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Robert Walpole
Licensing Manager

July 21, 2009

NL-09-097

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

SUBJECT: Fourth Ten-Year Interval Inservice Inspection and Containment Inservice Inspection Program Plan
Indian Point Unit Number 3
Docket No. 50-286
License No. DPR-64

Dear Sir or Madam:

Entergy Nuclear Operations, Inc (Entergy) hereby submits the 4th Ten-Year Interval Inservice Inspection and Containment Inservice Inspection Program Plan for the period July 21, 2009 through July 20, 2019. This program plan establishes the Fourth Ten-Year Interval Inservice Inspection (ISI) including the Containment Inservice Inspection (CII) Program Plan for IP3, in accordance with the Code of Federal Regulations, Title 10, Part 50, Section 55a, "Codes and Standards" (10CFR50.55a).

As required by 10 CFR 50.55a(a)(2) and (g)(4), this program has been reviewed to conform with the 2001 Edition 2003 Addenda of ASME Section XI, except where relief from certain inspection requirements is sought in accordance with 10 CFR 50.55a(a)(3) and (g)(5).

The attached program plan does not address the piping examination requirements of ASME Section XI Examination Categories B-F, B-J, C-F-1, and C-F-2. Entergy is planning to develop a risk informed program for the examination of piping as an alternate to the piping requirements contained in IWB-2500 and IWC-2500. There are 2 refuel outages contained in the first period of the fourth interval: either the piping inspection scope required by IWB-2500 and IWC-2500 or the risk based scope approved by the NRC will be complete prior to completing the second outage of the first period. The delayed submittal of the risk informed portion of the ASME Section XI program was discussed and agreed to in a June 18, 2009 phone call with Mr. John Boska and other NRC staff.

This submittal is for NRC information and does not contain anything requiring NRC review and approval. There are no new commitments being made in this submittal.

A047
NRR

If you have any questions or require additional information, please contact Mr. Robert Walpole, Manager, Licensing at (914) 734-6710.

Sincerely,

RW/sp

Enclosure: 1. IP3 Fourth Ten-Year Interval Inservice Inspection (ISI) / Containment Inservice Inspection (CII) Program Plan

cc: Mr. John P. Boska, Senior Project Manager, NRC NRR DORL
Mr. Samuel J. Collins, Regional Administrator, NRC Region 1
NRC Resident Inspector, IP3
Mr. Francis J. Murray, President and CEO, NYSERDA
Mr. Paul Eddy, New York State Dept. of Public Service

Enclosure 1 TO NL-09-097

IP3 FOURTH TEN-YEAR INTERVAL INSERVICE INSPECTION (ISI) / CONTAINMENT INSERVICE INSPECTION (CII) PROGRAM PLAN

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NO. 3
DOCKET NO. 50-286

Entergy

Entergy Nuclear
Indian Point Energy Center Unit 3 (IP3) Power Station
450 Broadway, Buchanan, New York 10511

ASME B&PV CODE SECTION XI

IP3 FOURTH TEN-YEAR INTERVAL INSERVICE INSPECTION (ISI) / CONTAINMENT INSERVICE INSPECTION (CII) PROGRAM PLAN

July 21, 2009 – July 20, 2019

Commercial Service Date:	**August 30, 1976**
NRC Docket Number:	**50-286**
Facility Operating License:	**DPR-64**
Program Section:	**SEP-ISI-IP3-001**
Revision Number:	**0**
Document Date:	**July 21, 2009**

Entergy

INDIAN POINT UNIT 3

ENTERGY NUCLEAR NORTHEAST

Program Section Title:

IP3 FOURTH TEN-YEAR INTERVAL INSERVICE INSPECTION (ISI)/ CONTAINMENT INSERVICE INSPECTION (CII) PROGRAM PLAN

Revision 0

July 21, 2009

Applicable Site(s)

IP1 [ ] IP2 [ ] IP3 [X] JAF [ ] PLP [ ] PNPS [ ] VY [ ]

ANO1 [ ] ANO2 [ ] HQN [ ] GGNS [ ] RBS [ ] WF3 [ ]

Quality-Related: [X] Yes [ ] No

Prepared by: Robert J. Dolansky — Responsible Engineer — Date: 7/8/09

Checked by: Lina Cossio-Gonzalez — Programs Engineering Review — Date: 7-14-09

RE/RPE: Richard Drake — For IWE/IWL Portion Only — Date: 7/16/09

ANII: Alan Schiaffino — Authorized Nuclear In-Service Inspector (ANII) — Date: 7/17/09

Approved by: Nelson Azevedo — Supervisor or Manager – Programs Engineering — Date: 7-20-09

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REVISION SUMMARY SHEET

SECTION	EFFECTIVE PAGE(S)	REVISION	DATE
1.0	1 through 27	0	
2.0	28 through 57	0	

SUMMARY OF CHANGES

REVISION	SUMMARY OF CHANGES
0	N/A – initial revision.

SECTION 1.0

INTRODUCTION AND DESCRIPTION

1.0 INTRODUCTION AND PLAN DESCRIPTION

1.1 Introduction

This document establishes the Fourth Ten-Year Interval Inservice Inspection (ISI) Program Plan and the Containment Inservice Inspection (CII) Program Plan for Indian Point Nuclear Generating Station Unit 3 (IP3), in accordance with the Code of Federal Regulations, Title 10, Part 50, Section 55a, "Codes and Standards" (10CFR50.55a).

The IP3 Fourth Ten-Year Interval ISI Program Plan is compliant with ASME Section XI, Division 1, "Rules for Inspection and Testing of Components of Light Water Cooled Plants." The inspection and non-destructive examination of systems, structures, and components (SSCs) will be performed to the extent practical and possible as permitted by existing designs, equipment arrangements, available access, and radiological conditions. Relief requests, including supporting documentation, are also provided for those components where meeting the code requirement is impractical or unnecessarily burdensome. Throughout the Fourth Ten-Year Interval ISI Program Plan, reference is made to SEP-ISI-IP3-002, "IP3 Fourth Ten-Year Interval Inservice Inspection (ISI)/Containment Inservice Inspection (CII) Schedule and Bases Document". SEP-ISI-IP3-002 is in the course of preparation and will be complete before the examinations described in this Program are performed.

This Program Plan outlines the requirements for inspection of:

1.1.1 ISI – Pressure Retaining Components/Supports

- ISI Class 1, 2, and 3 (Quality Group A, B, and C) pressure retaining components and their supports in accordance with ASME Section XI, Subsections IWA, IWB, IWC, IWD, and IWF with the following exception:

  Examination Categories B-J, B-F, C-F-1, and C-F-2 are excluded from the scope of the initial ISI Program (Revision 0) for the fourth interval. These items are the subject of a planned relief request to be pursued with the NRC that would allow for a risk based program as an alternate to the requirements contained in IWB-2500 and IWC-2500. There are two refuel outages contained in the first period of the fourth interval; either the inspection scope required by IWB-2500 and IWC-2500 or the risk based scope approved by the NRC will be complete prior to completing the second outage of the first period.

- Snubber support hardware such as lugs, bolting, pins, clamps, and structural steel between the snubber pin and the pressure retaining item and between the snubber pin and the building steel are included in the support population and examined in accordance with Subsection IWF per this Program Section.

- Reactor vessel upper head penetrations in accordance with Code Case N-729-1, "Alternative Examination Requirements for PWR Reactor Vessel Upper Heads with Nozzles Having Pressure-Retaining Partial Penetration Welds", Section XI, Division 1 with conditions specified in 10CFR50.55a(g)(6)(ii)(D)(2) through (6).

- Class 1 pressure retaining welds containing Alloy 600/82/182 in accordance with Code Case N-722, "Additional Examinations for PWR Pressure Retaining Welds in Class 1 Components Fabricated with Alloy 600/82/182 Materials", Section XI Division 1 with conditions specified in 10CFR50.55a(g)(6)(ii)(E)(1) through (4).

1.1.2 CII – Containment ISI Pressure Boundary Liner/Concrete

- ISI Class MC pressure-retaining components (Primary Containment) and their integral attachments in accordance with ASME Section XI, Subsections IWA and IWE.

- ISI Class CC reinforced concrete containment and attachments in accordance with ASME Section XI, Subsections IWA and IWL.

1.1.3 Augmented Inspection Programs

- Augmented inspection programs are detailed in Section 1.8.

1.2 ISI Inspection Interval

1.2.1 ISI - IWA, IWB, IWC, IWD, & IWF Interval History

The commercial service date for IP3 was August 30, 1976. The table below summarizes the IP3 Interval dates.

IP3 Interval Dates Summary			
10-Year Inspection Interval	Interval Start Date	Interval End Date	Length of Interval
1	August 30, 1976	August 29, 1987	11 years, 0 months
2	August 30, 1986	July 20, 2000	*13 years, 11 months
3	July 21, 2000	July 20, 2009	**9 years, 0 months
4	July 21, 2009	***July 20, 2019	10 years, 0 months

*The Second Ten-Year Inspection Interval ISI program plan was originally approved for the effective dates from August 30, 1986 through August 29, 1996. ASME Boiler & Pressure Vessel Code, Section XI (1983 Edition, Summer 1983 Addenda) Paragraph IWA-2400(c), allows inspection interval extensions equivalent to the time that the unit has been out of service whenever there is an outage greater than six months. Thus, the second interval end date was re-scheduled from August 29, 1996 to July 20, 2000. These dates include the 1 year extension permitted by Section XI to coincide with a refueling outage.

**The third inspection interval was nine (9) years in duration, due to the extension of the second inspection interval by one (1) year (Reference IPN-99-051, dated 5/4/99).

***IP3's Fourth Ten-Year Interval ISI Program Plan and CII Plan will be effective from July 21, 2009, through and including July 20, 2019. It should be noted that the plant's current (original) operating license will expire on December 12, 2015. Entergy is in the process of a license renewal application. The end date of the fourth interval will be controlled by the ISI/CII Program Plan, commensurate with the Operating License Renewal Application.

1.2.2 CII – IWE/IWL Interval History

On September 9, 1996, 10CFR50.55a was amended to incorporate the requirements of ASME Section XI Code 1992 Edition through the 1992 Addenda of Subsections IWE and IWL, Containment Program Plan.

Subsection IWE contains the requirements for liners and penetrations of light-water cooled nuclear power plants and IWL contains the requirements for ISI of reinforced concrete containments. The rule at the time required licensees to incorporate the new requirements into their ISI programs and to complete examinations equal to the required First Period Inspections within five years (i.e., no later than September 9, 2001).

Subsection IWE requires that examinations be performed at the required inspection periods of 3, 7 and 10 calendar years of plant service within the interval. Therefore the First Period Examinations were completed by September 9, 2001 to meet 10CFR50.55a requirements. The IWE inspection periods were therefore:

Inspection Period	IWE Period Dates
1	Sep. 10, 1999 – July 20, 2003
2	July 21, 2003 – July 20, 2006
3	July 21, 2006 – July 20, 2009

Subsection IWL requires that examination of the entire concrete surface of containment be performed every five years. The first of these examinations was completed by July 20, 2001; the second inspection was completed in June 2005; and the third inspection was completed in July 2009. Subsection IWL-2421 does not apply to IP3.

1.2.3 Fourth Ten-Year Interval Schedule

The IP3 Fourth Ten-Year Interval ISI Program Plan and CII Plan will be effective from July 21, 2009 through July 20, 2019.

