in Table 3.1-1, the examination requirements specified in Table IWC-2500-1 of the Section XI Code and AmerGen's plan to satisfy those requirements during the fourth ten-year inspection interval.

Identification of the specific components scheduled for examination is contained in the Oyster Creek's fourth ten-year schedule, a separate document from this Program Plan.

3.2 Selection and Scheduling Methodology for Class 2 Components

This section identifies the examinations and tests required for Class 2 systems in the ISI Program and provides amplifying information on compliance with Table IWC-2500-1.

The components within the ASME, Section XI, ISI boundaries, defined and described in Section 2 of this Program Plan, were grouped by component description and matched with the applicable ASME, Section XI category and item number. A count of the components by category and item number was made and examinations were scheduled based on the Code selection criteria for IWC.

Tables 3.2-1 through 3.2-11 are organized by the Class 2 examination categories specified in Table IWC-2500-1, and describe program compliance by referencing the Code requirements, identifying the type of components to be examined, defining the examination method to be used along with the frequency of examinations for completing the interval, and relief requests where applicable.

TABLE 3.1-1

CLASS 2 EXAMINATION CATEGORIES AND ITEM NUMBERS

Examination Category	Examination Item No.	Parts Examined
C-A	C1.10	Pressure Vessel Shell Circumferential Welds
C-A	C1.30	Pressure Vessel Tubesheet to Head Welds
C-B	C2.21	Pressure Vessel Nozzle to Shell Weld
C-B	C2.31	Pressure Vessel Reinforcing Plate Welds to Nozzle and Vessel
C-B	C2.33	Pressure Vessel to Shell Welds When Inside of Vessel is Inaccessible
C-C	C3.10	Welded Attachments for Vessels
C-C	C3.20	Welded Attachments for Piping
C-C	C3.30	Welded Attachments for Pumps
C-D	C4.20	Pressure Retaining Bolting > 2" Diameter Piping
C-F-1	C5.11	Stainless Steel Piping . . .Piping Circumferential Welds ≥ 3/8". Nominal Wall Thickness and > 4" NPS.
C-F-2	C5.51	Carbon Steel Piping. . .Piping Circumferential Welds ≥ 3/8". Nominal Wall Thickness and > 4" NPS.
C-F-2	C5.81	Carbon Steel Piping. . .Pipe Branch Connection Circumferential Welds
C-F-2	C5.90	Augmented
C-G	N/A	Not Applicable
C-H	Class 2 Boundary	System Pressure Test

TABLE 3.2-1

ISI CLASS 2 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY C-A

Pressure Retaining Welds in Pressure Vessels
(Shell Circumferential Weld)

B. APPLICABLE ITEM NUMBERS:

C1.10

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWC-2500-1[1]	None	Volumetric

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for this examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Containment Spray Heat Exchangers (4).

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

There are 4 circumferential shell welds in each of the 4 Containment Spray Heat Exchangers. Two of the 4 welds in each heat exchanger are shell to flange weld. Two of the welds are shell to shell and are not considered to be at gross structural discontinuities per Note 2. Therefore only the shell to flange welds are selected for examination as required by Section XI.

Section XI requires a volumetric examination of at least two of the shell to flange welds from one heat exchanger or distributed among the four heat exchangers by the end of the interval.

PERIOD	TALLY	OUTAGE
1ST	C1.10 (1)	1R20
2ND		
3RD	C1.10 (1)	1R24

NOTE: (1) Figure IWC-2500-1, Section XI, 1995 Edition, 1995 Addenda

TABLE 3.2-2

ISI CLASS 2 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY C-A

Pressure Retaining Welds in Pressure Vessels
(Isolation Condenser Tubesheet to Head Welds)

B. APPLICABLE ITEM NUMBERS:

C1.30

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Figure 3-1	None	Volumetric

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Isolation Condensers A and B.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

There are 4 tubesheet-to-head welds in each of the 2 Isolation Condensers.

Section XI requires a volumetric examination of at least 4 welds on one Condenser or distributed between the two condensers by the end of the interval.

PERIOD	TALLY	OUTAGE
1ST		
2ND	C1.30 (2)	1R22
3RD	C1.30 (2)	1R24

FIGURE 3-1
TYPICAL TUBESHEET-TO-HEAD WELD JOINTS

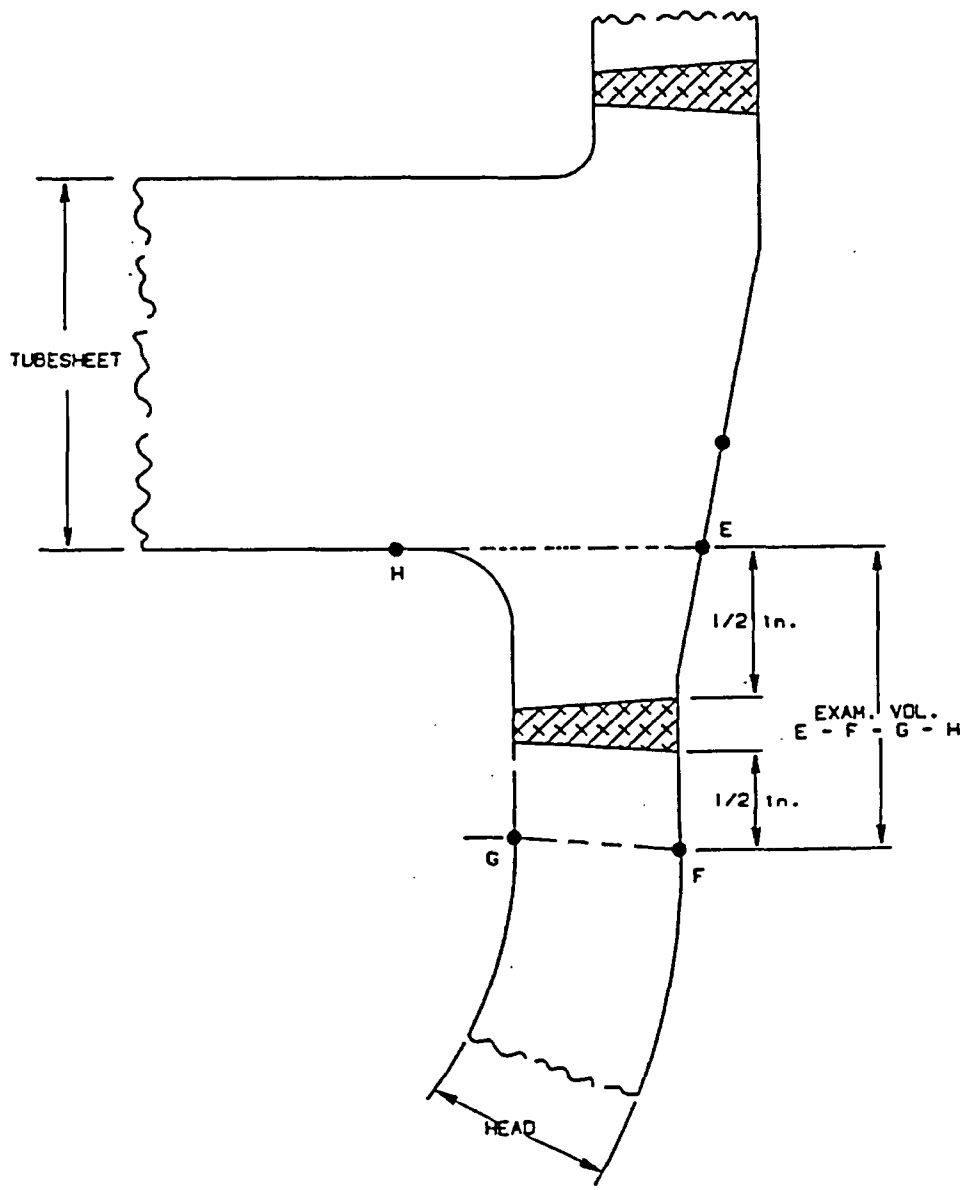

TABLE 3.2-3

ISI CLASS 2 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY C-B

Pressure Retaining Nozzle Welds in Vessels
(Nozzles without Reinforcing Plate)

B. APPLICABLE ITEM NUMBERS:

C2.21 & C2.22

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWC-2500-4(b)[1]	None	Volumetric and Surface

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Isolation Condensers A and B.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

There are 4 Nozzle-to-Head welds in each of the 2 Isolation Condensers and in the case of multiple vessels of similar design size and service the required examination may be limited to one vessel or distributed among the vessels. A volumetric and surface examination of the nozzle-to-head weld shall be performed on two nozzles from each vessel. The inner radius examination (Item C2.22) is not required due to size of nozzles (see note Figure IWC-2500-4). Nozzles are 8" and 12". Code requires inner radius examination for nozzles greater than 12".

