DETROIT EDISON COMPANY
2000 SECOND AVENUE
DETROIT, MICHIGAN 48226

INSERVICE INSPECTION-NONDESTRUCTIVE EXAMINATION (ISI-NDE) PROGRAM (PLAN) FOR FERMI 2 POWER PLANT DOCUMENT NO. ISI-NDE PROGRAM

FERMI 2 NUCLEAR OPERATIONS CENTER
6400 N. DIXIE HIGHWAY
NEWPORT, MICHIGAN 48166

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Prepared by: M.A. Brooks 8/13/99
M. A. Brooks /Date
NDE Level III

Reviewed by: R. M. Hambleton 8/13/99
R. M. Hambleton /Date
Lead ISI Engineer

Approved by: B. J. Sheffel 8/13/99
B. J. Sheffel /Date
Director Performance Engineering

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PART - A

INSERVICE INSPECTION-NONDESTRUCTIVE EXAMINATION (ISI-NDE) PROGRAM (PLAN) FOR PIPING, COMPONENTS, AND INTEGRAL ATTACHMENTS

1.0 Applicable Code

The Inservice Inspection Program (Plan) for Nondestructive Examination (NDE) of Class 1, 2 and 3 components is implemented in accordance with the requirements of Subsections IWA, IWB, IWC, IWD, and IWF Section XI, Division 1 of the ASME Boiler and Pressure Vessel Code, 1989 Edition. All references in this document (Part A) to Section XI, - the Code, Categories, Item Numbers, etc. - refer to the 1989 Edition with no Addenda unless otherwise noted. Containment inspections per subsection IWE are not included as part of this program.

2.0 Program Description

The NDE Program (Plan) developed herein will utilize Inspection Program B, (IWA-2420), Tables IWB-2412-1, IWC-2412-1, and IWD-2412-1 for the second 120 month inspection interval. Per 10CFR50.55a(g)(5)(iii), where the requirements of the governing Code Edition or Addenda are determined to be impractical, within the limitations of design, geometry and materials of construction of the components, specific relief requests have been written. These are referenced in the applicable NDE Program Tables and included in Section 4.0 of this program (Part A). If during the course of implementation the need for additional relief is identified, it will be requested at a later date.

The Second Ten-year Interval will begin on February 17, 2000 and is planned to include six refueling and inspection outages (reference ISI evaluation 98-005).

The extent of examination for ASME Class-2 pipe welds has been modified for the second ten-year interval as described in the 1989 Edition of ASME Section XI, Table IWB-2500-1, Category C-F. The selection of individual welds to be examined on each Class 2 system is based on the inspection philosophy described in Fermi UFSAR Section 5.2.8.8 along with the prorating methodology described in the 1989 Code (reference ISI Evaluation 99-053).

The systems or portions of systems subject to the examination requirements of the ISI-NDE Program for Fermi 2 and the associated Class 1, 2, and 3 boundaries are documented on ISI Classification Boundary Drawings. The ISI Classification Boundary Drawings are listed in Table A-5-5.1.

Section 5.0, Table A-5-5.2 also lists Fermi 2's Inservice Inspection Isometric Drawings which have been developed for all vessels, piping, pumps, and valves which require volumetric and/or surface examination by this program.

The system inservice inspection classifications, developed specifically to define the extent to which ASME Section XI requirements will be applied, differ somewhat from the ASME Section III design classifications. Primarily, these differences occur because systems, or portions of systems, were optionally upgraded in design. In addition, ISI classifications are limited to systems important to safety, which contain water, steam, or radioactive materials.

3.0 Exemptions

Certain components (or parts of components) and the associated supports are exempt from the examination requirements of ASME Section XI, Table IWB-2500-1, per provisions contained in the Code. This section lists those "Code Allowed Exemptions" as applicable to the Fermi 2 Inservice Inspection Program.

3.1 Class-1 Components exempt from volumetric and surface examination requirements of IWB-2500 of the Code:

Exemption EX-A1-1

ASME Section XI Code Paragraph: IWB-1220(a)

"Components that are connected to the reactor coolant system and part of the reactor coolant pressure boundary and that are of such size and shape so that upon postulated rupture the resulting flow of coolant from the reactor coolant system under normal plant operating conditions is within the capacity of makeup systems which are operable from on-site emergency power."