1.2.3.1 IWB, IWC, IWD, IWE, and IWF Inspection Schedules:

The inspection schedule for the fourth interval is divided into three ISI Periods such that approximately one third of the interval's inspections will be completed each period except for items that may be deferred until the end of the interval. The IWE inspection schedule is aligned with the IWB, IWC, IWD and IWF schedules except for IWE items that are required to be 100% inspected each period. The following table summarizes the period dates for the fourth inspection interval as defined by Inspection Program "B". In accordance with IWA-2430(d)(3), the first period has been extended by one year and the second period reduced by one year to coincide with outages. This does not alter the inspection interval. The inspection schedule for each ISI Period is provided in SEP-ISI-IP3-002.

IP3 Fourth Interval Inspection Periods Summary Dates				
Inspection Period	Period Start Date	Period End Date	Years of Plant Operation Within Period	Plant Refueling Outages within Period
1	July 21, 2009	July 20, 2013	4 years	RFO-16 (Spring 2011) RFO-17 (Spring 2013)
2	July 21, 2013	July 20, 2016	3 years	RFO-18 (Spring 2015)
3	July 21, 2016	July 20, 2019	3 years	RFO-19 (Spring 2017) RFO-20 (Spring 2019)

Changes to the stated Inspection Interval or Inspection Period dates, if deemed necessary, will be documented.

1.2.3.2 IWL Inspection Schedule

In accordance with the requirements of IWL-2410, the inspections required by IWL-2500-1, Examination Category L-A, are to be completed once every 5 years within the limitations specified in IWL-2410(b), (c), and (d).

1.2.4 Alignment of ISI and Containment ISI Intervals

An integral part of this Fourth Ten-Year Interval Program Plan is the merging of the IWE/IWL Containment Inservice Inspection (CII) Program Plan with the Inservice Inspection (ISI) Program Plan. This will facilitate one set of ASME Code requirements for both program plans.

The Second Ten-Year Interval for IWE/IWL Containment ISI inspections at IP3 will commence on July 21, 2009 concurrent with the start of the Fourth Ten-Year Interval Program Plan. Therefore, both the ISI and the CII Program Plans will be aligned with the Fourth Interval ISI Program schedule and ASME Code requirements.

1.3 IP3 Original Construction Codes of Record

The construction permit for IP3 was issued on August 13, 1969. At that time, the ASME Boiler and Pressure Vessel Code covered fabrication of only nuclear vessels. Piping, pumps, and valves were built primarily to the rules of USAS B31.1.0-1967, Power Piping.

1.3.1 ISI- Systems, Structures, and Components

The primary IP3 original Construction Codes for major equipment are listed below.

Component	Construction Code
Reactor Vessel, Pressurizer, Reactor Coolant Pumps, Boron Injection Tank	ASME Code, Section III, Class A. 1965

Component	Construction Code
Steam Generators- (Replacement, including the transition cone, lower shell, tubesheet, and channel head)	ASME Code, Section III, 1983 Edition, plus Summer 1984 Addenda
Other Pressure Vessels	ASME Boiler & Pressure Vessel Code, Section VIII, 1965
Piping Design – General Design Criteria	ASA Section B31.1 Pressure Piping Code 1967

1.3.1.1 **ISI Pre-service Inspections**

Westinghouse performed the pre-service inspection of IP3 in 1974 and 1975.

1.3.2 CII - Primary Containment Design

The reactor containment structure is a reinforced concrete vertical right cylinder with a flat base and hemispherical dome. A welded steel liner is attached to the inside face of the concrete shell to ensure a high degree of leak tightness. The design objective of the containment structure is to contain all radioactive material that might be released from the core following a loss-of-coolant accident. The structure serves as both a biological shield and a pressure container.

The flat concrete basemat is 9 ft. thick and has a liner plate located on top. The liner plate is covered with 3 ft. of concrete, which forms the floor of the containment and serves to carry internal equipment loads.

The cylinder consists of side walls measuring 148 ft. from the basemat to the spring line of the dome, and has an inside diameter of 135 ft. The side walls for the cylinder are 4 ft. 6 in. thick. A steel liner is attached to the inside face of the concrete shell to form a leak tight membrane.

The hemispherical dome is a 135 ft. diameter 3 ft. 6 in. thick shell that is lined with a liner plate. The inside radius of the dome is equal to the inside radius of the cylinder. The discontinuity that occurs at the springline due to the difference in thickness is on the outer surface. The original design of the containment preceded the issuance of ASME Section III, Division 2. As a result the reinforced concrete primary containment was designed and constructed to the requirements of the American Concrete Institute, Building Code Requirements for Reinforced Concrete, ACI 318-63.

1.3.2.1 **Containment ISI Initial Interval – Pre-service Inspections**

There were no regulatory requirements to implement Subsections IWE and IWL of ASME Section XI prior to IP3 commencing operations. However, in accordance with the requirements of 10CFR50.55a, the examinations performed during the First Period of the First Inspection Interval must serve the same purpose for operating plants as the pre-service examination specified for plants not yet in operation. The rule allowed five years for the implementation of the First Period Examinations, which were completed by September 9, 2001.

1.4 IP3 Fourth Ten-Year Interval ASME Code of Record

1.4.1 The regulations in 10CFR50.55a(g)(4) establish the effective ASME Code edition and addenda to be used by licensees for performing inservice inspections of components (including supports). Paragraph 50.55a(g)(4)(ii) requires the use of the latest edition and addenda that has been incorporated by 10CFR50.55a(b), one year prior to the beginning of each 120-month ISI interval. This is considered the Code of Record. The Code of Federal Regulation (CFR) in effect one year prior to the beginning of the fourth interval was published in September, 2005 as CFR70FR188. This CFR incorporated, by reference, the ASME Section XI, 2001 Edition including the 2002 and 2003 Addenda in paragraph (b)(2) with limits and conditions. Subsequently, CFR73FR52748 was published in September, 2008 requiring expedited implementation of Code Cases N-729-1 and N-722.

1.4.2 Based on the two referenced CFRs in 1.4.1, the IP3 Fourth Ten-Year Interval ISI Program Plan is based on the requirements of the 2001 Edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Section XI with the 2002 and 2003 Addenda with the limits and conditions contained in 10CFR50.55a(b)(2) and listed in SEP-ISI-IP3-002. Additionally, based on specific limits, earlier editions and addenda are also being used as described below.

1.4.2.1 The 1995 Edition with the 1997 Addenda of Section XI is being implemented for IWA-2240 (10CFR50.55a(b)(2)(xix)).

1.4.2.2 The 1998 Edition of Section XI is being implemented for Table IWB-2500-1, Examination Category B-D, Items B3.120 and B3.140 (10CFR50.55a(b)(2)(xxi)(A)).

1.4.2.3 The 2001 Edition (no addenda) of Section XI is being implemented for Appendix VIII and the supplements to Appendix VIII and Article I-3000 (10CFR50.55a(b)(2)(xxiv)).

1.4.3 ASME Code Cases N-729-1 and N-722 with the applicable limitations and modifications as identified in 10CFR50.55a(b)(2).

1.5 Inservice Inspection Program Plan Development

1.5.1 ISI/CII - Class 1, 2, and 3 (Quality Group A, B, and C), and Class MC and CC

The Fourth Ten-Year Interval ISI Program Plan for Quality Group A, B, and C systems and components (including their supports), was developed after giving consideration to the following documents and applicable relief requests:

- Code of Federal Regulations 10CFR50.55a
- ASME Boiler & Pressure Vessel Code Section V – 2001 Edition w/2002 & 2003 Addenda
- ASME Boiler & Pressure Vessel Code Section XI – 2001 Edition w/2002 & 2003 Addenda as modified by 10CFR50.55a(b)(2)
- United States Nuclear Regulatory Commission Regulatory Guides
  - Regulatory Guide 1.16, Rev. 4
  - Regulatory Guide 1.26, Rev. 3
  - Regulatory Guide 1.83, Rev. 1
  - Regulatory Guide 1.147 Latest Revision
- IP3 UFSAR
- IP3 Improved Tech. Specs.
- IP3 First Interval Ten-Year Inservice Inspection Program Plan
- IP3 Second Interval Ten-Year Inservice Inspection Program Plan
- IP3 Third Interval Ten-Year Inservice Inspection Program Plan
- IP3 First Ten-Year Containment Inservice Inspection Program Plan

1.5.2 Systems/Lines Exempt from Examination

Systems/lines within the ASME Section XI boundaries that are exempted from examination based on ASME Section XI are identified in SEP-ISI-IP3-002.

1.6 In-service Inspection Boundary Development

10CFR50.55(a) requires that systems and components be designed, constructed, fabricated, erected, tested, and inspected to quality standards commensurate with the importance of the safety function to be performed. To this end, the regulation continues to identify requirements related to defined "classes" of systems and components but, except for Class 1, does not specifically define the functional requirements for establishing classes or boundaries of these classes. Thus, in order to apply the in-service inspection (ISI) requirements of 10CFR50.55a to the systems and components installed at IP3, ISI class designations and boundaries have been defined and established.

Taking into consideration the fact that the CFR does not define components identified for Class 2 or 3 designations, the NRC issued Regulatory Guide 1.26 (Revision 2 dated June, 1975 and Revision 3 (unapproved)) that provide guidance for determining component classification. The guidance presented in these regulatory guides, as appropriate, was used in establishing component classification and boundaries. In those instances where the guidance conflicted with IP3 design or licensing basis, the IP3 design or licensing basis was used.

As part of an initiative to be consistent with Indian Point Unit 2 (IP2), the IP3 Section XI boundary drawings (ISI Flow Diagrams) are being revised to change the boundary designations from ISI Class 1, 2, and 3 to Quality Group A (ISI Class 1), B (ISI Class 2), and C (ISI Class 3). Until this effort is complete, some boundary drawings will identify the ASME Section XI boundaries as ISI Class 1, 2 or 3 and other drawings will identify the ASME Section XI boundaries as Quality Group A, B, or C. This is a change in designation only; there are no adjustments in the boundaries.

The drawings which provide details for examination of welds, components, and their supports and an index to the ASME Section XI boundary drawings are contained in SEP-ISI-IP3-002. Pursuant to 10CFR50.55a, the in-service inspection requirements of ASME Section XI have been assigned to these components within the constraints of existing plant design.

1.6.1 ISI Boundaries and Classification

For ISI Class 1 component(s) (Quality Group A), the requirements of Subsection IWB, Code Case N-729-1, and Code Case N-722 apply, for ISI Class 2 components (Quality Group B) the requirements of Subsection IWC apply, and for ISI Class 3 components (Quality Group C) the requirements of Subsection IWD apply. The requirements of IWF for component supports apply to all three ISI Classes (Quality Groups A, B, and C).

The ISI Flow Diagrams are marked with triangular shaped "flags" which include alpha characters designating Quality Group A, B, C, MC (IWE), CC (IWL), or black for non-nuclear safety class.

1.6.2 IWE/IWL Containment Boundaries and Classification

As stated above, Quality Group A, B and C piping systems shall be inspected in accordance with applicable subsections of Section XI. The interface boundary between the IWB, IWC, and IWD components and the containment systems are identified in the IPEC Repair and Replacement Program.

1.6.2.1 ISI Class MC (IWE)

ISI Class MC containment components consist of the containment structure and connecting penetrations, appurtenances and parts that form the containment leak tight boundary. The components included in the boundary are:

- Dome liner
- Wall liner
- Basemat liner
- Penetration sleeves
- Personnel air lock
- Equipment access hatch/personnel lock
- Fuel transfer tube

ISI Class MC containment components shall be inspected per the requirements of ASME Section XI, Subsection IWE Table IWE-2500-1 as modified by 10CFR50.55a, Code Cases, Technical Positions, and Relief Requests approved by the NRC.