PERIOD	TALLY	OUTAGE
1ST		
2ND	C2.21 (2) SYSTEM I	1R21
3RD	C2.21 (2) SYSTEM II	1R23

NOTE: (1) Figure IWC-2500-4(b), Section XI, 1995 Edition

TABLE 3.2-4

ISI CLASS 2 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY C-B

Pressure Retaining Nozzle Welds in Vessels > ½" Nominal Wall
(Nozzles with Reinforcing Plate)

B. APPLICABLE ITEM NUMBERS:

C2.31 & C2.33

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWC-2500-4(c)[1]	None	Surface and Visual (VT-2)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Containment Spray heat exchangers (4).

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

There are 2 nozzle-to-shell welds with reinforcing plates in each of the 4 Containment Spray Heat Exchangers.

Section XI requires a surface examination of at least 2 nozzles from one heat exchanger or distributed among the four heat exchangers by the end of the interval and a visual examination for leakage of at least one heat exchanger. One heat exchanger shall be selected for inspection in the interval. When performing the pressure test the weep hole plug must be removed for inspection.

PERIOD	TALLY	OUTAGE
1ST	C2.33 (2)	1R20
2ND	C2.33 (2)	1R21
3RD	C2.31 (2) C2.33 (2)	1R24

NOTE: (1) Figure IWC-2500-4(c), Section XI, 1995 Edition

TABLE 3.2-5

ISI CLASS 2 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY C-C

Welded Attachments for Vessels, Piping, Pumps and Valves

B. APPLICABLE ITEM NUMBERS:

C3.10 C3.20 C3.30

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWC-2500-5[1]	None	Surface

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for examinations.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Oyster Creek Fourth Ten-Year Schedule, Category C-C.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a surface examination of Class 2 welded attachments. For multiple vessels of similar design, function, and service only one welded attachment of only one of the multiple vessels shall be selected for examination. There are four Containment Spray heat exchangers and four welded supports per heat exchanger.

Section XI requires a surface examination of Class 2 welded attachments. Per Note 5 of IWC -2500-1 (Piping, Pumps and Valves), a sample of 10% of the welded attachments associated with component supports selected for examination under IWF-2510 shall be examined. Piping welded attachments shall be selected from item F1.20. A sample of 10% of the welded attachments of supports selected for examination under item F1.20 shall be examined. Twenty three (23) supports with welded attachments were selected for examination under F1.20. This would require a 10% sample of 3 welded attachments to be examined. Pumps shall be selected from item F1.40 utilizing a sample of 10% of the Class 2 welded attachments scheduled for examination (4 selected, 1 welded attachment required). There are no welded attachments on Class 2 valves.

PERIOD	TALLY	OUTAGE
1ST	C3.20, (1)	1R20
2ND	C3.20, (1) C3.30, (1)	1R22
3RD	C3.20, (1) C3.10 (1)	1R24

NOTE: (1) Figure IWC-2500-5, Section XI, 1995 Edition, 1995 Addenda

TABLE 3.2-6

ISI CLASS 2 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY C-D

Pressure Retaining Bolting Greater Than 2" in Diameter
(Piping)

B. APPLICABLE ITEM NUMBERS:

C4.20

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWC-2500-6[1]	None	Volumetric

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The component is accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Feedwater Flow Element Bolting.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires volumetric examinations be performed on 100% of the bolts and studs greater than 2" in diameter, each inspection interval. The examination may be performed while the bolting is in place under load or upon disassembly of the connection.

This requirement applies to two flange connections that tie in the Feedwater Flow Element.

PERIOD	TALLY	OUTAGE
1ST		
2ND	C4.20 (1)	1R22
3RD	C4.20 (1)	1R24

NOTE: (1) Figure IWC-2500-6, Section XI, 1995 Edition

TABLE 3.2-7

ISI CLASS 2 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY C-F-1

Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping

B. APPLICABLE ITEM NUMBERS:

C5.11

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. Nos. IWC-2500-7[1] IWC-2500-9[1] IWC-2500-10[1] IWC-2500-11[1] IWC-2500-12[1] IWC-2500-13[1]	OC-02-01	Volumetric and/or Surface

D. ACCESSIBILITY OR OTHER LIMITATIONS:

See Oyster Creek Fourth Ten-Year Schedule, Category C-F-1.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Oyster Creek Fourth Ten-year Schedule, Category C-F-1.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires: 1) a volumetric and surface examination on circumferential and intersecting longitudinal pipe welds where the diameters are greater than 4" and the nominal wall thickness is ≥ 3/8"; 2) a surface examination on socket welds; and 3) a surface examination on pipe branch connection, circumferential welds. The welds selected for examination shall include 7.5%, but not less than 28 welds from the population of C-F-1, Item C5.11 and shall be examined by the end of the interval. There are a total of 91 welds in this examination category. The calculation of 7.5% yields less than the minimum 28. Oyster Creek has scheduled the minimum 28 welds for this inspection interval. See Table
3.2-8, Category C-F-1 for the selection criteria, the distribution among the systems and item numbers.

PERIOD	TALLY	OUTAGE
1ST	C5.11 (5)	1R20
2ND	C5.11 (6) C5.11 (6)	1R21 1R22
3RD	C5.11 (6) C5.11 (5)	1R23 1R24

NOTE: (1) Figures IWC-2500-7, IWC-2500-9, IWC-2500-10, IWC-2500-11, IWC-2500-12, and IWC-2500-13, Section XI, 1995 Edition

TABLE 3.2-8

CATEGORY C-F-1

PRESSURE RETAINING WELDS IN AUSTENITIC STAINLESS STEEL OR HIGH ALLOY PIPING

System	Item Numbers[2]				% of Welds per System Contribution	7.5% Test	No. of Welds Scheduled for Examination	
							Total	By Item No.
	C5.11	C5.30	C5.41	Total				C5.11[4]
Isolation Condenser[5]	79	0	0	79	86	6.45	24	24
Core Spray	12	0	0	12	14	1	4	4
Totals	91	0	0	91[1]		7	28[3]	28

Notes:
1. The population from which the 7.5% sample is obtained.
2. Candidates for examinations excluding components that have a nominal wall thickness less than 0.375" and NPS greater than 4".
3. Minimum required examinations by end of interval.
4. The examinations shall be distributed among therminal ends and structural discontinuities.
5. The Isolation Condenser System piping was replaced during the 1990 refueling outage with less fittings.

TABLE 3.2-9

ISI CLASS 2 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY C-F-2

Pressure Retaining Welds in Carbon or Low Alloy Steel Piping

B. APPLICABLE ITEM NUMBERS:

C5.51,, and (C5.81 – greater than 4" only.)
C5.90 Augmented

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. Nos. IWC-2500-7[1] IWC-2500-9[1] IWC-2500-10[1] IWC-2500-11[1] IWC-2500-12[1] IWC-2500-13[1]	None	Volumetric and Surface/or Surface

D. ACCESSIBILITY OR OTHER LIMITATIONS:

See Oyster Creek's Fourth Ten-Year Schedule, Category C-F-2.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Oyster Creek's Fourth Ten-Year Schedule, Category C-F-2.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires: 1) a volumetric and surface examination on circumferential and intersecting longitudinal pipe welds where the diameters are greater than 4" and the nominal wall thickness is ≥ 3/8" (C5.51 and C5.52); and 2) a surface examination on pipe branch connection, circumferential welds (C5.81). The welds selected for examination shall include 7.5%, but not less than 28 welds from the population of non-exempt C-F-2 category, and shall be examined each inspection interval

See Table 3.2-10, Category C-F-2 for the selection criteria, the distribution among the systems and item numbers.

There are a total of 779 welds in this examination category. The calculation of 7.5% yields 58.425. OYSTER CREEK is scheduling 59 welds for this inspection interval.

Welds in the Core Spray System that are excluded form examination by Section XI criteria (piping > 3/8" nominal wall thickness and a NPS greater than 4") shall be examined under an augmented schedule.