Justification:

The maximum size line break for Fermi that can be made up by the reactor coolant makeup system has been calculated to be 1.44 inches inside diameter for liquid carrying lines and 2.88 inches inside diameter for steam carrying lines.

Exemption EX-A1-2

ASME Section XI Code Paragraph: IWB-1220(b)(1) and (2)

"Piping of 1 inch nominal pipe size and smaller and components and their connections in piping of 1 inch nominal pipe size and smaller."

Exemption EX-A1-3

ASME Section XI Code Paragraph: IWB-1220(c)

"Reactor Vessel head connections and associated piping, 2 inches nominal pipe size and smaller, made inaccessible by control rod drive penetrations."

3.2 Class-2 Components exempt from the inservice examination requirements of IWC-2500 of the Code:

Exemption EX-A2-1

ASME Section XI Code Paragraph: IWC-1221(a), IWC-1222(a)

Vessels, piping, pumps, valves, and other components NPS 4 and smaller.

Exemption EX-A2-2

ASME Section XI Code Paragraph: IWC-1221(c), and IWC-1222(b)

Component connections NPS 4 and smaller (including nozzles, socket fittings, and other connections) in vessels, piping, pumps, valves, and other components of any size.

Exemption EX-A2-3

ASME Section XI Code Paragraph: IWC-1221(f), and IWC-1222(d)

Piping and other components of any size beyond the last shutoff valve in open-ended portions of systems that do not contain water during normal plant operating conditions.

Exemption EX-A2-4

ASME Section XI Code Paragraph: IWC-5222(d)

Open ended portions of discharge lines beyond the last shutoff valve in non-closed systems, demonstration of an open flow path test shall be performed in lieu of the system hydrostatic test."

Exemption EX-A2-5

ASME Section XI Code Paragraph: IWC-1222(d)

Vessels, piping, pumps, valves, other components, and component connections of any size in systems or portions of systems other than RHR, ECC, and CHR, that operate (when the system function is required) at a pressure equal to or less than 275 psig and at a temperature equal to or less than 200^0F.

3.3 Class-3 Components exempt from the inservice inspection requirements of IWD-2500 of the Code:

Exemption EX-A3-1

ASME Section XI Code Paragraph: IWD-1220.1

Integral attachments to supports and restraints to components that are 4 inches nominal pipe size and smaller within the system boundaries of examination categories D-A, D-B, and D-C of Table IWD-2500-1 shall be exempt from the visual examination VT-3.

Exemption EX-A3-2

ASME Section XI Code Paragraph: IWD-1220.2(a) and (b)

"Integral attachments of supports and restraints to components exceeding 4 inches nominal pipe size may be exempted from the visual examination VT-3 of Table IWD-2500-1 provided:

(a) The components are located in systems (or portions of system) whose function is not required in support of reactor residual heat removal, containment heat removal, and emergency core cooling; and

(b) The components operate at a pressure of 275 psig or less and at a temperature of 200 degrees F or less."

Exemption EX-A3-3

ASME Section XI Code Paragraph: IWD-5223(d)

For open ended portions of discharge lines beyond the last shutoff valve in nonclosed systems, confirmation of adequate flow during system operation shall be acceptable in lieu of system hydrostatic test.

Exemption EX-A3-4

ASME Section XI Code Paragraph: IWD-5223(e)

Open ended vent and drain lines from components extending beyond the last shutoff valve and open-ended safety of relief valve discharge lines shall be exempt from hydrostatic test.

4.0 Relief Requests

Relief Requests are included where specific requirements of ASME Section XI are determined to be impractical. Each Relief Request is written in accordance with the format guidelines provided in Section 4.1. Individual Relief Requests are included in Section 4.2. As noted in the INTRODUCTION, Section 4.2 is subject to change throughout the inspection interval. If examination requirements in this program plan are determined to be impractical during the course of the interval, additional or modified Relief Requests will be submitted in accordance with 10 CFR 50.55a (g) (5) (iii).

4.1 Relief Request Format

Each Relief Request will include the following sections:

4.1.1 **COMPONENT DESCRIPTION:** The component description will include:

- o A general description of the component(s) addressed by the Relief Request,
- o The applicable Plant Identification System (PIS) number(s) which uniquely identify the plant system and specific component(s) within the system, and
- o A quantity of components if the Relief Request covers more than ten (10) components.