1.6.2.2 ISI Class CC (IWL)

The components that make up the ISI Class CC boundary are:

- Concrete wall
- Concrete dome

- Concrete basemat

ISI Class CC containment components shall be inspected per the requirements of ASME Section XI, Subsection IWL Table IWL-2500-1 as modified by 10CFR50.55a, Code Cases, Technical Positions, and Relief Requests approved by the NRC.

The IP3 containment is a reinforced concrete structure and is not designed utilizing a post tensioning system. Therefore, the requirements of ASME Section XI, Subsection IWL that pertain to post tensioning systems do not apply.

1.6.3 Containment ISI (CII) Drawings

The CII drawings were created to graphically identify the components and define the boundaries. The drawings are designed to be used as an inspection tool to locate the components and verify the configuration during inspections.

An index of the CII Drawings is contained in SEP-ISI-IP3-002.

1.6.4 Piping Penetrating Containment Boundaries

1.6.4.1 Quality Group A, B, and C Piping and Components

Piping and components that penetrate containment, including their welded attachments, that are Quality Group A, B, or C based on their service function are examined and maintained in accordance with IWB, IWC and IWD, respectively.

1.6.4.2 Piping and Components other than Quality Group A, B, and C

Piping and components that penetrate containment, including their welded attachments, that are specifically excluded from classification in accordance with Regulatory Guide 1.26, Rev. 3 based on their service function, such as instrument air, station air, service air, etc., are inspected and maintained as 'ISI Class MC' (noted by triangular shape flags denoting quality group 'MC')*. Also, drawings with triangular shaped flags such as "E" are part of the MC designation for IWE components.

- The ISI MC boundary will apply to the first weld of the first containment isolation valve outside containment through the penetration to the first weld inside the containment. If there are two containment isolation valves the MC boundary ends after the second isolation valve. The MC boundary, as defined in the IWE section of the Code, will remain the same.

- Repair/Replacement shall be in accordance with Indian Point design specification and the construction code.

- Pressure test shall be in accordance with 10CFR50 Appendix J.

*Note Quality Group 'Class MC' designation is used for piping penetrations that are not classified Quality Group A, B, or C (Class 1, 2, or 3).

1.7 Inspection, Examination, and Testing Activities Not Controlled By this Plan

Although the following items may be contained within the ASME Section XI boundaries and may be subject to ASME Section XI requirements, they are not included in this Program Section. The inspection, examination, or testing activities described below are controlled and managed under IP3 Improved Technical Specifications (ITS), Technical Requirements Manual (TRM), or other applicable Entergy procedures as follows:

1.7.1 Steam Generator Tubing IWB-2500-1 Category B-Q Item No. B16.20 will be examined in accordance with the requirements of ITS Section 5.5.8.

1.7.2 System Pressure Tests for Class 1, 2, and 3 components will be scheduled and controlled in accordance with IP3 site procedures.

1.7.3 Inspection and testing of Snubbers will be scheduled and controlled in accordance with IP3 site procedures and TRM 3.7.C.

1.7.4 In-service Testing of Pumps and Valves will be performed and controlled in accordance with IP3 site procedures and ITS 5.5.7.

1.7.5 The ASME Section XI Repair Replacement Program will be implemented and maintained in accordance with site procedures.

1.8 Augmented Inspection Programs

Augmented examinations are those that are outside the scope of 10CFR50.55a(g), but are contained and managed by the ISI Program Plan for convenience of scheduling and implementation. These examinations may result from activities including, but not limited to, commitments made to the NRC outside the scope of 10CFR50.55a, internal commitments, License Renewal commitments, or industry initiatives. These examinations may use ASME Section XI techniques and procedures as defined in the commitment, however, the requirements of ASME Section XI, including reporting, do not apply. Current augmented examinations include:

1.8.1 Reactor Coolant Pump Flywheel Inspection Program

The Reactor Coolant Pump (RCP) Flywheel inspection is not part of ASME Section XI but is required by Section 5.5.6 of the ITS and the UFSAR. The flywheels are scheduled for examination under the Preventive Maintenance Program. The flywheels are inspected when an RCP motor is removed and sent out for refurbishment in order to meet the ITS and the UFSAR requirements. Entergy is not committed to USNRC Regulatory Guide 1.14 at IP3.

1.8.2 NEI Initiatives - Materials Reliability Program (MRP-139) for Reactor Vessel Dissimilar Metal Welds

EPRI has developed a program titled "Materials Reliability Program: Primary System Piping Butt Weld Inspection and Evaluation Guideline (MRP-139)," dated July 14, 2005, that identifies primary system dissimilar metal (DM) butt weld locations susceptible to primary water stress corrosion cracking (PWSCC) and developed approaches for inspection, re-inspection, mitigation, and flaw evaluation. This includes terminal ends, where most of the Alloy 82/182 welds are located. In accordance with MRP-139, guidance has been provided to inspect DM butt welds as in the Reactor Vessel Nozzle to Safe-end Welds. In this guidance, IP3 falls under the classification of "D","E","J", and "K", as defined in MRP-139. Volumetric examination requirements are in accordance with MRP-139, Section 5.1, and are scheduled in accordance with Table 6-1. The visual examinations required by MRP-139 are replaced with the visual examinations contained in Code Case N-722 as required by 10CFR50.55a

Entergy will comply with the criteria, with the exception of visual examinations, of MRP-139 for welds that are potentially susceptible to PWSCC. At IP3 this consists of eight (8) welds where piping (safe-ends) attach to the reactor pressure vessel nozzles.

1.8.3 Regenerative Heat Exchanger Welds

The chemical and volume control system at IP3 is not classified as a Class 2 system. However, components that support reactor coolant pump seal cooling, emergency boration, and reactor coolant system make-up, that are not exempt from examination per IWC-1220, will be volumetric and surface examined per code requirements as applicable. Based on these criteria, the regenerative heat exchanger would not be exempt and will be examined. Code Case 706 will be used.

1.9 Administrative Controls

1.9.1 This program is written and implemented as a Program Section meeting the requirements of EN-DC-174, "Program Sections". This Program Section will be maintained through revisions and Program Change Notices (PCN) in accordance with EN-DC-174.

1.9.2 This program will be maintained current to reflect applicable changes to plant configuration through the review process defined by EN-DC-115, Engineering Change Process".

1.9.3 Additions of items to the program resulting from changes to the plant configuration will be incorporated and scheduled for inspection or examination in accordance with IWB/IWC/IWD/IWE-2412 and IWF-2410.

1.9.4 Organizational and divisions of responsibilities for the management and implementation of the ISI Program are defined in EN-DC-120, "Engineering Code Programs".

1.9.5 In accordance with IWA-1400(c), the initial ISI Program Plan shall be provided to the NRC for "Information Only". PCNs are not required to be provided to the NRC.

1.9.6 The initial ISI Program Plan, revisions, and PCNs are subject to review by the Authorized Nuclear Inservice Inspector (ANII).

1.10 IDDEAL® Data-Management Program

IP3 ISI Components and their examination schedules are developed with the aid of the IDDEAL Software Suite®. The IDDEAL Software Suite® integrates information from the examination programs to facilitate ease and efficiency in organizing, scheduling and tracking of all inspection and examination work. The software is used as a tool in developing the ISI Program. This Program Section shall be used as the controlling entity for managing and implementing the ISI program.

1.11 Adoption and Use of ASME Section XI Code Cases

In accordance with ASME Section XI, IWA-2441(a), Code Cases to be used during a pre-service or in-service inspection shall be identified in the Inservice Inspection Plan. ASME Section XI Code Cases adopted for ISI and NDE activities are listed in Tables 1.11-1 and 1.11-2. In addition, other Code Cases as approved in Regulatory Guide 1.147, latest revision, may be used as required. Code Cases applicable to System Pressure Testing and Repair/Replacement Activities are addressed in their respective program documents and are not included in this Program. The use of Code Cases is in accordance with ASME Section XI, IWA-2440, 10CFR50.55a, and Regulatory Guide 1.147. As permitted by ASME Section XI, Regulatory Guide 1.147, and 10CFR50.55a, ASME Section XI Code Cases may be adopted and used as described below:

1.11.1 Adoption of Code Cases Approved for Use in Regulatory Guide 1.147

Code Cases that are approved for use in the latest revision of Regulatory Guide 1.147 may be included in the ISI program provided any identified limitations or modifications specified in the Regulatory Guide are also incorporated. Table 1.11-1 identifies the Code Cases that have been approved for use in Regulatory Guide 1.147 and are incorporated into the ISI program.

1.11.2 Adoption of Code Cases Not Approved in Regulatory Guide 1.147

Certain Code Cases that have been approved by the ASME Board of Nuclear Codes and Standards may not have been reviewed and approved by the NRC Staff for use and are not listed in Regulatory Guide 1.147. Use of such Code Cases may be requested in the form of a "Request for Alternative" in accordance with 10CFR50.55a(a)(3). Code Cases that have been requested in accordance with 10CFR50.55a(a)(3) may not be used until NRC approval has been obtained. Section 1.13 identifies the Code Cases that have been requested in accordance with 10CFR50.55a(a)(3).

1.11.3 Adoption of Code Cases Mandated by 10CFR50.55a

Code Cases required by rule in 10CFR50.55a are incorporated into the ISI Program and implemented at the specified schedule. Code Cases currently required by 10CFR50.55a are identified in Table 1.11-2.

1.11.4 Use of Annulled Code Cases

As permitted by Regulatory Guide 1.147, Code Cases that have been adopted for use in the current interval that are subsequently annulled by ASME may be used for the remainder of the interval.

1.11.5 Code Case Revisions

Initial adoption of a Code Case requires use of the latest revision of that Code Case listed in Regulatory Guide 1.147. However, if an adopted Code Case is later revised and approved by the NRC, then either the earlier or later revision may be used. An exception to this provision would be the inclusion of a limitation or condition on the use of the Code Case which is necessary to enhance safety.