PERIOD	TALLY	OUTAGE
1ST	C5.51 (11) (C5.90.Augment (3)	1R20
2ND	C5.51 (12) (C5.90 Augment 4) C5.51 (11) (C5.90 Augment 4) C5.81 (1)	1R21 1R22
3RD	C5.51 (12) (C5.90 Augment 4) C5.51 (11) (C5.90 Augment 4) C5.81 (1)	1R23 1R24

NOTE: (1) Figures IWC-2500-7, IWC-2500-9, IWC-2500-10, IWC-2500-11, IWC-2500-12, and IWC-2500-13, Section XI, 1995 Edition

TABLE 3.2-10

CATEGORY C-F-2

PRESSURE RETAINING WELDS IN CARBON OR LOW ALLOY STEEL PIPING

System	Item Numbers				% of Welds per System Contribution	7.5% Test	No. of Welds Scheduled for Examination		
							Total	By Item No.	
	C5.51	C5.81	C5.90[2,4]	Total				C5.51	C5.90[5]
Core Spray	74	0	267	341	44		26	17	9
Scram Discharge	48	0	0	48	6		3	2	1
Containment Spray	231	0	70	301	39		23	15	8
Feedwater	52	2	0	54	7		4	3	1
Demin Water Transfer	0	0	2	2	1		1	1	0
Reactor Building Closed Cooling	0	0	23	23	3		2	2	0
Totals	405	2	362	769[1]		58	59[3]	40	19

Notes:
1. The population from which the 7.5% sample is obtained.
2. Candidated for examinations excluding components that have a nominal wall thickness less than 0.375" and NPS greater than 4".
3. Minimum required examinations by end of interval.
4. Created item number to identify excluded components, based on wall thickness less than 3/8".
5. Item number C5.90 shall be scheduled as "Augumented."

TABLE 3.2-11

ISI CLASS 2 SYSTEM TESTING

A. AREAS OF EXAMINATION: CATEGORY C-H

System Pressure Test of All Pressure Retaining Components

B. APPLICABLE ITEM NUMBERS:

C7.10, C7.30, C7.50, and C7.70

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
IWA-5240	None	Visual (VT-2)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination for leaks during a system leakage test each inspection period in accordance with IWC-5220.

These tests are performed in accordance with the system pressure test program.

PERIOD	TALLY	OUTAGE
1ST	Class 2 Systems	
2ND	Class 2 Systems	
3RD	Class 2 Systems	

NOTE:

3.3 Successive Inspections

3.3.1 The sequence of component examinations established during the first inspection interval shall be repeated during each successive inspection interval, to the extent practical.

3.3.2 If flaw indications, or relevant conditions are evaluated in accordance with IWC-3000 and the component qualifies as acceptable for continued service, the areas containing such flaw indications shall be reexamined during the next inspection period.

3.3.3 If the reexaminations required by 3.3.2 above reveal that the flaw indications remain essentially unchanged for the next inspection period, the component examination schedule may revert to the original schedule of successive inspections.

3.3.4 When welded attachments are examined as a result of identified component support deformation and the results of these examinations exceed the applicable acceptance standards listed above, additional or successive examinations shall be performed when determined necessary based on an evaluation by the Owner.

3.3.5 Successive Inspections and Additional Examinations Report

When successive inspections are required to be completed in accordance with this section, the successive inspections shall be scheduled in the ISI database, and the subject report should be revised. This report shows the successive inspections completed to date for Oyster Creek's Fourth Interval and also shows those scheduled for the remainder of the interval.

3.4 Additional Examinations

3.4.1 Examinations performed in accordance with Table IWC-2500-1, except for Examination Category C-H, that reveal flaws or relevant conditions exceeding the acceptance standards of Table IWC-3410-1 shall be extended to include additional examinations during the current outage. The additional examinations shall include an additional number of welds, areas, or parts included in the inspection item equal to 20% of the number of welds, areas, or parts included in the inspection item that are scheduled to be performed during the interval. The additional examinations shall be selected from welds, areas, or parts of similar material and service. This additional selection may require inclusion of piping systems other than the one containing the flaws or relevant conditions.

3.4.2 If the additional examinations required by IWC-2430(a) reveal flaws or relevant conditions exceeding the acceptance standards of Table IWC-3410-1, the examinations shall be further extended to include additional examinations during the current outage. These additional examinations shall include the remaining number of welds, areas, or parts of similar material and service subject to the same type of flaws or relevant conditions.

Notes: (1) Welds, areas, or parts are those described or intended in a particular inspection item of Table IWC-2500-1. (2) An inspection item, as listed in Table IWC-2500-1, may comprise a number of welds, areas, or parts of a component required to be examined in accordance with the inspection plan and schedule (IWA-2420.)

3.4.3 For the inspection period following the period in which the examinations of 3.4.1 or 3.4.2 were completed, the examinations shall be performed as originally scheduled in accordance with IWC-2400.

3.4.4 If welded attachments are examined as a result of identified component support deformation, and the results of these examinations exceed the acceptance standards of Table IWC-3410-1, additional examinations shall be performed, if determined necessary, based on an evaluation by the Owner.

3.4.5 Successive Inspections and Additional Examinations Report

When additional examinations are required to be performed in accordance with this section, the additional examinations shall be scheduled in the ISI database, and the subject report should be revised. This report shows the additional examinations completed to date for Oyster Creek's Fourth Interval and also shows those scheduled for the remainder of the interval.

4.0 ISI CLASS 3 COMPONENTS

4.1 Introduction and Overview

The purpose of this section is to provide the specific examination criteria for ASME, Class 3 components at Oyster Creek for the fourth ten-year inspection interval. A detailed methodology for selection and scheduling of applicable IWD-2500-1, Examination Categories has been developed to address selection and sampling requirements.

Subsection IWD of Section XI specifies that Class 3 pressure retaining components and their welded attachments, except those that are specifically exempted, are subject to examination and testing. This section describes the Code-required examinations and the program, that shall be implemented to meet those requirements.

A summary of those ASME examination categories and item numbers applicable to the Oyster Creek Fourth Ten-Year Inspection Interval are furnished in Table 4.1-1.

Section 4.2 of this basis presents the examination requirements for Class 3 components by addressing: each of the applicable examination categories listed in Table 4.1-1, the examination and testing requirements specified in Table IWD-2500-1 of the Section XI Code and AmerGen's plan to satisfy those requirements during the fourth ten-year interval.

Identification of the specific components scheduled for examination is contained in the Oyster Creek's fourth ten-year schedule, a separate document from this Program Plan.

TABLE 4.1-1

CLASS 3 EXAMINATION CATEGORIES AND ITEM NUMBERS

Examination Category	Examination Item No.	Parts Examined
D-A	D1.10	Welded Attachments Pressure Vessels
D-A	D1.20	Welded Attachments Piping
D-A	D1.30	Welded Attachments Pumps
D-B	Class 3 Boundary	System Pressure Test

4.2 Selection and Scheduling Methodology for Class 3 Components

This section identifies the examinations and tests for non-exempted components within the Class 3 piping boundaries as defined in the ISI Boundary Drawings and identified in Section 2. A review of the pipe support detail drawings was used for determining if the support was welded to the pressure-retaining boundary. Finally, the item numbers were assigned for welded attachments based on their description.

Tables 4.2-1 through 4.2-2 are organized by the Class 3 examination categories specified in Table IWD-2500-1, and describe program compliance by referencing the Code requirements, identifying the type of components to be examined, defining the examination method to be used along with the frequency of examinations for completing the interval, and relief requests where applicable.

TABLE 4.2-1

CLASS 3 COMPONENT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY D-A

Welded Attachments for Vessels, Piping, Pumps and Valves

B. APPLICABLE ITEM NUMBERS:

D1.10 D1.20 D1.30

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Surface	None	Visual (VT-1)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Oyster Creeks fourth Ten -Year Schedule, Category D-A. Reference Table 4.2-3

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination (VT-1) of welded attachments. All welded attachments selected for examination shall be those most subject to corrosion as determined by AmerGen Energy Company, LLC such as Service Water and Emergency Service Water piping at the intake structure. For multiple vessels of similar design, function and service the welded attachments of only one of the multiple vessels shall be examined. For vessels Oyster Creek has two **Isolation Condensers**, three **Fuel Pool Cooling** heat exchangers, one **Condensate Storage Tank, one Augmented Fuel Pool Cooling heat exchanger** and two **RBCCW** heat exchangers.
For welded attachments of piping, pumps and valves a 10% sample shall be selected for examinations. There are 75 piping welded attachments, and 18 pump attachments. There are no welded attachments on valves.

PERIOD	TALLY	OUTAGE
1ST	D1.10 (1) D1.20 (2) D1.30 (1)	1R20
2ND	D1.10 (1) D1.20 (2) D1.10 (1)	1R21 1R22
3RD	D1.10 (1) D1.10 (1) D1.20 (4) D 1.30 (1)	1R23 1R24

NOTE:

TABLE 4.2-2

CLASS 3 SYSTEM TESTING

A. AREAS OF EXAMINATION: CATEGORY D-B

All Pressure retaining Components

B. APPLICABLE ITEM NUMBERS:

D2.10, D2.20, D2.30, D2.40, D2.50, D2.60, D2.70, D2.80

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
IWA-5240	OC-02-03	Visual (VT-2)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

See Oyster Creek's Fourth Ten-Year Schedule, Category D-B.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Oyster Creek's Fourth Ten-Year Schedule, Category D-B

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a system leakage test each inspection period and a system hydrostatic test each inspection interval. Oyster Creek has requested relief for the performance of the hydrostatic test.