4.1.2 **ASME CODE CLASS:** The ISI classification, Class 1, 2, 3, as identified on the ISI Classification Boundary Drawings will be listed.

4.1.3 **ASME SECTION XI REQUIREMENT:** The impractical ASME Section XI requirement(s) will be listed. To the extent possible, subparagraphs, individual footnotes, or specific Item Numbers will be cited.

4.1.4 **BASIS FOR RELIEF:** Information to support Detroit Edison's determination that the Code requirement is impractical will be provided. The following data will be provided, if applicable:

- A physical sketch if the component(s) are not accessible for examination.
- Detailed technical information (an engineering justification) supporting proposed alternate scope of examination, examination method, or acceptance standard.
- A description of the proposed alternative examination's impact on plant safety and justification of any change in the overall level of plant safety.
- A justification of any change in the overall level of plant safety if it is not possible to perform alternative examination(s).
- Reference to the regulatory basis paragraph.

4.1.5 **ALTERNATE EXAMINATION:** Any alternate examination(s) that are proposed will be identified. Both alternate examination(s) that are performed in lieu of the Section XI examination requirement(s) and alternate examination(s) that supplement partially completed Section XI examination requirement(s) will be identified. The description of the alternate examination(s) will include a statement describing the extent and frequency of examination, the acceptance standard, and whether deferral of inspection to the end of the interval is requested.

4.1.6 **APPLICABLE TIME PERIOD:** A statement identifying the time period during the inspection interval for which relief is requested will be included.

4.1.7 Processing and Implementation of NRC requests for relief is as follows:

Proposed Alternatives to requirements of ASME Section XI may only be used when authorized by the Director of the Office of Nuclear Reactor Regulation. The applicant shall demonstrate per 10CFR50.55a(a)(3) that:

(i) The proposed alternatives would provide an acceptable level of quality and safety - equivalent to the required examination	or	(ii) Compliance with the specified requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Furthermore, if the licensee determines that conformance with certain code requirements is impractical for is facility, the licensee shall notify the NRC as specified in 10CFR50.55a (a)(g)(5)(iii).

Impractical - would require a change in component design to permit the required examination

1. Prepare the relief request in accordance with Part 4.0 of the ISI-NDE Program in sufficient detail to demonstrate one of the above positions and process in accordance with Fermi 2 procedures.

2. Initiate a Licensing Change Request (LCR)

3. Initiate a Preliminary Evaluation (PE)

   Note: A relief request is a change to a procedure or assumption made in the UFSAR because the UFSAR states and assumes compliance with Section XI. The relief request is a change from that assumption. Detroit Edison does not perform the safety evaluation because a relief request requires NRC approval in accordance with the specific regulatory basis paragraph of 10CFR50.55a.

4. The Relief Request must be submitted to, reviewed by, and authorized by the Director of the Office of Nuclear Reactor Regulation based on licensee demonstration of the appropriate regulatory provision noted above, prior to its implementation.

4. Upon receipt of the NRC acceptance, complete the LCR and incorporate the relief requests into the ISI Program.

   Note: Where Code requirements are determined to be impractical because of component design, geometry, or materials of construction, NRC acceptance must be granted within twelve months of the expiration of the interval in which the requirement was determined to be impractical as specified in 10 CFR 50.55a(g)(5)(iii).

4.2 Relief Request(s)

The Relief Requests submitted for NRC approval with the second interval program are included in this section.

RELIEF REQUEST NUMBER	GENERAL DESCRIPTION
RR-A1	Class 1 Reactor Pressure Vessel Welds Resubmitted at end of first interval (NRC Letter 99-0038)

RELIEF REQUEST NUMBER	GENERAL DESCRIPTION
RR-A6	RPV Nozzle weld partial exam coverage because of configuration Resubmitted at end of first interval (NRC Letter 99-0041)
RR-A18	Use of ASME Code Case N-546 (Alternative Requirements for Qualification of VT examiners)
RR-A19	Alternative Pressure Test Requirements for HPCI
RR-A23	Limited Examination of Class 1 Piping Welds
RR-A25	Alternative Requirements for Examination of RPV Shell Circumferential Welds (BWRVIP-05), Submitted at the end of first interval (NRC Letter 99-0024)
RR-A26	Examination of Extension of Containment Welds – (ISI Evaluation 99-014)
RR-A27	Examination Method for Category B-G-1 Reactor Pressure Vessel Closure Head Nuts
RR-A28	IWA 5250(a)(2) Corrective Measures for Leakage at Bolted Connections
RR-A29	Sample Expansion Requirements for Austenitic Stainless Steel Welds
RR-A30	Application of Utility PDI Qualified Ultrasonic Examination Personnel and Procedures