Table 1.11-1
Code Cases Adopted by IP3 from Regulatory Guide 1.147

Code Case Number	Title	NRC Limitations
N-460	Alternative Examination Coverage for Class 1 and 2 Welds	None
N-526	Alternative Requirements for Successive Inspections of Class 1 and 2 Vessels	None
N-532-4	Repair/Replacement Activity Documentation Requirements and Inservice Summary Report Preparation and Submission	None
N-537	Location of Ultrasonic Depth-Sizing Flaws	None

Table 1.11-1
Code Cases Adopted by IP3 from Regulatory Guide 1.147

Code Case Number	Title	NRC Limitations
N-552	Alternative Methods - Qualification for Nozzle Inside Radius Section from the Outside Surface	To achieve consistency with the 10CFR50.55a rule change published September 22, 1999 (64 FR 51370), incorporating Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems," to Section XI, add the following to the specimen requirements: "At least 50 percent of the flaws in the demonstration test set must be cracks and the maximum misorientation must be demonstrated with cracks. Flaws in nozzles with bore diameters equal to or less than 4 inches may be notches." Add to detection criteria, "The number of false calls must not exceed three."
N-586-1	Alternative Additional Examination Requirements for Classes 1, 2, and 3 Piping, Components, and Supports	None
N-593	Alternative Examination Requirements for Steam Generator Nozzle to Vessel Welds	Essentially 100 percent (not less than 90 percent) of the examination volume A-B-C-D-E-F-G-H must be inspected.
N-613-1	Ultrasonic Examination of Penetration Nozzles in Vessels, Examination Category B-D, Item Nos. B3.10 and B3.90, Reactor Nozzle to Vessel Welds, Figs. IWB-2500-7(a), (b), and (c)	None
N-624	Successive Inspections	None

Table 1-11-1
Code Cases Adopted by IP3 from Regulatory Guide 1.147

Code Case Number	Title	NRC Limitations
N-639	Alternative Calibration Block Material	Chemical ranges of the calibration block may vary from the materials specification if (1) it is within the chemical range of the component specification to be inspected, and (2) the phase and grain shape are maintained in the same ranges produced by the thermal process required by the material specification.
N-648-1	Alternative Requirements for Inner Radius Examination of Class 1 Reactor Vessel Nozzles	In place of a UT examination, licensees may perform a visual examination with enhanced magnification that has a resolution sensitivity to detect a 1-mil width wire or crack, utilizing the allowable flaw length criteria of Table IWB-3512-1 with limiting assumptions on the flaw aspect ratio. The provisions of Table IWB-2500-1, Examination Category B-D, continue to apply except that, in place of examination volumes, the surfaces to be examined are the external surfaces shown in the figures applicable to this table (the external surface is from point M to point N in the figure).
N-685	Lighting Requirements for Surface Examination	None
N-695	Qualification Requirements for Dissimilar Metal Piping Welds	None
N-696	Qualification Requirements for Appendix VIII Piping Examinations Conducted from the Inside Surface	None

Table 1.11-1
Code Cases Adopted by IP3 from Regulatory Guide 1.147

Code Case Number	Title	NRC Limitations
N-700	Alternative Rules for Selection of Classes 1, 2, and 3 Vessel Welded Attachments for Examination	None
N-706	Alternative Examination Requirements of Table IWB-2500-1 and Table IWC-2500-1 for PWR Stainless Steel Residual and Regenerative Heat Exchangers	None

Table 1.11-2
Code Cases Required by 10CFR50.55a

Code Case Number	Title	Notes
N-722	Additional Examinations for PWR Pressure Retaining Welds in Class 1 Components Fabricated With Alloy 600/82/182 Materials	Implemented in the Pressure Test Program
N-729-1	Alternative Examination Requirements for PWR Reactor Vessel Upper Heads With Nozzles Having Pressure-Retaining Partial-Penetration Welds	Conditions specified in paragraphs (g)(6)(ii)(D)(*2*) through (6) of 10CFR50.55a

1.12 Technical Positions

Technical Positions are created for areas where the Code does not provide clear direction or areas where regulation requires more attention to a specific area. Technical Position papers used as bases for the ISI program are listed in Table 1.12-1.

Table 1.12-1
Technical Position Papers

Document Number	Title	Notes
	None at this time	

1.13 Relief Requests

Throughout this program, the term "relief request" is used interchangeably referring to submittals to the NRC requesting permission to deviate from either an ASME Section XI requirement, a 10CFR50.55a rule, or to use provisions from Editions or Addenda of Section XI not approved by the NRC as referenced in 10CFR50.55a(b). However, when communicating with the NRC and in written requests to deviate, the terms as defined below must be used for clarity and to satisfy 10CFR50.55a. Submittals to the NRC must clearly identify which of the below rules are being used to request the deviation.

Table 1.13-1 contains an index of Relief Requests written in accordance with 10CFR50.55a(a)(3) and (g)(5). The applicable Entergy submittal and NRC Safety Evaluation Report (SER) correspondence numbers are also included for each request.

Only requests associated with the ISI program and the supporting nondestructive examination requirements are listed in Table 1.13-1. Copies of these requests are located in SEP-ISI-IP3-002. Requests applicable to System Pressure Testing and Repair/Replacement Activities are identified in their respective program documents.

1.13.1 Request for Alternatives

When seeking an alternative to the rules contained in 10CFR50.55a(c), (d), (e), (f), (g), or (h) the request is submitted under the provision of 10CFR50.55a(3). Once approved by the Director, Office of Nuclear Reactor Regulation, the alternative may be incorporated into the ISI program. These types of requests are typically used to request use of Code Cases, Code Edition, or Addenda not yet approved by the NRC. Request for Alternatives must be approved by the NRC prior to their implementation or use. Within the provisions of 10CFR50.55a(3) there are two specific methods of submittal:

1.13.1.1 10CFR50.55a(a)(3)(i) allows alternatives when authorized by the NRC, if the proposed alternatives would provide an acceptable level of quality and safety. Requests submitted under these provisions are not required to demonstrate hardship or burden.

1.13.1.2 10CFR50.55a(a)(3)(ii) also allows alternatives when authorized by the NRC, if compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. When submitted under this provision, there must be evidence of unusual hardship or difficulty. Typically this hardship will be dose or excessive disassembly.

1.13.2 Relief Request Required Due to Impracticality

10CFR50.55(a)(g)(5)(iii) and (iv) allows relief to be requested in instances when a Code requirement is deemed impractical with (iv) being specific to examination requirements that are determined to be impractical. The provisions of these two paragraphs are typically used to address impracticalities like limited examination coverage. Under 10CFR50.55(a)(g)(5)(iv), relief requests for examination impracticalities must be provided to the NRC no later than 12 months after the end of the active 120-month interval.

In cases where the ASME Section XI requirements for inservice inspection are considered impractical, Entergy will notify the NRC and submit information to support the determination, as required by 10CFR50.55a(g)(5). The submittal of this information will be referred to as a Request for Relief.

1.13.3 Requests to use Later Edition and Addenda of ASME Section XI

On July 28, 2004, the NRC published Regulatory Issue Summary (RIS) 2004-12, "Clarification on Use of Later Editions and Addenda to ASME OM Code and Section XI". This RIS clarifies the NRC position on using Editions and Addenda of Section XI, in whole or in part, later than those specified in the ISI program. If the desired Edition or Addenda are referenced in 10CFR50.55a(b)(2), the request is submitted following the guidance of the RIS. These types of request are not required to demonstrate hardship, difficulty, or provide evidence of quality and safety. They do need to ensure that all related requirements are also used.

Table 1-13-1
Fourth Interval Relief Requests

Relief Request	Relief Request Description	Entergy Correspondence	NRC SER Correspondence	Modified
RR-3-43(I)	Extend the ISI Interval for Certain RPV Welds from 10 to 20 Years	NL-08-096	RA-09-024	N/A
IP3-ISI-RR-01	Request to use Code Case N-753 in Lieu of IWA-2321(a)	NL-09-087	Waiting NRC SER	N/A
IP3-ISI-RR-02	Use of Alternative Requirements for Weld Reference Systems (IWA-2600)	NL-09-087	Waiting NRC SER	N/A
IP3-ISI-RR-03	Request to use Code Case N-739-1 for Qualification of Personnel Performing Visual Inspections of Class CC Items and Post-Tensioning Systems	NL-09-087	Waiting NRC SER	N/A

1.14 Calibration Blocks

A detailed list of all ISI calibration blocks to be employed during the fourth interval is provided in SEP-ISI-IP3-002. Per the Electric Power Research Institute (EPRI) Performance Demonstration Initiative (PDI) procedures, calibration blocks fabricated to an Edition of Section XI earlier than the 2001 Edition with 2003 Addenda may be used in the fourth interval without reconciliation.

1.15 Limited Examinations

In the event that the examination volume or surface as defined in the ASME Code or Code Cases cannot be examined due to interference by another component or part geometry, then, in accordance with Code Case N-460, a reduction in examination volume or area is acceptable if the reduction is less than 10%. In the event that the reduction in examination volume or area is 10% or greater, a request for relief will be submitted. NRC Information Notice 98-42 provides additional guidance that all ASME Section XI examinations should meet the examination coverage criteria established in Code Case N-460. Therefore, the guidance included in NRC Information Notice 98-42 will be followed by Entergy when determining whether to prepare a relief request or apply the criteria of Code Case N-460 for examinations where less than 100% coverage is obtained. This does not apply to the bare metal visual examination required by Code Case N-729-1. When performing visual examinations to meet N-729-1, the requirements of N-729-1 shall be used for determining allowance for partial examination of the required surface.

SECTION 2.0

CODE COMPLIANCE INSERVICE INSPECTION PROGRAM SUMMARY

2.0 APPLICATION CRITERIA AND CODE COMPLIANCE

2.1 ASME Section XI

The following provides a summary of the application of ASME Code, Section XI, 2001 Edition through the 2003 Addenda for the IP3, Fourth Ten-Year Interval ISI Program Plan. The application and distribution of examinations for this interval is based upon utilizing Inspection Program B of Section XI.

The results of this application are summarized by ASME Category and Item Number and are contained within the IP3 Code Category Summary Table contained in this document. **This table only contains those ASME Item Numbers that are relevant to IP3.**

2.1.1 Examination Category B-A – Pressure Retaining Welds in Reactor Vessel

Reactor vessel examinations were scheduled to meet the 2001 Edition through the 2003 Addenda of the ASME Code, Section XI as required by 10CFR50.55a. Article IWB-2420 in the 2001 Edition through the 2003 Addenda of ASME Code, Section XI requires that the sequence of component examinations be repeated during each successive inspection interval, to the extent practical. Table IWB-2500-1, Examination Category B-A, Note (4) specifies at least 50% of the Shell to Flange Welds will be examined by the end of the first inspection period, however, Request for Alternative RR-3-43(I) was submitted to extend the inspection interval to 20 years for all reactor vessel welds.

Item Number B1.21, Reactor Vessel Circumferential Head Welds require all accessible length of the weld to be examined. Weld Summary No. 1-1300-8 is totally inaccessible due to CRDM penetrations, therefore two of the total three Reactor Vessel Circumferential Head Welds will be examined for 67%.

Request for Alternative RR-3-43(I) requires that all of the required Reactor Vessel Welds to be examined by the year 2015 for the third interval. Since the third interval was extended, these examinations are tracked in the fourth interval, but are credited for the third and will be performed in accordance with Appendix VIII of the ASME Section XI Code.

A flaw that required reexamination for three periods in accordance with IWB-2420(b) was discovered in the Reactor Vessel Head to Flange Weld. It was discovered in the first period of the third interval. This examination will complete the successive examinations if the flaw is essentially unchanged and therefore it will not be examined in accordance with Request for Alternative RR-3-43(I).

The selection of these welds for examination meets the requirements of Examination Category B-A Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI as modified by Request for Alternative RR-3-43(I).

2.1.2 Examination Category B-B - Pressure Retaining Welds In Vessels Other Than Reactor Vessels

The 2001 Edition through the 2003 Addenda of Section XI, Examination Category B-B requires the pressurizer and primary side of steam generators (S/G) be examined during the inspection interval. The examinations may be limited to one of a group of vessels with similar function.

PRESSURIZER

Section XI requires examination of both Shell to Head Welds and one foot of one intersecting Longitudinal Weld per head. Both of the Shell to Head Welds and Longitudinal Welds are selected meeting the 100% requirement.

STEAM GENERATORS

IP3 has four steam generators. Table IWB-2500-1, Category B-B, Note (1) allows the examination to be limited to one vessel among a group of vessels performing a similar function or 25% for IP3. There is one Tubesheet to Head Weld on each S/G. One of four Tubesheet to Head Welds is selected for examination, thus meeting the one vessel among a group of vessels performing a similar function or 25% requirement.

The selection of these welds for examination meets the requirements of Examination Category B-B Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI.

2.1.3 Examination Category B-D - Full Penetration Welds Of Nozzles In Vessels

This category applies to the reactor vessel, pressurizer, and steam generators.