These tests are performed in accordance with the system pressure test program.

PERIOD	TALLY	OUTAGE
1ST	Class 3 Systems	
2ND	Class 3 Systems	
3RD	Class 3 Systems	

NOTE:

TABLE 4.2-3

CATEGORY D-A
WELDED ATTACHMENTS ON CLASS 3
COMPONENTS AND PIPING

System	Items in Scope	Total Supports
Isolation Condenser	(2) Condensers – 3 Supports Each	6
Condensate Transfer	(1) Condensate Storage Tank (2) Pumps – 1 Support Each	1 2
Service Water	(2) Pumps – 1 Support Each Piping – 7 Supports	2 7
Fuel Pool Cooling	(3) Heat Exchangers – 2 Supports Each (4) Pumps – 2 Supports Each Piping – 9 Supports	6 8 9
Emergency Service Water	(4) Pumps – 1 Support Each Piping – 13 Supports	4 13
Reactor Building Close Cooling	(2) Heat Exchangers – 2 Supports Each (2) Pumps – 1 Support Each Piping – 46 Supports	4 2 46
Augmented Spent Fuel Pool	(1) Heat Exchanger – 2 Supports	2

4.3 Successive Inspections

4.3.1 The sequence of component examinations, which was established during the first inspection interval, shall be repeated during each successive inspection interval, to the extent practical.

4.3.2 If components are accepted for continued service by evaluation in accordance with IWD-3000, the areas containing flaws or relevant conditions shall be reexamined during the next inspection period listed in the schedule of the inspection program of IWD-2400.

4.3.3 If the reexaminations required by 4.3.2 above reveal that the flaws or relevant conditions remain essentially unchanged for the next inspection period, the component examination schedule may revert to the original schedule of successive inspections.

4.3.4 When welded attachments are examined as a result of identified component support deformation and the results of these examinations exceed the applicable acceptance standards listed above, additional or successive examinations shall be performed when determined necessary based on an evaluation by the Owner.

4.3.5 Successive Inspections and Additional Examinations Report

When successive inspections are required to be completed in accordance with this section, the successive inspections shall be scheduled in the ISI database, and the subject report should be revised. This report shows the successive inspections completed to date for Oyster Creek's Fourth Interval and also shows those scheduled for the remainder of the interval.

4.4 Additional Examinations

4.4.1 Examinations performed in accordance with Table IWD-2500-1, except for Examination Category D-B, that reveal flaws or relevant conditions exceeding the acceptance standards of Table IWD-3000 shall be extended to include additional examinations during the current outage. The additional examinations shall include an additional number of welds, areas, or parts[3] included in the inspection item[4] equal to 20% of the number of welds, areas, or parts included in the inspection item that are scheduled to be performed during the interval. The additional examinations shall be selected from welds, areas, or parts of similar material and service. This additional selection may require inclusion of piping systems other than the one containing the flaws or relevant conditions.

4.4.2 If the additional examinations required by 4.4.1 above reveal flaws or relevant conditions exceeding the acceptance standards of IWD-3000, the examinations shall be further extended to include additional examinations during the current outage. These additional examinations shall be determined by the Owner based upon an engineering evaluation of the root cause of the flaws or relevant conditions. The Owner's corrective measures shall be documented in accordance with IWA-6000.

4.4.3 For the inspection period following the period in which the examinations of 4.4.1 or 4.4.2 were completed, the examinations shall be performed as originally scheduled in accordance with IWD-2400.

4.4.4 If welded attachments are examined as a result of identified component support deformation, and the results of these examinations exceed the applicable acceptance standards listed above, additional or successive examinations shall be performed, when determined necessary, based on an evaluation by the Owner.

[3] Welds, areas, or parts are those described on intended in a particular inspection item of Table IWD-2500-1.

[4] An inspection item, as listed in Table IWD-2500-1, may comprise a number of welds, areas, or parts of a component required to be examined in accordance with the inspection plan and schedule (IWA-2420.)

4.4.5 Successive Inspections and Additional Examinations Report

When additional examinations are required to be performed in accordance with this section, the additional examinations shall be scheduled in the ISI database, and the subject report should be revised. This report shows the additional examinations completed to date for Oyster Creek's Fourth Interval and also shows those scheduled for the remainder of the interval.

5.0 ISI CLASS 1, CLASS 2, AND CLASS 3 COMPONENT SUPPORTS

5.1 Introduction and Overview

The purpose of this section is to provide the specific examination criteria for ASME, Class 1, Class 2, Class 3, and MC component supports at Oyster Creek for the fourth ten-year inspection interval. A detailed methodology for selection and scheduling of Examination Category F-A component supports has been developed to address selection and sampling requirements.

Subsection IWF of Section XI specifies that Class1, Class 2, Class 3, and MC component supports (e.g., piping supports and supports other than piping supports) except those that are specifically exempted, are subject to examinations. This section describes the Code-required examinations and the program, that shall be implemented to meet those requirements.

A summary of those Section XI examination categories and item numbers applicable to the Oyster Creek Fourth Ten-Year Inspection Interval are furnished in Table 5.1-1.

Section 5.2 of this basis deals with each of the applicable IWF examination category-item numbers listed in Table 5.1-1. This section also describes the method used for selecting component supports for examination, the examination method that shall be applied and AmerGen's plan for satisfying requirements during the fourth ten-year inspection interval.

Tables 5.2-1 through 5.2-8 are in sequence, to coincide with the applicable Section XI categories, and item numbers identified in Table 5.1-1. They are organized in a format that presents: a reference to the Code requirements, identify the type of components to be examined, defines the examination method to be used, the frequency of examinations for completing the interval, and relief requests if applicable.

Identification of the specific components scheduled for examination is contained in the Oyster Creek's fourth ten-year schedule, a separate document from this Program Plan.

5.2 Selection and Scheduling Methodology for Component Supports

This section identifies the examinations for non-exempted component supports within the Section XI, Class 1, Class 2, Class 3 and MC boundaries. The class boundaries are defined in the ISI Boundary Drawings and identified in Section 2 of this program. A review of each pipe support detail sketch was performed in order to determine the type (e.g., variable spring, rod hanger, or snubber) of component support.

Section XI requires the item numbers shall be categorized to identify support types by component support function.

The selection of component supports for examinations during the fourth interval was based on the component configuration type. The AmerGen ISI database is computerized and has a field for entering component type. The system allows AmerGen to sort and make selections on component type for all components in the computerized database. A list of the types within the scope of this program is contained in Table 5.1-2.

TABLE 5.1-1

COMPONENT SUPPORT EXAMINATION CATEGORIES

Examination Category	Examination Item No.	Parts Examined
F-A	F1.10	Class 1 Piping Supports
F-A	F1.20	Class 2 Piping Supports
F-A	F1.30	Class 3 Piping Supports
F-A	F1.40	Supports Other Than Piping Supports Class 1, Class2, and Class 3

TABLE 5.1-2

CONFIGURATION TYPE REFERENCE

I	Anchor	VI	Lug	XI	Slide
II	Bracket	VII	Rigid Restraint	XII	Stanchion
III	Clamp	VIII	Rod Hanger	XIII	Swaybrace
IV	Constant	IX	Snubber Hydraulic	XIV	U-Bolt
V	Frame	X	Snubber Mechanical	XV	Variable Spring

TABLE 5.2-1

COMPONENT SUPPORT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY F-A

Piping Supports, Class 1

B. APPLICABLE ITEM NUMBERS:

F1.10

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWF-1300-1[1]	None	Visual (VT-3)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Oyster Creek's Fourth Ten-Year Schedule, Category F-A

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination (VT-3) of at least 25% of the Class 1 piping supports by the end of the interval.

The total percentage sample shall be comprised of supports from each system, where the individual sample sizes are proportional to the total number of non-exempt supports of each type and function within each system.

From a total of 283 Class 1 piping supports, 72 examinations (25%) have been scheduled for the fourth interval. Ten systems and 10 different configuration types are represented by this sample. See Table 5.2-2.