SECOND INTERVAL RELIEF REQUEST
RR-A1

COMPONENT FUNCTION/DESCRIPTION:
Pressure Retaining Reactor Pressure Vessel (RPV) Shell Welds (See Table 1)

SYSTEM:
Reactor (B11)

ASME CODE CLASS:
Class 1

ASME SECTION XI REQUIREMENTS:
Subsection IWB, Table IWB 2500-1, Examination Category B-A, Item No.'s B1.10 through B1.40, require volumetric examination of RPV weld and base material regions described in figures IWB-2500-1 through 2500-3 for pressure retaining welds in the reactor pressure vessel each inspection interval.

BASIS FOR RELIEF:
Pursuant to 10 CFR 50.55a(g)(5)(iii) Detroit Edison is requesting relief from ASME Section XI requirements to examine essentially 100% of accessible Category B-A weld lengths because within the limits of RPV design it is impractical to do so. Detroit Edison believes that the alternatives specified provide an acceptable level of quality and safety.

Relief Request RR-A1 documented limitations based on both the installed ultrasonic examination system, which used pole tracks for scanning, and part geometry. During RF02 Fermi implemented the use of an automated examination system that uses a magnetic wheel scanning device which maximizes coverage to the extent possible using current technology. Limitations to automated scanning of RPV shell welds due to the examination system have been eliminated. Current limitations are based only on RPV configuration or interference from other components as described in the "Alternatives" section below.

Reactor Vessel Ultrasonic Examination techniques meet the requirements of ASME Section XI; ASME Section V, Article 4; and Regulatory Guide 1.150. Detroit Edison believes that the alternative examinations proposed satisfy the intent of the ASME Code within the limits of accessibility for examination inherent to the BWR design. Table 1 identifies the welds with limitations and the cause of the limitation (see also attached figures). The extent of examination is reported in accordance with ASME Section V.

ALTERNATIVES:
Welds 1-319A, 1-319C, 1-319E, & 1-319G

The four listed top head weld exams were examined for most of the weld length during the first interval. They are limited because of a lifting lug positioned on each weld. Because of the physical access limitations it is impractical to examine the full volume of these welds for their entire length.

The Fermi proposed alternative for the ASME Code exam performance is partial examination for these welds. For the weld volume that is partially scanned, the ultrasonic examination covers the most critical area at the inside surface of the head. The areas of highest stress on the outside surface in the area of the limitation (lifting lug attachment welds) receive a surface examination per Category B-H. The alternative of partial examination combined with the surface exam yields similar results to a full examination.

Because of the substantial coverage obtained by the partial ultrasonic examination and the surface examination of the interfering lug/welds, along with the low empirical probability of reactor vessel weld failure, Detroit Edison considers the proposed alternative examination to provide an acceptable level of quality and safety.

Inaccessible Bottom Head Welds
Welds 5-306 and 2-306A through 2-306G
The access restrictions caused by the CRD penetrations and RPV support skirt make it impractical to perform a meaningful ultrasonic examination of these welds with current technology. For the inaccessible RPV bottom head welds, the proposed alternatives include a combination ASME Section XI Code required leakage inspections and monitoring of drywell leakage during operation.

Reasonable assurance of structural integrity is maintained because the welds received volumetric and surface NDE to verify that no deleterious material or processing defects were present at the time of fabrication. The welds are physically located at the bottom of the reactor vessel, below the withdrawn control rod blades. There is also more than 170 inches of water from the bottom of the active fuel height to the weld location. This physical arrangement reduces the neutron fluence and the coincident material degrading impacts significantly, when compared to RPV beltline welds that are inspectable. The same CRD penetrations that prevent the examination of the welds would also serve to prevent rapid propagation of a large defect by providing a crack arrest point.