REACTOR VESSEL

ASME Code, Section XI does not allow the deferral of these examinations, except for Nozzle to Reactor Vessel Welds. Table IWB-2500-1, Category B-D, Note (3) allows partial deferral if the examinations are conducted from inside the component and the Nozzle Weld is examined by straight beam UT from the nozzle bore. The examinations required to be conducted from the shell inside diameter may be performed at or near the end of the interval.

However, Request for Alternative RR-3-43(I) was submitted to extend the inspection interval to 20 years for these welds. All of the Reactor Vessel Shell Welds will be examined by the year 2015.

PRESSURIZER

The 2001 Edition through the 2003 Addenda no longer has a requirement to examine Pressurizer Inner Radii. However, 10CFR50.55a(b)(2)(xxi)(A) requires utilities to either apply the Volumetric Examination of the 1998 Edition or allows a visual examination with magnification that has a resolution sensitivity to detect a 1-mil width wire or crack. These will be examined volumetrically or with an enhanced visual as required by 10CFR50.55a(b)(2)(xxi)(A) depending on which method is determined to be prudent to IP3.

IP3 Pressurizer nozzles are integrally cast and therefore, contain no Item Number B3.110, nozzle to vessel welds

STEAM GENERATOR

The 2001 Edition through the 2003 Addenda no longer has a requirement to examine Steam Generator Inner Radii. However, 10CFR50.55a(b)(2)(xxi)(A) requires utilities to either apply the Volumetric Examination of the 1998 Edition or allows a visual examination with magnification that has a resolution sensitivity to detect a 1-mil width wire or crack. These will be examined volumetrically as required by 10CFR50.55a(b)(2)(xxi)(A).

IP3 Steam Generator nozzles are integrally cast and therefore, contain no Item Number B3.130, nozzle to vessel welds.

The selection of these welds for examination meets the requirements of Examination Category B-D Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI as modified by Request for Alternative RR-3-43(I) and 10CFR50.55a(b)(2)(xxi)(A).

2.1.4 Examination Category B-E - Pressure Retaining Partial Penetration Welds In Vessels

Examination Category B-E was removed from the Code in the 1992 Addenda. However, Code Case N-729-1 uses Examination Category B-E for its examination requirements. Code Case N-729-1 has been mandated by 10CFR50.55a. This Code Case requires examination of Reactor Vessel Upper Heads. Based on the susceptibility of materials, the Reactor Vessel Head will be visually examined every refueling outage and the Nozzles and Partial-Penetration Welds in the head will be volumetrically examined every refueling outage.

The selection of these welds for examination meets the requirements of Code Case N-729-1 Examination Category B-E Examination Requirements as mandated in 10CFR50.55a.

2.1.5 Examination Category B-F - Pressure Retaining Dissimilar Metal Welds In Vessel Nozzles

This category addresses Nozzle to Safe End Welds and Piping Welds.

Examination Category B-F is excluded from the scope of the initial ISI Program (Revision 0) for the fourth interval. These items are subject of a relief request to be pursued with the NRC that would allow for a risk based program as an alternate to the requirements contained in IWB-2500. There are two refuel outages contained in the first period of the fourth interval; either the inspection scope required by IWB-2500 or the risk based scope approved by the NRC will be complete prior to completing the second outage of the first period.

2.1.6 Examination Category B-G-1 - Pressure Retaining Bolting, Greater Than 2" In Diameter

Components with bolting greater than 2" in diameter include the reactor vessel and reactor coolant pumps. Examinations will be conducted as required in Table IWB-2500-1 in the 2001 Edition through the 2003 Addenda of Section XI. The Reactor Coolant Pump Bolting will only be examined if one of the reactor coolant pumps is disassembled. This is the same requirement as for Examination Category B-L-2. All other B-G-1 components are scheduled for examination.

During previous intervals piping, pump, and valve bolting examinations were scheduled by bolt. For the forth interval these examinations have been combined to one summary number that requires examination of all the bolting of a component.

The selection of these components for examination meets the requirements of Examination Category B-G-1 Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI.

2.1.7 Examination Category B-G-2 - Pressure Retaining Bolting, 2" And Less In Diameter

This category includes manway bolting, valve bolting, flange bolting in piping, and reactor coolant pump seal bolting. Examinations will be conducted as required in Table IWB-2500-1 in the 2001 Edition through the 2003 Addenda of Section XI. This bolting will only be examined if associated connections are disassembled.

For components other than piping, bolting examinations will be required only when the component is examined under Examination Category B-B, B-L-2, or B-M-2. IP3 has grouped B-G-2 bolting in accordance with components examined under Examination Category B-B, B-L-2, or B-M-2. This grouping is contained in the IDDEAL Software Suite®, ScheduleWorks® module in the "Program Type" field.

During previous intervals piping, pump, and valve bolting examinations were scheduled by bolt. For the fourth interval these examinations have been combined to one summary number that requires examination of all the bolting of a component.

During previous intervals Steam Generator and Pressurizer manway bolting examinations were also scheduled by bolt. For the fourth interval these examinations have been combined to one summary number for each manway that requires examination of all the bolting of the manway.

10CFR50.55a(b)(2)(xxi)(B) has added a limitation to the 2001 Edition through the 2003 Addenda of Section XI. It requires for Item B7.80, to follow the requirements of the 1995 Edition, if CRDM Bolting is reused. The examination requirement of the 1995 Edition of Section XI is a VT-1 visual examination of CRDM bolting each interval. The NRC condition only requires the VT-1 on bolting that is disassembled and reused.

The selection of these components for examination meets the requirements of Examination Category B-G-2 Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI as modified by 10CFR50.55a(b)(2)(xxi)(B).

2.1.8 Examination Category B-J - Pressure Retaining Welds In Piping

Examination Category B-J of the ASME Code Section XI, 2001 Edition through the 2003 Addenda requires examination of Class 1 piping welds.

Examination Category B-J is excluded from the scope of the initial ISI Program (Revision 0) for the fourth interval. These items are the subject of a planned relief request to be pursued with the NRC that would allow for a risk based program as an alternate to the requirements contained in IWB-2500. There are two refuel outages contained in the first period of the fourth interval; either the inspection scope required by IWB-2500 or the risk based scope approved by the NRC will be complete prior to completing the second outage of the first period.

2.1.9 Examination Category B-K – Welded Attachments For Vessels, Piping, Pumps, And Valves

Examination Category B-K of the ASME Code Section XI, 2001 Edition through the 2003 Addenda requires examination of integral attachments. For vessel attachments, Note (4) allows only one welded attachment of only one of the multiple vessels to be selected for examination for multiple vessels of similar design, function, and service. For single vessels, only one welded attachment shall be selected for examination. IP3 has one PZR Welded Attachment that is selected for examination.

For piping, pumps, and valves, inspection of 10% of the total population of Integral Welded Attachments is required. Ten Percent (10%) of all Piping Welded Attachments and 10% of all Pump Welded Attachments are selected for examination. IP3 does not have any Class 1 valve welded attachments.

The selection of these welds for examination meets the requirements of Examination Category B-K Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI.

2.1.10 Examination Categories B-L-1 And B-L-2 - Pressure Retaining Welds In Pump Casings, And Pump Casings

This category involves reactor coolant pumps and requires volumetric examination on Pump Casing Welds and visual examination of Pump Internals when disassembled. The reactor coolant pumps are the only Code Class 1 pumps.

B-L-1 requires examination of one pump in each group of pumps performing similar functions in the system. The three welds on one of the four Reactor Coolant Pumps are selected for examination meeting the 25% requirement.

B-L-2 requires examination of the pump interior of one pump in each group of pumps performing similar functions in the system. However, this examination is only required when a pump is dissembled for maintenance, repair, or volumetric examination. Scheduling ticklers(t) have been placed in the IDDEAL Software Suite®, ScheduleWorks® for Reactor Coolant Pumps, requiring examination if disassembled.

The selection of these welds for examination meets the requirements of Examination Categories B-L-1 and B-L-2 Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI.

2.1.11 Examination Categories B-M-1 And B-M-2 - Pressure Retaining Welds In Valve Bodies, And Valve Bodies

This category only involves reactor coolant, residual heat removal, and safety injection valves. Examinations will be conducted as required in Table IWB-2500-1. There are a total of 17 valves that fall into this examination category. IP3 has grouped these valves based on size, design, manufacturing method, and function into four groups of valves. This grouping is contained in the IDDEAL Software Suite®, ScheduleWorks® module in the "Program Type" field.

B-M-1 requires examination of one valve in each group of valves that are of the same size, constructural design, and manufacturing method, and that performs similar functions in the system. There are no Class 1 Valve Body Welds at IP3.

B-M-2 requires examination of the valve internals of one valve in each group of valves that are of the same size, constructural design, manufacturing method, and that performs similar functions in the system. However, this examination is only required when a valve is dissembled for maintenance, repair, or volumetric examination. No valve body internal surfaces have been selected. This requirement will be met during the repair replacement process.

The selection of these welds for examination meets the requirements of Examination Categories B-M-1 and B-M-2 Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI.

2.1.12 Examination Category B-N-1 - Interior of Reactor Vessel

These examinations will be conducted each inspection period. This meets the Examination Category B-N-1 Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI.

2.1.13 Examination Category B-N-2 - Welded Core Support Structures And Interior Attachments To Reactor Vessel

These examinations will be scheduled in the second period to coincide with the inspection of the reactor vessel. The selection of these welds for examination meets the requirements of Examination Category B-N-2 Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI.

2.1.14 Examination Category B-N-3 - Removable Core Support Structures

These examinations will be conducted during the second period to coincide with the inspection of the reactor vessel. The selection of these welds for examination meets the requirements of meets the Examination Category B-N-3 Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI.

2.1.15 Examination Category B-O - Pressure Retaining Welds In Control Rod Housing And Instrument Nozzle Housings

The ASME Code, Section XI, 2001 Edition through the 2003 Addenda requires volumetric or surface examination of 10% of peripheral Control Rod Drive Housings during the inspection interval. There are 34 peripheral Control Rod Drive Mechanisms (CRDMs) on the reactor vessel head. To meet the Code requirements, four CRDMs have been selected.

The selection of these components for examination meets the requirements of Examination Category B-O Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI.

2.1.16 Examination Category B-P - All Pressure Retaining Components

The pressure testing program at IP3 meets the requirements of ASME Code, Section XI, 2001 Edition through the 2003 Addenda for Class 1 systems. Details are contained in the pressure test program.

Code Case N-722 is being implemented under Examination Category B-P. IP3 has four hot leg connections that will be visually inspected each refueling outage and four cold leg connections that will be visually inspected once this interval.

The selection of these components for examination meets the requirements of Examination Category B-P Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI and the requirements of Code Case N-722 as mandated in 10CFR50.55a.

2.1.17 Examination Category B-Q - Steam Generator Tubing

The Steam Generator Tube inspection program at IP3 is governed by IP3 Technical Specifications.

2.1.18 Examination Category C-A - Pressure Retaining Welds In Pressure Vessels

This category applies to the steam generators, residual heat removal heat exchangers (RHR HX), and boron injection tank (BIT). Note 3 states that "In the case of multiple vessels of similar design, size, and service, the required examinations may be limited to one vessel or distributed among the vessels." All four S/Gs have three shell circumferential welds, one vessel head weld, and one tubesheet to shell weld. The two RHR HX have one shell circumferential weld and one vessel head weld. The BIT has two vessel head welds.