PERIOD		
1ST	F1.10 (12)	1R20
2ND	F1.10 (16) F1.10 (16)	1R21 1R22
3RD	F1.10 (14) F1.10 (14)	1R23 1R24

NOTE: (1) Figure IWF-1300-1, Section XI, 1995 Addenda

TABLE 5.2-2

CATEGORY F-A, ITEM NO. F1.10
CLASS 1 PIPING SUPPORTS

System	Component Support Type[1,2]											Total	25%	Scheduled
	III	IV	V	VII	VIII	IX	X	XI	XIII	XIV	XV			
Isolation Condenser			[1]2			[1]3	[3]12				[3]15	32	8	8
Core Spray			1	2		[1]2	[2]5				[2]7	17	4.25	4
Liquid Poison			[1]5							5	[1]4	14	3.5	3
Cleanup			[1]4	1			[1]4				[2]8	17	4.25	4
Shutdown Cooling				[1]2		[1]4	[1]6	[1]1			[3]14	27	6.75	7
Reactor Head Cooling	1				1						[1]3	5	1	1
Recirculation		[14]55					[5]20		[5]20		[1]5	100	25	25
Control Rod Drive Return	[1]3		[1]2	[1]3							[3]10	18	4.5	5
Main Steam							[4]14				[2]11	25	6.25	7
Feedwater	2						[4]16				[3]12	30	7.5	8
Total	**5**	**55**	**13**	**8**		**9**	**77**	**1**	**20**	**5**	**85**	**283**		**72**
Scheduled	**2**	**14**	**4**	**2**		**3**	**20**	**1**	**5**	**0**	**21**	**72**		

Note: (1) For Roman numeral cross-reference component support type, see Table 5.1-2.
(2) "N where N = total number of components of that type in the system, n = quantity of components of that type in the system scheduled for examination.

TABLE 5.2-3

COMPONENT SUPPORT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY F-A

Piping Support, Class 2

B. APPLICABLE ITEM NUMBERS:

F1.20

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWF-1300-1[1]	None	Visual (VT-3)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Oyster Creek's Fourth Ten-year Schedule, Category F-A.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination (VT-3) of at least 15% of the Class 2 piping supports by the end of the interval. The total percentage sample shall be comprised of supports from each system where the individual sample sizes are proportional to the total number of non-exempt supports of each type and function within each system.

From a total of 380 Class 2 piping supports, 59 examinations (15.5%) have been scheduled for the fourth interval. Seven systems and 14 different configuration types are represented by this sample. See Table 5.2-4. OYSTER CREEK has scheduled the 59 Class 2 piping supports as follows:

PERIOD	TALLY	OUTAGE
1ST	F1.20 (12)	1R20
2ND	F1.20 (12) F1.20 (12)	1R21 1R22
3RD	F1.20 (11) F1.20 (12)	1R23 1R24

NOTE: (1) Figure IWF-1300-1, Section XI, 1995 Addenda

TABLE 5.2-4

CATEGORY F-A, ITEM NO. F1.20
CLASS 2 PIPING SUPPORTS

System	Component Support Type[1,2]														Total	15%	Scheduled
	I	II	III	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV			
Isolation Condenser								[4]27		1				[3]20	48	7.35	7
Core Spray	[2]9	1	2	[2]9	1	4	[1]7	[3]19	[1]7	[2]11	[1]2		4	[8]55	131	19.65	20
Shutdown Cooling						[1]3									3	0.45	1
Control Rod Drive Return				[1]4	[1]3	[2]12	2		1				3	1	26	3.75	4
Containment Spray	[1]4	[1]7	[1]5	[1]8		[2]14	[4]24	[3]19		[4]28		1		[5]36	146	21.9	22
Main Steam	[1]1													1	2	0.3	1
Feedwater						[1]2	[1]7						1	[1]7	17	2.55	3
Rx. Closed Cooling Water	1		2	1		2								1	7	1.05	1
Total	15	10	7	22	4	37	37	65	8	40	2	1	7	118	380		59
Scheduled	4	2	1	4	1	6	6	10	1	6	1	0	0	17	59		

Note: (1) For Roman numeral cross-reference component support type, see Table 5.1-2.
(2) "N where N = total number of components of that type in the system, n = quantity of components of that type in the system scheduled for examination.

TABLE 5.2-5

COMPONENT SUPPORT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY F-A

Piping Support, Class 3

B. APPLICABLE ITEM NUMBERS:

F1.30

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWF-1300-1[1]	None	Visual (VT-3)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Oyster Creek's Fourth Ten-Year Schedule, Category F-A.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination (VT-3) of at least 10% of the Class 3 piping supports by the end of the interval. The total percentage sample shall be comprised of supports from each system where the individual sample sizes are proportional to the total number of non-exempt supports of each type and function within each system.

From a total of 285 Class 3 piping supports, 29 examinations (10%) have been scheduled for the fourth interval. Five systems and 12 different configuration types are represented by this sample. See Table 5.2-6. OYSTER CREEK has scheduled the 29 Class 3 piping supports as follows:

PERIOD	TALLY	OUTAGE
1ST	F1.30 (6)	1R20
2ND	F1.30 (4) F1.30 (6)	1R21 1R22
3RD	F1.30 (7) F1.30 (6)	1R23 1R24

NOTE: (1) Figure IWF-1300-1, Section XI, 1995 Addenda

TABLE 5.2-6

CATEGORY F-A, ITEM NO. F1.30
CLASS 3 PIPING SUPPORTS

System	Component Support Tupe[1,2]												Total	10%	Scheduled
	I	II	III	V	VII	VIII	X	XI	XII	XIII	XIV	XV			
Fuel Pool Cooling	[1]9	[1]16	2	[1]6	[1]5	[2]22	[1]1				[1]8	6	75	7.5	8
Condensate Transfer	2				1	[1]7			[1]12		3		25	2.5	2
Service Water	2	2				12			3		2	1	22	2.2	3
Emergency Service Water	[1]7	[1]4	[1]1	[2]19	4	[2]23		[1]8	[1]4		[1]6	[1]7	83	8.3	8
Reactor Closed Cooling	2			[1]9	[1]4	[3]33		1			[1]9	[2]22	80	8	8
Total	**22**	**22**	**3**	**44**	**16**	**85**	**1**	**9**	**16**	**0**	**28**	**36**	**285**		**29**
Scheduled	**2**	**2**	**1**	**5**	**3**	**8**	**1**	**1**	**2**	**0**	**3**	**3**	**29**		

Note: (1) For Roman numeral cross-reference component support type, see Table 5.1-2.
(2) [n]N where N = total number of components of that type in the system, n = quantity of components of that type in the system scheduled for examination.

TABLE 5.2-7

COMPONENT SUPPORT EXAMINATIONS

A. AREAS OF EXAMINATION: CATEGORY F-A

Component Supports, Class 1, Class 2, and Class 3 Other Than Piping Supports

B. APPLICABLE ITEM NUMBERS:

F1.40

C. INSPECTION REQUIREMENTS:

AREAS SUBJECT TO EXAMINATION	RELIEF REQUEST	EXAMINATION METHOD(S)
Fig. No. IWF-1300-1[1]	None	Visual (VT-3)

D. ACCESSIBILITY OR OTHER LIMITATIONS:

The areas of interest are accessible for examination.

E. IDENTIFICATION OF AREAS TO BE EXAMINED:

Oyster Creek's Fourth Ten-Year Schedule, Category F-A.

F. EXAMINATION METHODS AND EXTENT TO BE EMPLOYED:

Section XI requires a visual examination (VT-3) of at least 100% of supports other than piping supports by the end of the interval. For multiple components other than piping, within a system of similar design, function, and service, the supports of only one of the multiple components are required to be examined.

From a total of 31 pumps (8 sets of multiple components), 26 valves (4 sets of multiple components) and 8 vessels (Reactor Vessel, Torus and 5 sets of heat exchangers/tanks), 32 examinations have been scheduled for the fourth interval. Eleven systems are represented by this sample. See Table 5.2-8.

Oyster Creek has scheduled the 32 component supports as follows:

PERIOD	TALLY	OUTAGE
1ST	F1.40 (8)	1R20
2ND	F1.40 (5) F1.40 (5)	1R21 1R22
3RD	F1.40 (6) F1.40 (8)	1R23 1R24

NOTE: (1) Figure IWF-1300-1, Section XI, 1995 Addenda

TABLE 5.2-8a

CATEGORY F-A, ITEM NO. F1.40
CLASS 1, CLASS 2, AND CLASS 3 COMPONENT SUPPORTS

System	Component Support Type[1]				Total	Scheduled	Component Description[2]
	Anchor	Restraint	Stabilizer	Sway-Brace			
Isolation Condenser	[3]6				6	3	2 Condensers
Reactor Vessel	[1]1		[8]8		9	9	Vessel Skirt & Lateral Support
Containment Spray	[4]16				16	4	4 Heat Exchangers
Fuel Pool Cooling	[2]6	4			10	2	3 Heat Exchangers
Shutdown Cooling	6				6	2	3 Heat Exchangers
Condensate Transfer	[1]1				1	1	1 Tank
Reactor Closed Cooling	[2]4				4	2	2 Heat Exchangers
Torus				[1]1	1	1	
Total	**34**	**4**	**8**	**1**	**47**	**24**	
Scheduled	**13**		**8**	**1**	**22**		

Note: (1) For Roman numeral cross-reference component support type, see Table 5.1-2.
(2) [n]N where N = total number of components of that type in the system, n = quantity of components of that type in the system scheduled for examination.