Because of the visual inspections (VT-2) and leakage monitoring performed, physical access limitations, reasonable assurance of structural integrity for these welds, and the low empirical probability of reactor vessel weld failure, Detroit Edison considers the proposed alternative to provide an acceptable level of quality and safety.

Weld 13-308

The RPV shell to flange weld exam is limited due to vessel flange configuration, which makes it impractical to examine the full volume of the weld. The Code allowed alternative exam of ASME Section V, Article 4, T441.5.1 (Longitudinal exam from the flange) was performed during RF06 but this exam was also limited because of the RPV stud holes. Even with this Code allowed alternative, it is not possible to obtain full volume coverage even when scanning is performed from both sides of the weld for 360 degrees.

The Fermi proposed alternative is a partial exam from the shell side combined with the longitudinal wave exam from the flange surface. As shown in Figure 3, the proposed alternative partial exam performed from the shell side provides significant coverage of the ID surface where flaws would be most likely to originate. A significant portion of full weld volume is also covered by the longitudinal exam from the flange surface. Based on physical limitations, the coverage achievable by the alternative examinations, and the low empirical probability of reactor vessel weld failure, Detroit Edison considers the proposed alternative examination to provide an acceptable level of quality and safety.

APPLICABLE TIME PERIOD:

Relief is requested for the second 10-year inspection interval.