One S/G and one RHR HX will be examined. The S/G contains three shell circumferential vessel welds and the RHR HX has one. Therefore, four of 14 or 21% will be examined. One S/G, one RHR HX, and two BIT vessel head welds will be examined for four of eight or 50%. One of four S/G tubesheet to shell welds will be examined for one of four or 25%.

The selection of these welds for examination meets the requirements of Examination Category C-A Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI.

2.1.19 Examination Category C-B - Pressure Retaining Nozzle Welds In Vessels

This category applies to steam generators and RHR HX heat exchangers. Note (1) in Table IWC-2500-1, Category C-B, excludes manways and handholes. Note (3) requires that nozzles selected initially for examination shall be reexamined over the service life of the component. Note (5) allows that in the case of multiple vessels of similar design, size, and service, the required examinations may be limited to one vessel or distributed among the vessels. Both of the Vessel Nozzle Welds and Inner Radii on one S/G are selected for examination. Each RHR HX has 4 nozzles with reinforcing plates requiring four surface and ultrasonic examinations this interval and two VT-2 examinations each period on the telltale holes in the reinforcing plates.

The selection of these welds for examination meets the requirements of Examination Category C-B Examination Requirements in the 2001 Edition through the 2003 Addenda of Section XI.

2.1.20 Examination Category C-C - Welded Attachments For Vessels, Piping, Pumps, And Valves

Examination Category C-C of the ASME Code Section XI, 2001 Edition through the 2003 Addenda requires examination of integral attachments. For vessel attachments, Note (4) allows 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. For single vessels, only one welded attachment shall be selected for examination. IP3 has two Welded Attachments on each RHR HX and four welded attachments on the BIT. One of the four RHR HX Welded Attachments and one of the four BIT Welded Attachments are selected for examination or 25% of all Vessel Welded Attachments.

For piping, pumps, and valves, inspection of 10% of the total population of Integral Welded Attachments is required. Ten percent (10%) of all Piping Welded Attachments are selected for examination. IP3 does not have any Class 2 pump or valve welded attachments.

The selection of these welds for examination meets the requirements of Examination Category C-C Examination Requirements in the 2001 Edition through the 2003Addenda of Section XI.

2.1.21 Examination Category C-F-1- Pressure Retaining Welds In Austenitic Stainless Steel Or High Alloy Piping

Examination Category C-F-1 of the ASME Code Section XI, 2001 Edition through the 2003 Addenda requires examination Austenitic Class 2 piping welds.

Examination Category C-F-1 is excluded from the scope of the initial ISI Program (Revision 0) for the fourth interval. These items are the subject of a relief request to be pursued with the NRC that would allow for a risk based program as an alternate to the requirements contained in IWC-2500. There are two refuel outages contained in the first period of the fourth interval; either the inspection scope required by IWC-2500 or the risk based scope approved by the NRC will be complete prior to completing the second outage of the first period.

2.1.22 Examination Category C-F-2 - Pressure Retaining Welds In Carbon Or Low Alloy Steel Piping

Examination Category C-F-2 of the ASME Code Section XI, 2001 Edition through the 2003 Addenda requires examination Carbon or Low Alloy Steel Class 2 piping welds.

Examination Category C-F-2 is excluded from the scope of the initial ISI Program (Revision 0) for the fourth interval. These items are the subject of a planned relief request to be pursued with the NRC that would allow for a risk based program as an alternate to the requirements contained in IWC-2500. There are two refuel outages contained in the first period of the fourth interval; either the inspection scope required by IWC-2500 or the risk based scope approved by the NRC will be complete prior to completing the second outage of the first period.

2.1.23 Examination Category C-H - All Pressure Retaining Components

The pressure testing program at IP3 meets the requirements of ASME Code, Section XI, 2001 Edition through the 2003 Addenda for Class 2 systems. Details are contained in the pressure test program.

2.1.24 Examination Category D-A – Welded Attachments For Vessels, Piping, Pumps, And Valves

Examination Category D-A of the ASME Code Section XI, 2001 Edition through the 2003 Addenda requires examination of integral attachments. For Vessel Attachments, Note (3) allows for multiple vessels of similar design, function, and service only the welded attachment of one of the multiple vessels shall be selected for examination. For single vessels, only one welded attachment shall be selected for examination. IP3 has three multiple vessels and a single vessel with one integral attachment. One integral attachment is selected on one of the vessels for each group of vessels. In addition, one integral attachment on the single vessel is selected for examination. Four of the 11 vessel welded attachments are selected for examination or 36% of all vessel welded attachments.

For piping pumps and valves, inspection of 10% of the total population of Integral Welded Attachments is required. Ten percent (10%) of all Piping and Pump Welded Attachments are selected for examination. IP3 does not have any Class 3 valve welded attachments.

The selection of these welds for examination meets the requirements of Examination Category D-A Examination Requirements in the 2001 Edition through 2003 Addenda of Section XI.

2.1.25 Examination Category D-B – All Pressure Retaining Components

The pressure testing program at IP3 meets the requirements of ASME Code, Section XI, 2001 Edition through the 2003 Addenda for Class 3 systems. Details are contained in the pressure test program.

2.1.26 Examination Category E-A, Containment Surfaces

Examination Category E-A of the ASME Code Section XI, 2001 Edition through the 2003 Addenda requires examination of Class MC "Metallic Containment" pressure-retaining components and their integral attachments, as well as, the metallic shell and penetration liners of Class CC "Concrete Containment" pressure-retaining components and their integral attachments.

IP3 will examine 100% of the accessible inside surface area of the Containment Vessel. The IDDEAL Software Suite®, ScheduleWorks® module, is used to track 401 inspection areas and one complete containment roll-up inspection for a total of 402 inspections each period. The bolted connections are also scheduled for a VT-3 visual examination under the Item Number E1.11b during the interval to satisfy the requirements of 10CFR50.55a(b)(2)(ix)(G). IP3 does have areas that are considered inaccessible. These are contained in the IDDEAL Software Suite®, ScheduleWorks® module as inactive E1.11 components with component notes stating they are inaccessible.

10CFR50.55a(b)(2)(ix)(H) requires VT–3 examinations of containment bolted connections will be conducted whenever containment bolted connections are disassembled for any reason.

One hundred percent (100%) of the Moisture barrier will be visually examined each inspection period. In the IDDEAL Software Suite®, ScheduleWorks® module is used to track the 13 inspection areas and one complete moisture barrier roll-up inspection for a total of 14 inspections each period.

This meets the Examination Category E-A Examination Requirements in the 2001 Edition through 2003 Addenda of Section XI as modified by 10DFR 50.55a.

2.1.27 Examination Category F-A – Supports

Examination Category F-A of the ASME Code Section XI, 2001 Edition through the 2003 Addenda requires 25% of Class 1 Piping Supports, 15% of Class 2 Piping Supports, and 10% of Class 3 Piping Supports to be examined during the inspection 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. The supports have been separated by type as defined in Note (1) to Examination Category F-A. This type has been added to the Item Number to clearly identify each support by type. IP3 also has split out their snubber supports. Twenty-five percent (25%) of the Class 1 supports have been selected and are prorated by type and system. Fifteen percent (15%) of the Class 2 supports have been

selected and are prorated by type and system. Ten percent (10%) of the Class 3 supports have been selected and are prorated by type and system.

For supports, other than piping supports, the components have been scheduled as follows:

Note 3 requires only one component of multiple components of similar design, function, and service to be schedules for inspection. IP3 scheduled the following supports:

- one Pressurizer Support;
- one of four Reactor Coolant Pump Supports;
- one of four Steam Generator Supports;
- one of two RHR HX Supports;
- one Boron Injection Tank Support;
- one of two Residual Heat Removal Pump Supports;
- one of three Safety Injection Pump Supports;
- one of two RHR HX Supports;
- one Spent Fuel Pit Heat Exchanger Support;
- one of two Component Cooling Water Heat Exchangers Supports;
- one of five Recirculation Fan Cooler Supports;
- one of six Service Water Pump Supports;
- one of three Component Cooling Water Pump Supports;
- one of two Auxiliary Feedwater Pump Supports (Electric);
- one Auxiliary Feedwater Pump Supports (Turbine);
- one of two Spent Fuel Pump Supports;
- one of six Service Water Pump Strainer Supports

Seventeen of the forty-seven non piping supports are selected for examination or 40% of all non piping supports.

The selection of these components for examination meets the requirements of Examination Category F-A Examination Requirements in the ASME Code Section XI, 2001 Edition through the 2003 Addenda

2.1.28 Examination Category L-A, Concrete

Examination Category L-A of the ASME Code Section XI, 2001 Edition through the 2003 Addenda requires examination of the reinforced concrete portions of Class CC "Concrete Containment" pressure-retaining components. This inspection divides the containment into three areas. Inspections are conducted on the dome and the upper and lower sections of the cylinder.

IP3 last examined these areas in July 2009 and will examine all accessible surface area every 5 years, with exams scheduled in the second and third periods.

The selection of these components for examination meets the requirements Examination Category E-A Examination Requirements in the ASME Code Section XI, 2001 Edition through the 2003 Addenda of Section XI.

2.2 Augmented Programs

2.2.1 MRP- 139 Category D Welds

Pressurizer and Hot Leg Welds ≥ 4 inches of Non-Resistant Material that have not been mitigated by stress improvement (SI) have a MRP-139 requirement of 100% examination per period not to exceed 5 years for pressurizer welds and 100% examination every 5 years for hot leg locations (including surge line nozzles near the hot leg). IP3 has four welds that are Category D Hot Leg Welds and are selected for examination under the MRP Category D Augmented Program every 5 years.

The selection of these welds for examination meets the requirements Augmented Program MRP Category D Examination Requirements

2.2.2 MRP- 139 Category E Welds

Cold Leg Welds ≥ 4 inches of Non-Resistant Material that have not been mitigated by SI have a MRP-139 requirement of 100% examination each 6 years. IP3 has four welds that are Category E Welds. These welds are selected for examination under the MRP Category E Augmented Program.

The selection of these welds for examination meets the requirements Augmented Program MRP Category E Examination Requirements.

2.2.3 Regenerative Heat Exchanger Welds

The Regenerative Heat Exchanger is scheduled for examination in accordance with Class 2 Requirements. The requirements of Code Case N-706 will be followed for all vessel welds. The Regenerative Heat Exchanger has six Vessel Head Circumferential Welds and six Tubesheet to Shell Welds. Each of these welds will receive a VT-2 visual examination each inspection period.

The selection of these welds for examination meets the requirements Augmented Program Regenerative Heat Exchanger Welds examination requirements.