TABLE 5.2-8b

CATEGORY F-A, ITEM NO. F1.40
CLASS 1, CLASS 2, AND CLASS 3 COMPONENT SUPPORTS

SYSTEM	COMPONENT	CODE CLASS	SUPPORT
211	V-14-30	1	211-120
	V-14-31	1	211-121
	V-14-32	1	211-122
	V-14-33	1	211-123
	V-14-34	1	211-124
	V-14-35	1	211-125
212	P-20-001A	2	H-I
	P-20-001B	2	H-I
	P-20-001C	2	H-I
	P-20-001D	2	H-I
	P-20-002A	2	H-I
	P-20-002B	2	H-I
	P-20-002C	2	H-I
	P-20-002D	2	H-I
214	V-17-205	2	214-0036
	V-17-206	2	214-0032
	V-17-207	2	214-0029
223	V-37-9	1	223-4
	V-37-10	1	223-1
	V-37-11	1	223-7
	V-37-20	1	223-15

SYSTEM	COMPONENT	CODE CLASS	SUPPORT
223	V-37-21	1	223-12
	V-37-22	1	223-18
	V-37-31	1	223-26
223	V-37-32	1	223-23
	V-37-33	1	223-29
	V-37-42	1	223-37
	V-37-43	1	223-39
	V-37-44	1	223-40
	V-37-53	1	223-48
	V-37-54	1	223-45
	V-37-55	1	223-51
	P-37-001	1	223-8, 223-9, 223-10
	P-37-002	1	223-19, 223-20, 223-21
	P-37-003	1	223-30, 223-31, 223-32
	P-37-004	1	223-41, 223-42, 223-43
	P-37-005	1	223-52, 223-53, 223-54
241	P—21-001A	2	H-1
	P—21-001B	2	H-1
	P—21-001C	2	H-1
	P—21-001D	2	H-1
251	P-18-0001A	3	H-1, H-2
	P-18-0001B	3	H-1, H-2
	P-18-0001C	3	H-1, H-2
	P-18-0001D	3	H-1, H-2
411	V-1-10	1	411-38
	V-1-9	1	411-30
424	P-11-001	3	H-1
	P-11-002	3	H-1
531	P-3-001A	3	H-1

SYSTEM	COMPONENT	CODE CLASS	SUPPORT
	P-3-001B	3	H-1
532	P-3-003A	3	H-1
	P-3-003B	3	H-1
532	P-3-003C	3	H-1
	P-3-003D	3	H-1
541	P-5-1	3	H-1
	P-5-2	3	H-1

5.3 Selection and Scheduling Methodology for Snubbers

ASME Section XI requires three examinations of Code Class snubbers – (1) a VT-3 visual examination of the snubbers in accordance with OM-4, (2) functional testing of the snubbers in accordance with OM-4, and (3) a VT-3 visual examination of the integral and nonintegral attachments per Subsection IWF.

Pursuant to 10 CFR 50.55a(a)(3)(i), an alternative to perform snubber examinations and tests in accordance with the requirements of Oyster Creek Technical Specifications 3.5.A.8 and 4.5M was requested.

Refer to Section 1, Subsection 4.6 of this Program plan for a detailed discussion of the applicable snubber examination and testing requirements including how they are implemented at Oyster Creek.

5.4 Successive Inspections

5.4.1 The sequence of component support examinations established during the first inspection interval shall be repeated during each successive inspection interval, to the extent practical.

5.4.2 When a component support is accepted for continued service in accordance with IWF-3112.2 or IWF-3122.2, the component support shall be reexamined during the next inspection period listed in the schedules of the inspection programs of IWF-2410.

5.4.3 When the examinations required by 5.4.2 do not require additional corrective measures during the next inspection period, the inspection schedule may revert to the requirements of 5.4.1.

5.4.4 Successive Inspections and Additional Examination Report

When successive inspections are required to be completed in accordance with this section, the successive inspections shall be scheduled in the ISI database, and the subject report should be revised. This report shows the successive inspections completed to date for Oyster Creek's Fourth Interval and also shows those scheduled for the remainder of the interval.

5.5 Additional Examinations

5.5.1 Component support examinations performed in accordance with Table IWF-2500-1 that reveal flaws or relevant conditions exceeding the acceptance standards of IWF-3400 shall be extended to include the component supports immediately adjacent to those component supports for which corrective action is required. The additional examinations shall be extended to include additional supports within the system, equal in number and of the same type and function as those scheduled for examination during the inspection period.

5.5.2 When the additional examinations required by 5.5.1 above reveal flaws or relevant conditions exceeding the acceptance standards of IWF-3400, the examinations shall be further extended to include additional examinations during the current outage. These additional examinations shall include the remaining component supports within the system of the same type and function.

5.5.3 When the additional examinations required by 5.5.2 above reveal flaws or relevant conditions exceeding the acceptance standards of IWF-3400, the examinations shall be extended to include all nonexempt supports potentially subject to the same failure modes that required corrective measures in accordance with 5.5.1 and 5.5.2.

Also, these additional examinations shall include nonexempt component supports in other systems when the support failures requiring corrective measures indicate non-system-related support failure modes.

5.5.4 When the additional examinations required by 5.5.3 reveal flaws or relevant conditions exceeding the acceptance standards of IWF-3400, the Owner shall examine those exempt component supports that could be affected by the same observed failure modes and could affect nonexempt components.

5.5.5 Successive Inspections and Additional Examination Report

When additional examinations are required to be performed in accordance with this section, the additional examinations shall be scheduled in the ISI database, and the subject report should be revised. This report shows the additional examinations completed to date for Oyster Creek's Fourth Interval and also shows those scheduled for the remainder of the interval.

OYSTER CREEK NUCLEAR GENERATING STATION

SECTION 4

ISI RELIEF REQUEST

AmerGen Energy Company
Oyster Creek Nuclear Generating Station
Fourth 10-Year Interval
Request for Relief OC-02-01

COMPONENT IDENTIFICATION

Code Class:	Class 1 and Class 2
Reference:	ASME Section XI, 1995 Edition, 1996 Addenda, Tables IWB 2500-1 and IWC-2500-1
Examination Categories:	B-J, C-F-1
Item Numbers:	B9.10, and C5.10
Description:	Alternative requirements to the surface examination requirements for circumferential welds
Component Numbers:	All welds examined per the requirements of Generic Letter 88-01

CODE REQUIREMENTS

ASME Section XI, 1995 Edition, 1996 Addenda, Table IWB-2500-1, Examination Category B-J, Pressure retaining welds in Piping, Item B9.10 and Table IWC-2500-1, Examination Category C-F-1, Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping, Item C5.10 requires a surface and volumetric examination.

CODE REQUIREMENTS FROM WHICH AN ALTERNATIVE IS REQUESTED

Relief is requested from the ASME Section XI required surface examination specified in Table IWB-2500-1, Examination Category B-J, Pressure retaining welds in Piping, Item B9.10 and Table IWC-2500-1, Examination Category C-F-1, Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping, Item C5.10 for those welds which are volumetrically examined per the requirements of Generic Letter 88-01.

BASIS FOR ALTERNATIVE

Pursuant to 10 CFR 50.55a(g)(5)(i), relief is requested on the basis that the proposed alternative would provide an acceptable level of quality and safety.

During over 20 years of Section XI required surface examinations, not a single service induced OD crack has been discovered on any stainless steel weld at Oyster Creek. Typically, OD cracking of stainless steel welds has been limited to leachable chloride contamination resulting from wetted insulation. Presently, insulation on stainless steel piping within the ASME Section XI and GL 88-01 common boundaries is manufactured from low leachable material. Additionally, the "haze" cracking experienced by some plants during the 1980's has not been a problem at Oyster Creek as there was no procurement of rolled and welded piping during that period.

One positive result of the investigations performed on BWR piping is that no significant mode of degradation other than IGSCC has been noted. This means that inspections can focus on those approaches that are best suited for detecting and evaluating IGSCC.

Service-induced stresses on most BWR piping are relatively low. The source of the high stress primarily responsible for IGSCC is the high tensile stress on the inside of the pipe caused by normal welding practice.

Liquid penetrant testing is very radiation dose intensive due to pre and post cleaning and minimum dwell times associated with penetrant and developer application. The process also creates substantial amounts of mixed waste. Oyster Creek has concurred with recommendations in 88-01, 0301 and now implements GL 88-01 which focus on approaches which are best suited for detecting and evaluating IGSCC. Continuing with the ASME Section XI surface examinations for the welds in question is an undue hardship in exposure to personnel and creation of mixed waste with no increase in safety or quality.

PROPOSED ALTERNATIVE PROVISIONS

The welds identified as being under both the requirements of: 1) ASME Section XI, Examination Category B-J, Item B9.10; and 2) BWRVP-75 shall be ultrasonically examined in accordance with requirements of Section XI and BWRVP-75.