RR-A1 Table 1

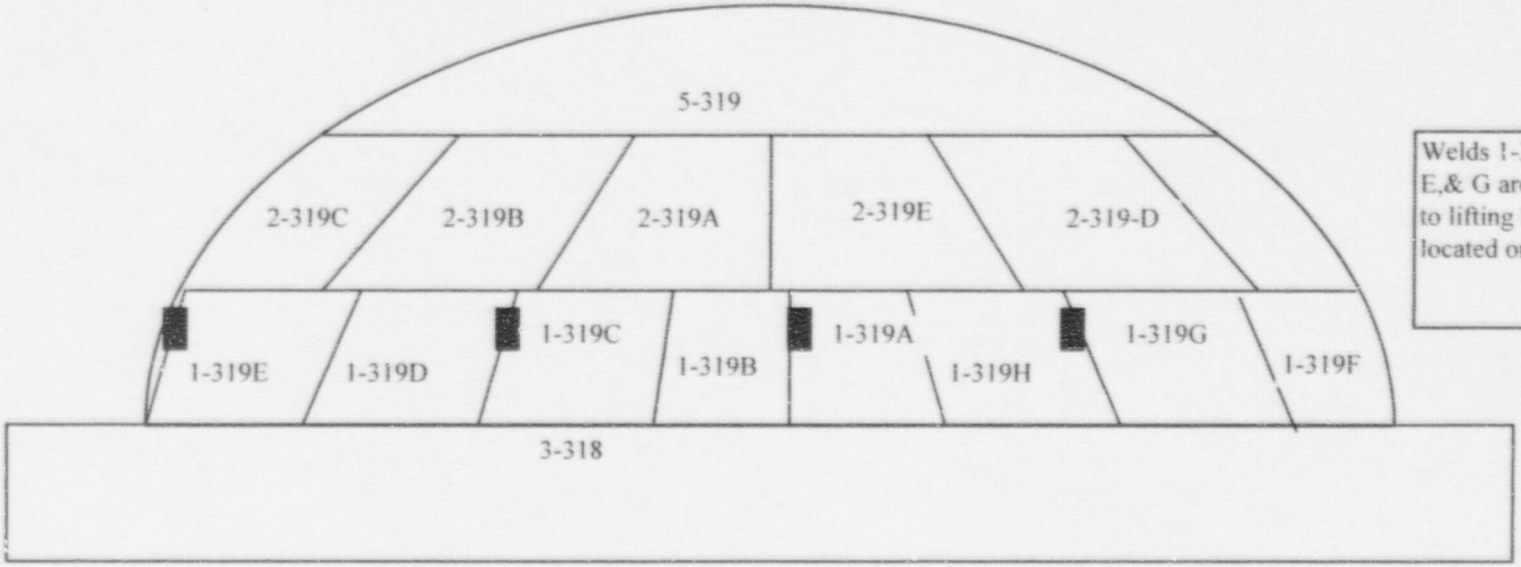
LIMITED EXAMINATIONS

Category /Item	Weld Identification	Percentage Complete	Limitation Description
B-A/B1.21 Head Circ. Weld	5-306	Inaccessible	Bottom head CRD Penetrations and Skirt Attachment Weld (Dollar Plate)
B-A/B1.22 Hd. Merid. Weld	1-319A	~73.6%	Top Head Lifting Lugs
B-A/B1.22 Hd. Merid. Weld	1-319C	~70%	Top Head Lifting Lugs
B-A/B1.22 Hd. Merid. Weld	1-319E	~72%	Top Head Lifting Lugs
B-A/B1.22 Hd. Merid. Weld	1-319G	~71.3%	Top Head Lifting Lugs
B-A/B1.22 Hd. Merid. Weld	2-306A	Inaccessible	Bottom head CRD Penetrations and Skirt Attachment Weld
B-A/B1.22 Hd. Merid. Weld	2-306B	Inaccessible	Bottom head CRD Penetrations and Skirt Attachment Weld
B-A/B1.22 Hd. Merid. Weld	2-306C	Inaccessible	Bottom head CRD Penetrations and Skirt Attachment Weld
B-A/B1.22 Hd. Merid. Weld	2-306D	Inaccessible	Bottom head CRD Penetrations and Skirt Attachment Weld
B-A/B1.22 Hd. Merid. Weld	2-306E	Inaccessible	Bottom head CRD Penetrations and Skirt Attachment Weld
B-A/B1.22 Hd. Merid. Weld	2-306F	Inaccessible	Bottom head CRD Penetrations and Skirt Attachment Weld
B-A/B1.22 Hd. Merid. Weld	2-306G	Inaccessible	Bottom head CRD Penetrations and Skirt Attachment Weld
B-A/B1.30 Shell to Flange	13-308	54%	RPV Flange Configuration (coverage augmented by scan from flange seal surface)

FERMI 2 ULTRASONIC SCAN COVERAGE LIMITATIONS

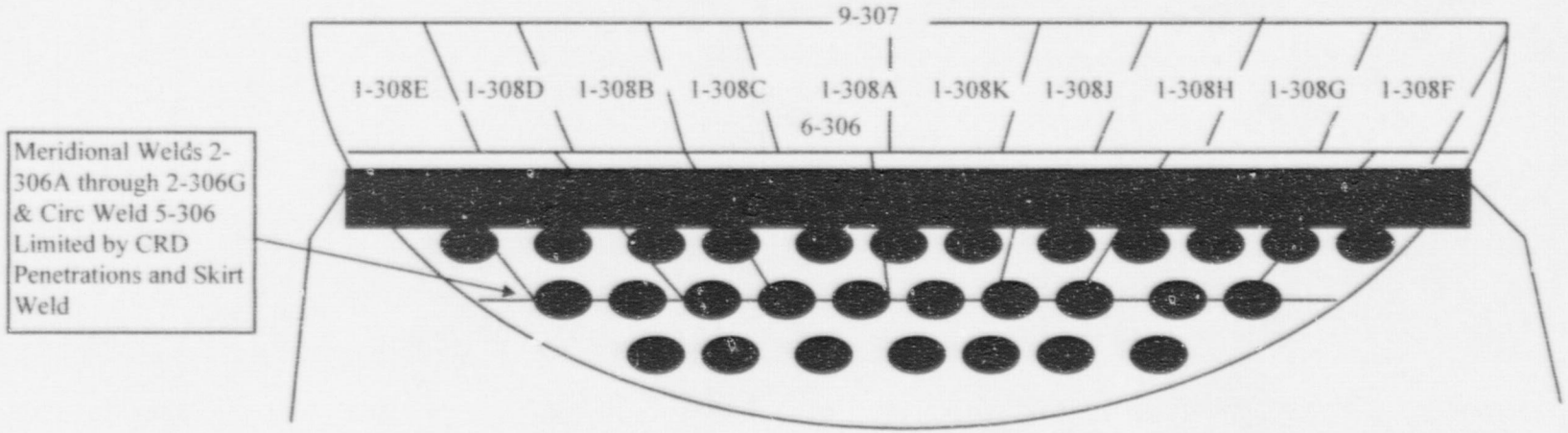
RR-A1 Figure 1

Top Head Weld Layout



Welds 1-319 A, C, E,& G are limited due to lifting lugs being located on the welds