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
B-A[1]	**Pressure Retaining Welds in Reactor Vessel**									
B-A	B1.11	Reactor Vessel Circumferential Shell Welds	Volumetric	2	2	100%	All Welds	0	2[1]	0
B-A	B1.12	Reactor Vessel Longitudinal Shell Welds	Volumetric	9	9	100%	All Welds	0	9[1]	0
B-A	B1.21	Reactor Vessel Circumferential Head Welds	Volumetric	3	2	67%	Accessible Length of All Welds[2]	0	2[1]	0
B-A	B1.22	Reactor Vessel Meridional Head Welds	Volumetric	12	12	100%	Accessible Length of All Welds	0	12[1]	0
B-A	B1.30	Reactor Vessel Shell to Flange Weld	Volumetric	1	1	100%	Weld	0	1[1]	0
B-A	B1.40	Reactor Vessel Head to Flange Weld	Volumetric and Surface	1	1[3]	100%	Weld	1	0	0
		Category Total		**28**	**27**			**1**	**26[1]**	**0**
Notes for Cat. B-A		Note 1: NRC authorized the extension of the third 10-year interval RPV ISI during the current license period, with the next inspection for IP3 due by 2015 via letter number RA-09-024. Note 2: Summary No. 1-1300-8 inaccessible due to CRDM penetrations. Note 3: This weld contains a flaw that required reexamination for three periods in accordance with IWB-2420(b). The flaw was discovered in the first period of the third interval. This examination will complete the successive examinations if the flaw is essentially unchanged.								
B-B	**Pressure Retaining Welds in Vessels Other Than Reactor Vessels**									
B-B	B2.11	Pressurizer Shell-to-Head Welds Circumferential	Volumetric	2	2	100%	Both welds	1	0	1
B-B	B2.12	Pressurizer Shell to Head Welds Longitudinal	Volumetric	2	2	100%	1 ft (300 mm) of one weld per head	1	0	1

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
B-B	B2.40	Steam Generators (Primary Side) Tubesheet to Head Weld	Volumetric	4	1	25%	Weld[1]	0	1	0
			Category Total	**8**	**5**			**2**	**1**	**2**
Notes for Cat. B-B		Note 1: The examination may be limited to one vessel among the group of vessels performing a similar function (Ref. Table IWB-2500-1, Examination Category B-B, Note 1).								
B-D	**Full Penetration Welded Nozzles in Vessels**									
B-D[1]	B3.90	Reactor Vessel Nozzle to Vessel Welds	Volumetric	8	8	100%	Same as 1st Interval	0	8[1]	0
B-D[1]	B3.100	Reactor Vessel Nozzle Inside Radius Section	Volumetric	8	8	100%	Same as 1st Interval	0	8[1]	0
B-D	B3.120	Pressurizer Nozzle Inside Radius Section	Volumetric or visual	6	6	100%	All nozzles	0	0	6
B-D	B3.140	Steam Generators (Primary Side) Nozzle Inside Radius Section	Volumetric or visual	8	8	100%	All nozzles	4	0	4
			Category Total	**30**	**30**			**4**	**16**	**10**
Notes for Cat. B-D		Note 1: NRC authorized the extension of the third 10-year interval RPV ISI during the current license period, with the next inspection for IP3 due by 2015 via letter number RA-09-024.								
B-E	**PWR Reactor Pressure Vessel Upper Head[1]**									
B-E	B4.10	Reactor Vessel Head with UNS N0600 nozzles and UNS N06082 or UNS W86182 Nozzle partial Penetration Welds	Visual, VE	1	5[2]	100%	Every refueling outage	2	1	2

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
B-E	B4.20	Reactor Vessel Head UNS N0600 nozzles and UNS N06082 or UNS W86182 partial penetration welds in head	Vol &/or Sur	1	5(2)	100%	Every refueling outage	2	1	2
			Category Total	**2**	**10(2)**			**4**	**2**	**4**
Notes for Cat. B-E		Note 1: These examinations are in accordance with Code Case N-729-1 as required by 10CFR50.55a(g)(6)(B). Note 2: Examination of this item number is required each outage. Therefore the number required during the interval is five times the total number of components. This is also reflected in the category total.								
B-G-1	**Pressure Retaining Bolting, Greater Than 2 in. (50 mm) in Diameter**									
B-G-1	B6.10	Reactor Vessel Closure Head Nuts	Visual, VT-1	54	54	100%	Same as for 1st interval	18	18	18
B-G-1	B6.20	Reactor Vessel Closure Studs	Volumetric	54	54	100%	Same as for 1st interval	18	18	18
B-G-1	B6.40	Reactor Vessel Threads in Flange	Volumetric	54	54	100%	Same as for 1st interval	0	54	0
B-G-1	B6.50	Reactor Vessel Closure Washers, Bushings	Visual, VT-1	54	54	100%	Same as for 1st interval	18	18	18
B-G-1	B6.180	Pumps Bolts and Studs	Volumetric	4	0	0%	(1)(2)	0	0	0
B-G-1	B6.190	Pumps Flange Surface when connection disassembled	Visual, VT-1	4	0	0%	(1)(2)	0	0	0
B-G-1	B6.200	Pumps Nuts, Bushings, and Washers	Visual, VT-1	4	0	0%	(1)(2)	0	0	0
			Category Total	**228**	**216**			**54**	**108**	**54**
Notes for Cat. B-G-1		Note 1: Not Required unless disassembled. Note 2: For heat exchangers, piping, pumps, and valves, examinations are limited to components selection for examination under Examination Categories B-B, B-J, B-L-2, and B-M-2. (Ref. Table IWB-2500-1, Examination Category B-G-1, Note 3)								

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
B-G-2	**Pressure Retaining Bolting, 2in. (50 mm) and Less in Diameter**									
B-G-2	B7.20	Pressurizer Bolts, Studs, and Nuts	Visual, VT-1	1	0	0%	Same as for 1st interval[(1)(3)]	0	0	0
B-G-2	B7.30	Steam Generator Bolts, Studs, and Nuts	Visual, VT-1	8	0	0%	Same as for 1st interval[(1)(3)]	0	0	0
B-G-2	B7.50	Piping Bolts, Studs, and Nuts	Visual, VT-1	7	0	0%	Same as for 1st interval[(1)(2)(3)]	0	0	0
B-G-2	B7.60	Pumps Bolts, Studs, and Nuts	Visual, VT-1	4	0	0%	Same as for 1st interval [(1)(2)(3)(4)]	0	0	0
B-G-2	B7.70	Valves Bolts, Studs, and Nuts	Visual, VT-1	17	0	0%	Same as for 1st interval [(1)(2)(3)(5)]	0	0	0
B-G-2	B7.80	CRD Housing Bolts, Studs, and Nuts	Visual, VT-1	5	0	0%	Same as for 1st interval [(6)]	0	0	0
		Category Total		**38**	**0**			**0**	**0**	**0**
Notes for Cat. B-G-2		Note 1: Not required unless disassembled. Note 2: For heat exchangers, piping, pumps, and valves, examinations are limited to components selection for examination under Examination Categories B-B, B-J, B-L-2, and B-M-2 (Ref. Table IWB-2500-1, Examination Category B-G-2, Note 2). Note 3: Examination is only required once per interval. Note 4: Only one pump of each group of pumps is required as outlined in B-L-2. Note 5: Only one valve of each group of valves is required as outlined in B-M-2. Note 6: Examination is only required if disassembled and bolting is reused.									
B-K	**Welded Attachments for Vessels, Piping, Pumps, and Valves**									
B-K	B10.10	Pressure Vessels Welded Attachments	Surface	1	1	100%	Same as for 1st interval	0	0	1
B-K	B10.20	Piping Welded Attachments	Surface	6	1	10%	Same as for 1st interval	0	1	0
B-K	B10.30	Pumps Welded Attachments	Surface	12	2	10%	Same as for 1st interval	2	0	0

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
		Category Total		**19**	**4**			**2**	**1**	**1**
B-L-1	**Pressure Retaining Welds in Pump Casings**									
B-L-1	B12.10	Pumps Pump Casing Welds (B-L-1)	Visual, VT-1	12	3	25%	Same as for first interval[1] [2]	0	0	3
		Category Total		**12**	**3**			**0**	**0**	**3**
Notes for Cat. B-L-1	Note 1: Examination is limited to at least one pump in each group of pumps performing similar functions in the system. Note 2: There are four Reactor Coolant Pumps. Each pump has one Casing Weld; therefore, 3 of the 12 welds are required for 25%.									
B-L-2	**Pump Casings**									
B-L-2	B12.20	Pumps Pump Casing (B-L-2)	Visual, VT-3	4	0	0%	Same as for first interval[1] [2]	0	0	0
		Category Total		**4**	**0**			**0**	**0**	**0**
Notes for Cat. B-L-2	Note 1: Examination is limited to at least one pump in each group of pumps performing similar functions in the system. Note 2: Not required unless disassembled.									
B-M-2	**Valve Bodies**									
B-M-2	B12.50	Valve Body, Exceeding NPS 4 (DN 100) (B-M-2)	Visual, VT-3	17	0	0%	Same as for first interval [1][2]	0	0	0
		Category Total		**17**	**0**			**0**	**0**	**0**
Notes for Cat. B-M-2	Note 1: Examination is limited to at least one valve in each group of valves that are of the same size, constructural design, manufacturing method, and that perform similar functions in the system. Note 2: Not required unless disassembled.									
B-N-1	**Interior of Reactor Vessel**									

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
B-N-1	B13.10	Reactor Vessel, Vessel Interior (B-N-1)	Visual, VT-3	1	3(1)	100%	Each inspection period	1	1	1
			Category Total	**1**	**3(1)**			**1**	**1**	**1**
Notes for Cat. B-N-1	Note 1: Examination of this item number is required each period. Therefore the number required during the interval is three times the total number of components. This is also reflected in the category total.									
B-N-2	**Welded Core Support Structures and Interior Attachments to Reactor Vessels**									
B-N-2	B13.60	Reactor Vessel (PWR) Interior Attachments Beyond Beltline Region (B-N-2)	Visual, VT-3	1	1	100%	Same as for 1st interval	0	1	0
			Category Total	**1**	**1**			**0**	**1**	**0**
B-N-3	**Removable Core Support Structures**									
B-N-3	B13.70	Reactor Vessel (PWR) Core Support Structure (B-N-3)	Visual, VT-3	1	1	100%	Same as for 1st interval	0	1	0
			Category Total	**1**	**1**			**0**	**1**	**0**
B-O	**Pressure Retaining Welds in Control Rod Drive and Instrument Nozzle Housings**									
B-O	B14.20	Reactor Vessel (PWR) Welds in Control Rod Drive CRD Housing	Volumetric or surface	34	4	10%	10% peripheral CRD housings (1)	0	0	4
			Category Total	**34**	**4**			**0**	**0**	**4**
Notes for Cat. B-O	Note 1: There are 34 Peripheral CRDMs.									