AmerGen will continue to meet the ASME Section XI scheduling, recording, and summary report preparation requirements associated with the referenced components.

PERIOD FOR WHICH RELIEF IS REQUESTED

This relief is for the fourth inspection interval at Oyster Creek Nuclear Generating Station, which is scheduled to end on October 14, 2012.

TABLE 1
QUANTITY OF WELDS

IGSCC SYSTEM	IGSCC WELD COUNT	SECTION XI WELD COUNT FOR IGSCC SYSTEM				Welds Scheduled for Section XI/IGSCC
		B5.10	B9.11	C5.11	TOTAL	
RECIRC.	89	10	79		89	30
RWCU	49		52		52	13
CORE SPRAY	27	2	71	12	85	22
SHUTDOWN COOLING	14		80		80	21
ISO CONDENSER	122	2	53	79	134	40
HEAD COOLING	7	3	9		12	5
TOTAL	308	17	344	91	452	131

AmerGen Energy Company
Oyster Creek Nuclear Generating Station
Fourth 10-Year Interval
Request for Relief OC-02-02

COMPONENT IDENTIFICATION

Code Class:	Class 1
Reference:	ASME, Section XI, 1995 Edition, 1996 Addenda, Table IWB-2500-1
Examination Categories:	B-K
Item Numbers:	B10.10
Description:	Alternative requirements to examination area requirements of Figure IWB-2500-13 and Note 2 of Table IWB-2500-1, Category B-K, extent of examination which requires "essentially 100% (more than 90%) of the length of the attachment weld at each attachment subject to examination.
Component Numbers:	Reactor Vessel Support Skirt weld 1-569

CODE REQUIREMENTS

ASME Section XI, 1995 Edition, 1996 Addenda, Table IWB-2500-1, Examination Category B-K, Welded Attachments for Vessels, Piping, Pumps, and Valves, Item B10.10, requires that welded attachments to pressure vessels be subject to a surface examination. Table IWB-2500-1 references Figures IWB-2500-13, IWB-2500-14, and IWB-2500-15 for the determination of the applicable surface areas requiring examination. Figure IWB-2500-13 is the applicable figure for the Oyster Creek Vessel skirt design. In addition, the extent of the examination per Note 2 includes "essentially 100% (more than 90%) of the length of the attachment weld at each attachment subject to examination.

CODE REQUIREMENTS FROM WHICH AN ALTERNATIVE IS REQUESTED

Relief is requested from the ASME Section XI required surface areas (examination areas A-B and C-D) as shown in Figure IWB-2500-13 (Attachment 1) and extent of examination as stated in Note 2 of Table IWB-2500-1, Examination Category B-K, Item B10.10.

BASIS FOR ALTERNATIVE

Pursuant to 10 CFR 50.55a(g)(5)(iii), relief is requested on the basis that the Code requirements to examine essentially 100% of the surface areas is impractical due to physical obstructions and geometric interference.

Control rod drive housings and instrumentation penetrations restrict the examination of area C-D as required by Figure IWB-2500-13. The physical location of the drives and instrumentation penetration and the location of the vessel skirt attachment weld prohibit access to area C-D. Typically access ports are located in the vessel skirt. However the Oyster Creek skirt design as shown in Drawing 232-569 is fabricated from a continuous plate (item 569-07) with no access ports to the inside surfaces. Area A-B as shown in Figure IWB-2500-13 remains accessible for surface examination to the extent required by the Code.

In addition, Oyster Creek's nondestructive examination group pursued the use of an alternative ultrasonic examination method in lieu of the surface examination for area C-D. As a result of this review which considered the unique configuration of the Oyster Creek vessel skirt design, it was concluded that ultrasonics would not provide meaningful examination coverage.

Compliance with the applicable Code requirements may be accomplished by redesigning and modifying the reactor pressure vessel support skirt. The modification of the vessel support skirt would incur unnecessary radiological exposure and significant engineering and construction expense without a compensating increase in the level of quality and safety.

PROPOSED ALTERNATIVE PROVISIONS

As an alternative to the Code requirement to perform a surface examination of areas A-B and C-D AmerGen proposes to perform the following:

- Perform a surface examination of area A-B as required by Table IWB-2500-1, Category B-K
- Perform a VT-3 visual examination of the support skirt IWB boundary as shown in Figure IWB-2500-13 for any support member deformation.

PERIOD FOR WHICH RELIEF IS REQUESTED

This relief is for the fourth inspection interval at Oyster Creek Nuclear Generating Station, which is scheduled to end on October 14, 2012.

AmerGen Energy Company
Oyster Creek Nuclear Generating Station
Fourth 10-Year Interval
Request for Relief OC-02-03

COMPONENT IDENTIFICATION

Code Class:	Class 3
Reference:	ASME, Section XI, 1995 Edition, 1996 Addenda, Table IWD-2500-1
Examination Categories:	D-B
Item Numbers:	D2.20, D2.40, D2.60, and D2.80
Description:	Alternative requirements to the hydrostatic tests specified in Table IWD-2500-1
Component Numbers:	All Class 3 pressure retaining components

CODE REQUIREMENTS

ASME, Section XI 1995 Edition, 1996 Addenda, Table IWD-2500-1, Examination Category D-B, Items D2.20, D2.40, D2.60, D2.80 requires a system hydrostatic test, VT-2 visual examination, each inspection interval per the requirements of IWD-5222.

CODE REQUIREMENTS FROM WHICH AN ALTERNATIVE IS REQUESTED

An alternative is requested from performing the system hydrostatic tests required by Table IWD-2500-1, Examination Category D-B, Items D2.20, D2.40, D2.60, and D2.80.

BASIS FOR ALTERNATIVE

Pursuant to 10 CFR 50.55a(a)(3)(i), an alternative is requested on the basis that the proposed alternatives provide an acceptable level of quality and safety.

ASME Section XI Boiler and Pressure Vessel Code Committees and working groups have over recent years reviewed the requirements for hydrostatic testing. Code committee consensus acknowledged that the small increase in system pressure and limited challenge to pressure boundary integrity associated with a hydrostatic test versus the pressure for the system leakage test did not offset the hardship imposed by the performance of the hydrostatic test. As a result Code Case N-498-1 was published and endorsed by the NRC in Regulatory Guide 1.147. Section XI was later in the 1995 Edition, 1996 Addenda revised and the requirements of Code Case N-498-1 (i.e. system leakage tests replacing hydrostatic tests) were incorporated into Tables IWB-2500-1, Category B-P and IWC-2500-1, Category C-H. However, the pressure test requirements for Class 3 stated in N-498-1 and endorsed by the NRC were omitted in the Code revision as shown by Table IWD-2500-1, Category D-B that still requires a system hydrostatic test. The Section XI working Group Pressure Testing has recognized this omission and is taking action via unanimous approval of File ISI 00-11 (WG 98-0-4: S G99-12) to resolve this issue through Main Committee consideration under BPV LB 00-06.

The ASME Code has subsequently approved Code Case N-498-4 for use regarding pressure testing of Class 1, Class 2, and Class 3 Systems. Code Case N-498-1 allows for the alternative use of a system leakage test in lieu of hydrostatic testing for Class 3 systems. However, the Code Case does not require any hold time prior to the performance of the VT-2 examination. Contrary to the Case, Oyster Creek would impose a hold time as follows:

- For insulated systems, a 4 hour hold time would be required at system operating pressure and temperature.
- For non-insulated systems a hold time of 10 minutes would be required at system operating pressure and temperature.

PROPOSED ALTERNATIVE PROVISIONS

As an alternative to the Code requirements of for Class 3 systems of Table IWD-2500-1, Examination Category D-B, Items D2.20, D2.40, D2.60, and D2.80 AmerGen proposes to perform a system leakage test each inspection period in lieu of hydrostatic testing per Code Case N-498-4.

The following hold times for the pressure test would be imposed in addition to the requirements of Code Case N-498-4.

- For insulated systems, a 4 hour hold time would be required at system operating pressure and temperature.
- For non-insulated systems a hold time of 10 minutes would be required at system operating pressure and temperature.

PERIOD FOR WHICH RELIEF IS REQUESTED

This relief is for the fourth inspection interval at Oyster Creek Nuclear Generating Station which is scheduled to end on October 14, 2012.

AmerGen Energy Company
Oyster Creek Nuclear Generating Station
Fourth 10-Year Interval
Request for Relief OC-ALT VIII-1

COMPONENT IDENTIFICATION

Code Class:	All
Reference:	1995 Edition with 1996 Addenda, Appendix VII, VII-4240
Examination Categories:	All
Item Numbers:	All
Description:	Alternative Requirements to Appendix VII of Section XI (1995 Edition with the 1996 Addenda), VII-4240, "Annual Training"
Component Numbers:	All Components Subject to Ultrasonic Examination

CODE REQUIREMENTS

The 1995 Edition, with the 1996 Addenda of ASME Section XI, Subarticle VII-4240, requires a minimum of 10 hours annual training.