Bottom Head Weld Layout



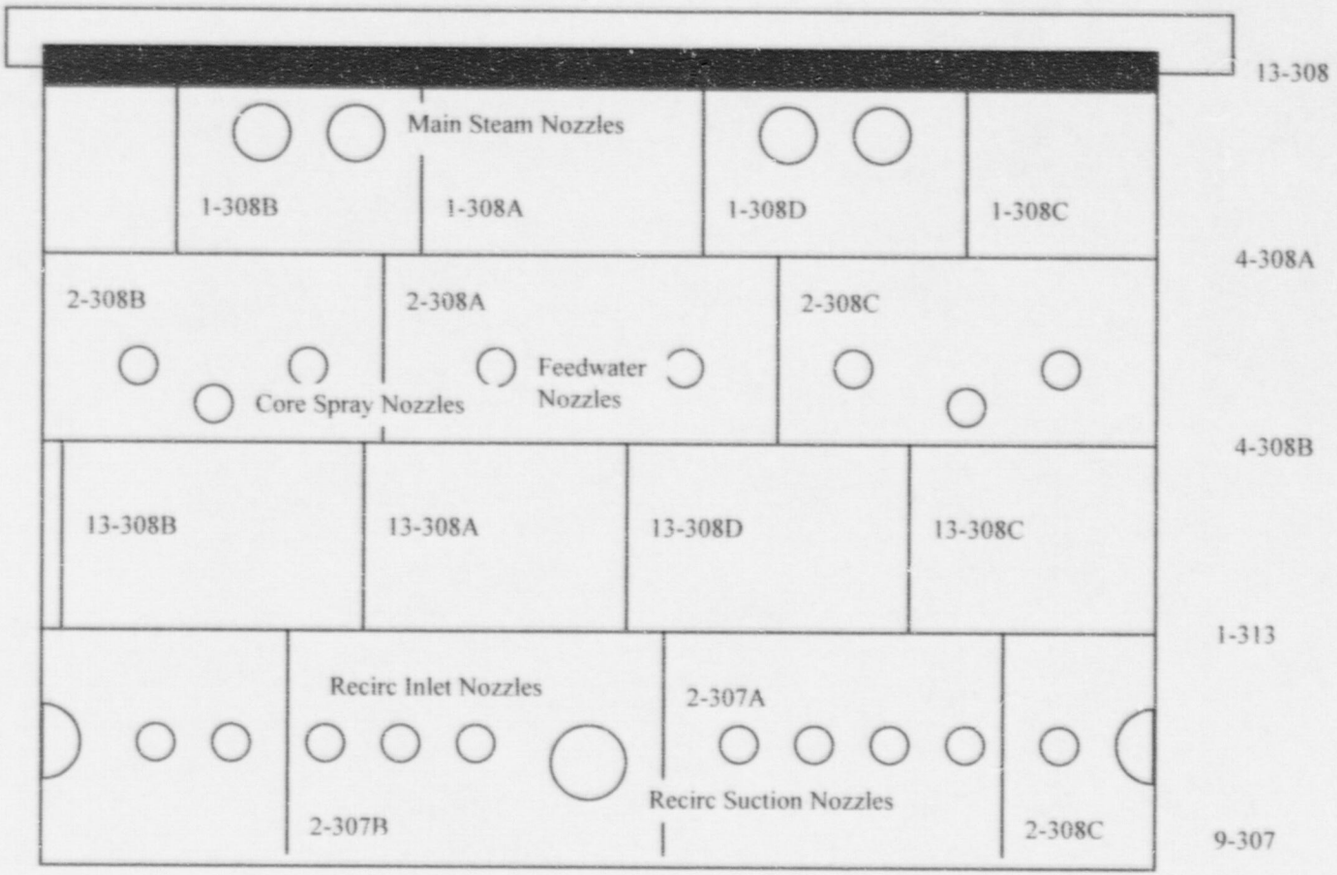
Meridional Welds 2-306A through 2-306G & Circ Weld 5-306 Limited by CRD Penetrations and Skirt Weld