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
B-P	**Class 1 PWR Components Containing Alloy 600/82/182[1]**									
B-P	B15.90	Hot Leg Nozzle–to-Pipe Connections	Visual, VE	4	20[2]	100%	Each refueling outage	8	4	8
B-P	B15.95	Cold Leg Nozzle–to-Pipe Connections	Visual, VE	4	4	100%	Once per interval	1	1	2
		Category Total		**8**	**16[2]**			**9**	**5**	**10**
Notes for Cat. B-P	Note 1: These examinations are in accordance with Code Case N-722 as required by 10CFR50.55a(g)(6)(B). Note 2: Examination of this item number is required each refueling outage. Therefore the number required during the interval is five times the total number of components. This is also reflected in the category total.									
C-A	**Pressure Retaining Welds in Pressure Vessels**									
C-A	C1.10	Pressure Vessels Shell Circumferential Welds	Volumetric	14	4	21%	Each inspection interval[1][2]	1	2	1
C-A	C1.20	Pressure Vessels Head Circumferential Welds	Volumetric	8	4	50%	Each inspection interval[1][3]	1	1	2
C-A	C1.30	Pressure Vessels Tubesheet-to-Shell Weld	Volumetric	4	1	25%	Each inspection interval[1][4]	0	0	1
		Category Total		**26**	**9**			**2**	**3**	**4**

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
Notes for Cat. C-A		Note 1: The examination may be limited to one vessel among the group of vessels of similar design, size, and function (Ref. Table IWC-2500-1, Examination Category C-A, Note 3). Note 2: There are three vessel shell welds on four S/Gs, and one vessel shell weld on two RHR HXs, therefore based on Note 1, 4 of 14 vessel shell welds are required to be examined or 21%. Note 3: There is one circumferential head weld on four S/Gs and two RHR HX and two on the BIT, therefore based on Note 1, 4 of the 8 head welds are required to be examined or 50%. Note 4: There is one tubesheet to shell weld on four S/Gs, therefore based on Note 1, 1 of the 4 tubesheet to shell welds are required to be examined for 25%.								
C-B	**Pressure Retaining Nozzle Welds in Vessels**									
C-B	C2.21	Nozzles Without Reinforcing Plate in Vessels > 1/2in. (13mm) Nominal Thickness Nozzle to Shell (Nozzle to Head or Nozzle to Nozzle) Weld	Surface and volumetric	8	2	25%	Each inspection interval[1][2]	0	0	2
C-B	C2.22	Nozzles Without Reinforcing Plate in Vessels > 1/2 in. (13mm) Nominal Thickness Nozzle Inside Radius Section	Volumetric	8	2	25%	Each inspection interval[1][3]	1	1	0
C-B	C2.31	Nozzles With Reinforcing Plate in Vessels > 1/2in. (13mm) Nominal Thickness Reinforcing Plate Welds to Nozzle and Vessel	Surface	4	2	50%	Each inspection interval[1][4]	1	0	1

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
C-B	C2.33	Nozzle to Shell (Nozzle to Head or Nozzle to Nozzle) Welds When Inside of Vessel Is Inaccessible	VT-2	4	6[6]	50%	Each inspection period[1][5]	2	2	2
		Category Total		**28**	**12[6]**			**4**	**3**	**5**
Notes for Cat. C-B		Note 1: The examination may be limited to one vessel among the group of vessels of similar design, size, and function (Ref. Table IWC-2500-1, Examination Category C-B, Note 4). Note 2: There are two nozzles on 4 S/Gs; therefore based on Note 1, 2 of the 8 nozzles are required to be examined or 25%. Note 3: There are two nozzle inner radii on 4 S/Gs; therefore based on Note 1, 2 of the 8 inner radii are required to be examined or 25%. Note 4: There are two nozzles on 2 RHR HXs; therefore based on Note 1, 2 of the 4 nozzles are required to be examined or 50%. Note 5: There are two nozzle inner radii on 2 RHR HXs; therefore based on Note 1, 2 of the 4 nozzles are required to be examined or 50%. Note 6: Examination of this item number is required each period. Therefore the number required during the interval is three times the total number of components. This is also reflected in the category total.								
C-C	**Welded Attachments for Vessels, Piping, Pumps, and Valves**									
C-C	C3.10	Pressure Vessels Welded Attachments	Surface	8	2	25%	Each identified occurrence and each inspection interval [1][2] [3]	1	0	1
C-C	C3.20	Piping Welded Attachments	Surface	132	14	10%	Each identified occurrence and each inspection interval [1][3]	2	7	5
		Category Total		**140**	**16**			**3**	**7**	**6**

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
Notes for Cat. C-C		Note 1: 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. For single vessels, only one welded attachment shall be selected for examination (Ref. Table IWC-2500-1, Examination Category C-C, Note 4). Note 2: There are two welded attachments on each RHR HXs and four welded attachments on the BIT, therefore 2 of the 8 welded attachments are required to be examined for 25%. Note 3: Examination is required whenever component support member deformation is identified (Ref. Table IWC-2500-1, Examination Category C-C, Note 6).								
D-A	**Welded Attachments for Vessels, Piping, Pumps, and Valves**									
D-A	D1.10	Pressure Vessels Welded Attachments	Visual, VT-1	11	4	36%	Each identified occurrence and each inspection interval[1][2][3]	0	2	2
D-A	D1.20	Piping Welded Attachments	Visual, VT-1	133	14	10%	Each identified occurrence and each inspection interval[3]	4	4	6
D-A	D1.30	Pumps Welded Attachments	Visual, VT-1	9	1	10%	Each identified occurrence and each inspection interval[3]	1	0	0
		Category Total		**153**	**19**			**5**	**6**	**8**
Notes for Cat. D-A		Note 1: For multiple vessels of similar design, function, and service, the welded attachments of only one of the multiple vessels shall be selected for examination. For single vessels, only one welded attachment shall be selected for examination (Ref. Table IWC-2500-1, Examination Category D-A, Note 3). Note 2: There are three groups of multiple vessels (two with two vessels and one with six vessels) and one single vessel, therefore, 4 of the 11 are required to be examined for 36%. Note 3: Examination is required whenever component support member deformation is identified (Ref. Table IWD-2500-1, Examination Category D-A, Note 4).								

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
E-A	**Containment Surfaces**									
E-A	E1.11	Containment Vessel Accessible Surface Areas	General Visual	402	1206(2)	100%	Each Inspection Period	402	402	402
E-A	E1.11b(1)	Bolted connections	VT-3	6	6(1)	100%	Each inspection interval	2	2	2
E-A	E1.30	Moisture Barriers	General Visual	14	42(2)	100%	Each Inspection Period	14	14	14
Category Total				**422**	**1254(2)**			**418**	**418**	**418**
Notes for Cat. E-A		Note 1: Item Number E1.11b is utilized to ensure compliance with the specific requirements of 10CFR50.55a(b)(2)(ix)(G) and (H) for bolting. Note 2: Examination of this item number is required each period. Therefore the number required during the interval is three times the total number of components. This is also reflected in the category total.								
F-A	**Supports**									
F-A	F1.10(S)	Class 1 Piping Supports - Snubbers	Visual, VT-3	13	3	(1)	Each inspection interval	1	1	1
F-A	F1.10A	Class 1 Piping Supports - One Directional	Visual, VT-3	3	1	(1)	Each inspection interval	0	1	0
F-A	F1.10B	Class 1 Piping Supports - Multi-directional	Visual, VT-3	77	20	(1)	Each inspection interval	4	7	9
F-A	F1.10C	Class 1 Piping Supports - Thermal Movement	Visual, VT-3	28	7	(1)	Each inspection interval	5	1	2

IP3 Code Category Summary										
Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
F-A	**F1.10**	**Total Class 1 Piping Supports**	**Visual, VT-3**	**121**	**31**	**25%**	**Each inspection interval**	**10**	**10**	**12**
F-A	F1.20(S)	Class 2 Piping Supports - Snubbers	Visual, VT-3	53	8	(1)	Each inspection interval	2	2	4
F-A	F1.20A	Class 2 Piping Supports - One Directional	Visual, VT-3	26	4	(1)	Each inspection interval	1	1	2
F-A	F1.20B	Class 2 Piping Supports - Multi-directional	Visual, VT-3	197	30	(1)	Each inspection interval	8	10	12
F-A	F1.20C	Class 2 Piping Supports - Thermal Movement	Visual, VT-3	66	10	(1)	Each inspection interval	4	4	2
F-A	**F1.20**	**Total Class 2 Piping Supports**	**Visual, VT-3**	**343**	**52**	**15%**	**Each inspection interval**	**15**	**17**	**20**
F-A	F1.30(S)	Class 3 Piping Supports - Snubbers	Visual, VT-3	6	1	(1)	Each inspection interval	1	0	0
F-A	F1.30A	Class 3 Piping Supports - One Directional	Visual, VT-3	72	7	(1)	Each inspection interval	2	3	2
F-A	F1.30B	Class 3 Piping Supports - Multi-directional	Visual, VT-3	575	58	(1)	Each inspection interval	14	23	21
F-A	F1.30C	Class 3 Piping Supports - Thermal Movement	Visual, VT-3	26	2	(1)	Each inspection interval	1	0	1

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
F-A	**F1.30**	**Class 3 Piping Supports**	**Visual, VT-3**	**679**	**68**	**10%**	**Each inspection interval**	**18**	**26**	**24**
F-A	**F1.40**	**Supports other than Piping Supports (Class 1,2,3, and MC)**	**Visual, VT-3**	**47**	**17**	**36%**	**Each inspection interval[2][3]**	**4**	**7**	**6**
		Category Total		**1623**	**234**			**72**	**86**	**76**
Notes for Cat. F-A		Note 1: 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 (Ref. Table IWF-2500-1, Examination Category F-A, Note 2). Note 2: 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 (Ref. Table IWF-2500-1, Examination Category F-A, Note 3). Note 3: 1 Pressurizer Support, 1 of 4 Reactor Coolant Pump Supports, 1 of 4 Steam Generator Supports, 1 of 2 RHR HX Supports, 1 BIT Support, 1 of 2 RHR Pump Supports, 1 of 3 SI Pump Supports, 1 of 2 RHR HX Supports, 1 Spent Fuel Pit Heat Exchanger Supports, 1 of 2 CCW Heat Exchangers Supports, 1 of 5 Recirculation Fan Cooler Supports, 1 of 6 Service Water Pump Supports, 1 of 3 CCW Pump Supports, 1 of 2 AFW Pump Supports (Electric), 1 AFW Pump Supports (Turbine), 1 of 2 Spent Fuel Pump Supports, 1 of 6 Service Water Pump Strainer Supports. 17 of the 47 non piping supports are selected for examination or 36% of all non piping supports.							
L-A	**Concrete**									
L-A	L1.11	All accessible surface areas	General Visual	3	6[1]	100%	IWL-2410	0	3	3
		Category Total		**3**	**6[1]**			**0**	**3**	**3**
Notes for Cat. L-A		Note 1: IWL-2410 requires 100% examination every 5 years. Therefore the number required during the interval is twice the total number of components. This is also reflected in the category total.								
MRP-139D		**Non Mitigated Hot Leg Welds of Non-Resistant Material**								
R-A	R1.20	MRP 139 Category D	Volumetric	4	8[1]	(1)	Every five years	4	0	4

IP3 Code Category Summary

Category	Item Number	Description	Exam Method	Number of Components in Item No.	Required to be Examined During Interval	Examination Percentage Required	Number to be Examined in Interval	Number to be Examined in First Period	Number to be Examined in Second Period	Number to be Examined in Third Period
		Category Total		**4**	**8**[1]			**4**	**0**	**4**
Notes for MRP-139D		Note 1: Hot Leg Welds >4 inches of Non-Resistant Material that have not been mitigated by SI have a MRP-139 requirement of 100% examination each 5 years. Therefore the number required during the interval is twice the total number of components. This is also reflected in the category total.								
MRP-139E		**Non Mitigated Cold Leg Welds of Non-Resistant Material**								
R-A	R1.20	MRP 139 Category E	Volumetric (MRP 139 Cat E)	4	8[1]	(1)	Every six years	4	0	4
		Category Total		**4**	**8**[1]	(1)		**4**	**0**	**4**
Notes for MRP-139E		Note 1: Cold Leg Welds >4 inches of Non-Resistant Material that have not been mitigated by SI have a MRP-139 requirement of 100% examination each 6 years. Therefore the number required during the interval is twice the total number of components. This is also reflected in the category total.								
		Regenerative Heat Exchanger Welds								
C-A	C1.20(A)	Pressure Vessels Head Circumferential Welds	VT-2[1]	6	18[2]	100%	Each inspection period[1]	6	6	6
C-A	C1.30(A)	Pressure Vessels Tubesheet to Shell Weld	VT-2[1]	6	18[2]	100%	Each inspection period[1]	6	6	6
		Category Total		**12**	**36**[2]			**12**	**12**	**12**
Notes for Regenerative Heat Exchanger Welds		Note 1: Code Case N-706. Note 2: Examination of this item number is required each period. Therefore the number required during the interval is three times the total number of components. This is also reflected in the category total.								