10 CFR 50.55a(b)(2)(xiv) requires that all personnel qualified for performing ultrasonic examinations in accordance with Appendix VIII shall receive 8 hours of annual hands-on training on specimens that contain cracks. The training must be completed no earlier than 6 months prior to performing ultrasonic examinations at a licensee's facility.

CODE REQUIREMENTS FROM WHICH AN ALTERNATIVE IS REQUESTED

An alternative is requested in accordance with 10 CFR 50.55a(a)(3)(i) to the provisions of Subarticle VII-4240, "Annual Training."

BASIS FOR ALTERNATIVE

10 CFR 50.55a was amended in the Federal Register (Volume 64, No. 183 dated September 22, 1999) to require the 1995 Edition, with the 1996 Addenda of Section XI for Appendix VIII qualification requirements. This also imposes the requirements of Appendix VII of the 1995 Edition, with the 1996 Addenda of Section XI. This includes Subarticle VII-4240, which requires a minimum of 10 hours of annual training.

10 CFR 50.55a(b)(2)(xiv) requires that all personnel qualified for performing ultrasonic examinations in accordance with Appendix VIII shall receive 8 hours of annual hands-on training on specimens that contain cracks. This training must be taken no earlier than 6 months prior to performing examinations at a licensee's facility.

Paragraph 2.4.1.1.1 in the Federal Register notice for the final rule (64 Fed. Reg. 51370, 1999) contained the following statement:

The NRC had determined that this requirement was inadequate for two reasons. The first reason was that the training does not require laboratory work and examination of flawed specimens. Signals can be difficult to interpret and, as detailed in the regulatory analysis for this rulemaking, experience and studies

indicate that the examiner must practice on a frequent basis to maintain the capability for proper interpretation. The second reason is related to the length of training and its frequency. Studies have shown that the examiner's capability begins to diminish within approximately 6 months if skills are not maintained. Thus, the NRC had determined that 10 hours of annual training is not sufficient practice to maintain skills, and that the examiner must practice on a more frequent basis to maintain proper skill level. The PDI program has adopted a requirement for 8 hours of training, but it is required to be hands-on practice. In addition, the training must be taken no earlier than 6 months prior to performing examinations at a licensee's facility. PDI believes that 8 hours will be acceptable relative to an examiner's abilities in this highly specialized skill area because personnel can gain knowledge of new developments, material failure modes, and other pertinent technical topics through other means. Thus, the NRC has decided to adopt in the Final Rule the PDI position on this matter. These changes are reflected in Sec. 10 CFR 50.55a(b)(2)(xiv) of the final rule.

Implementation of the requirements contained in ASME Section XI and 10 CFR 50.55a will result in redundant training programs. The use of the regulatory requirements in lieu of additional requirements will simplify record keeping, satisfy needs for maintaining skills, and provide an acceptable level of quality and safety.

PROPOSED ALTERNATIVE PROVISIONS

Annual ultrasonic training shall be conducted in accordance with 10 CFR 50.55a(b)(2)(xiv) in lieu of Section XI, Appendix VII, Subarticle VII-4240.

PERIOD FOR WHICH RELIEF IS REQUESTED

This alternative is for the fourth inspection interval at Oyster Creek Nuclear Generating Station, which is scheduled to end on October 14, 2012.

AmerGen Energy Company
Oyster Creek Nuclear Generating Station
Fourth 10-Year Interval
Request for Relief OC-02-04

COMPONENT IDENTIFICATION

Code Class:	Class MC
Reference:	ASME, Section XI, 1992 Edition, 1992 Addenda, Table IWE-2500-1
Examination Categories:	E-G
Item Numbers:	E8.10 and E.8.11
Description:	Alternative requirements to the visual (VT-1) and torque and tension testing requirements specified in Table IWE-2500-1
Component Numbers:	All Class MC bolting

CODE REQUIREMENTS

ASME Section XI, 1992 Edition, 1992 Addenda, Table IWE-2500-1, Examination Category E-G, Pressure Retaining Bolting, Item E8.10, requires that Class MC bolted connections be subject to a VT-1 visual examination.

ASME Section XI, 1992 Edition, 1992 Addenda, Table IWE-2500-1, Examination Category E-G, Pressure Retaining Bolting, Item E8.20, requires that Class MC bolted connections which have not been disassembled and reassembled during the inspection interval be subject to torque or tension testing.

CODE REQUIREMENTS FROM WHICH AN ALTERNATIVE IS REQUESTED

Relief is requested from the Code required VT-1 visual examinations specified in Table IWE-2500-1, Examination Category E-G, Item E8.10, and the Code required torque or tension testing specified in Table IWE-2500-1, Examination Category E-G, Item E8.20.

BASIS FOR ALTERNATIVE

Pursuant to 10 CFR 50.55a(a)(3)(ii), relief is requested for the Oyster Creek Nuclear Generating Station on the basis that compliance with the specified Code requirements would result in hardship or unusual difficulty without a compensating increase in the level of safety and quality.

10 CFR 50.55a was amended in the Federal Register to require the use of the 1992 Edition, 1992 Addenda, Section XI when performing containment inspections. Section XI requires a VT-1 visual examination of bolted connections, which was evaluated during subsequent rewrites of Subsection IWE. During the of Examination Category E-G examination criteria, the following factors were considered.

1) Containment surfaces, including bolted connections, are already subject to visual examination in accordance with Table IWE-2500-1, Examination Category E-A.
2) Bolted connections in containment are subject to the performance of 10 CFR 50, Appendix J testing.
3) Containment bolting is not subject to a known degradation mechanism, primarily because it is not in contact with a corrosive environment. There have been no problems associated with containment bolting identified in the industry.

4) More specifically, AmerGen performed the required IWE expedited examinations during the 1R18 Outage. **Identify results**

The conclusion reached by ASME Section XI was that Examination Category examinations on bolted connections were not warranted. In the commentary which accompanied the Subsection IWE rewrite, the following was written:

> "Pressure retaining bolting as a separate category has been deleted, and the examination requirements for pressure retaining bolting have been consolidated into Examination Category E-A. Examination of pressure retaining bolting does not require removal or disassembly, and only those exposed surfaces of the bolting materials need be examined."

The performance of VT-1 visual examinations on bolted connections in accordance with the 1992 Edition, 1992 Addenda represents a hardship with no compensating increase in the level of quality and safety. The reexamination of bolted connections that are already examined as part of Examination Category E-A, and tested in accordance with 10 CFR 50, Appendix J, unnecessarily increases the number of inservice examinations and the associated radiation exposure to personnel.

In addition to the VT-1 visual examination of bolted connections the 1992 Edition, 1992 Addenda, Section XI, Examination Category E-G, Item E8.20 requires that bolt torque or tension testing be performed on bolted connections that have not been disassembled and reassembled during the inspection interval. Determination of the torque or tension value would require that the bolting be un-torqued and then re-torqued or retensioned. The performance of a 10 CFR 50, Appendix J, Type B test proves that the bolt torque or tension remains adequate to provide a leak rate that is within acceptable limits. The torque or tension value of bolting only becomes an issue if the leak rate is excessive. Once a bolt is torqued or tensioned, it is not subject to dynamic loading that could cause it to experience significant change. Appendix J testing and visual inspection is adequate to demonstrate that the design function is met. Torque or tension testing is not required on any other ASME Section XI, Class 1,2, or 3 bolted connections or supports as part of the inservice inspection program.

As a result, Examination Category E-G has been eliminated from Table IWE-2500-1 in the 1998 Edition of ASME Section XI and bolting examinations incorporated into the examinations required to be performed in Examination Category E-A.

PROPOSED ALTERNATIVE PROVISIONS

The adequacy of Class MC containment pressure retaining bolted connections shall be verified by the following:

1) Exposed surfaces of bolted connections shall be visually examined during the conduct of examinations performed in accordance with the requirements of IWE-2500-1, Examination Category E-A, Containment Surfaces, using VT-3 certified inspectors. These examinations shall be evaluated in accordance with the requirements of IWE-3510. Deficiencies recorded during the visual examinations will subsequently be VT-1, visually examined and dispositioned by a responsible engineer.
2) Bolted connections shall meet the pressure test requirements of 10 CFR 50, Appendix J.

PERIOD FOR WHICH RELIEF IS REQUESTED

Relief is requested for the first inspection interval for containment inspections required by ASME B&PV Code Section XI, 1992 Edition, 1992 Addenda at Oyster Creek Nuclear Generating Station.