FERMI 2 ULTRASONIC SCAN COVERAGE LIMITATIONS

RR-A1 Figure 2

Shell Weld Layout

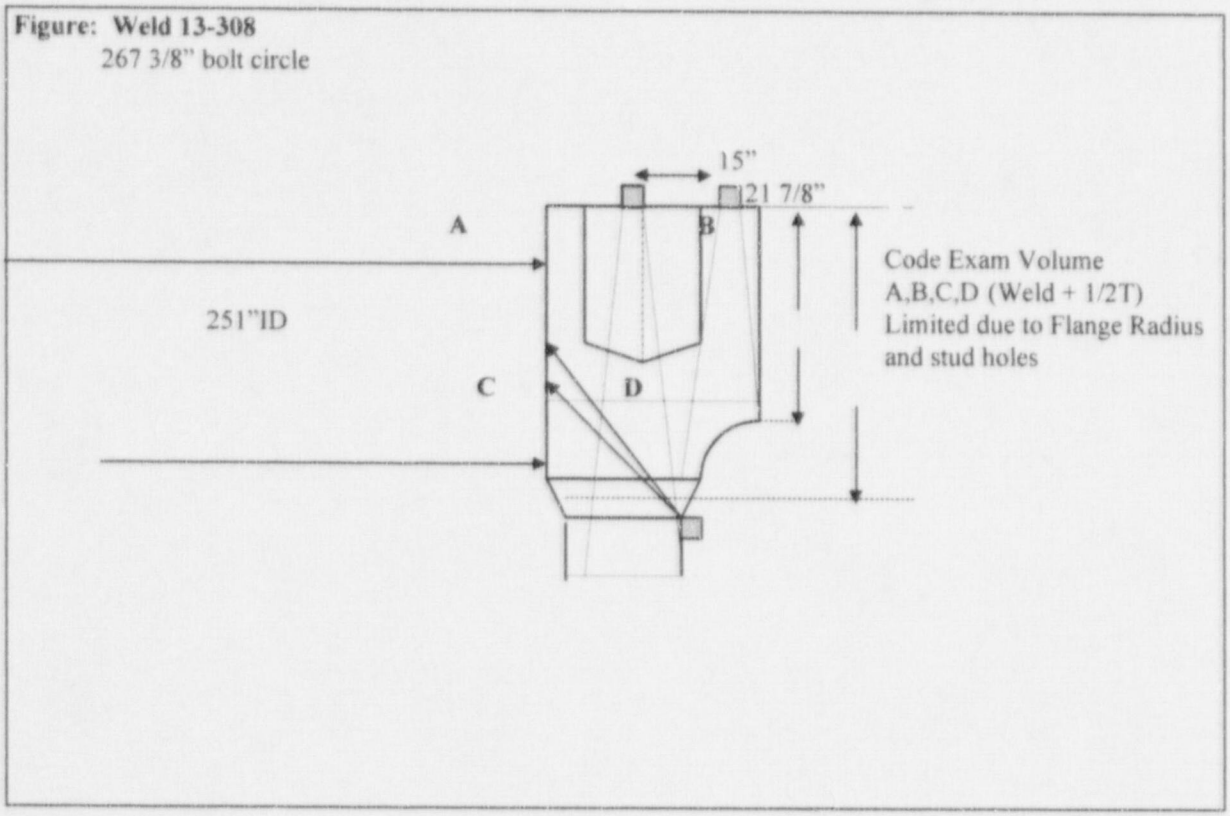
Weld 13-308 limited due to flange configuration (see figure)



FERMI 2 RPV ULTRASONIC SCAN COVERAGE LIMITATIONS

RR-A1

Figure 3



SECOND INTERVAL RELIEF REQUEST
RR-A6

COMPONENT FUNCTION/DESCRIPTION:
Pressure Retaining Reactor Pressure Vessel (RPV) Nozzle to Shell Welds (See Table 1)

SYSTEM:
Reactor (B11)

ASME CODE CLASS:
Class 1

ASME SECTION XI REQUIREMENTS:
Subsection IWB, Table IWB 2500-1, Examination Category B-D, Item Nos. B3.90 and B3.100 require volumetric examination of RPV nozzle-to-shell welds and base material regions as shown in figure 2500-7(b).

BASIS FOR RELIEF:
Pursuant to 10 CFR 50.55a(g)(5)(iii) Detroit Edison is requesting relief from ASME Section XI requirements to examine essentially 100% of accessible Category B-D nozzle welds, because within the limits of design and accessibility it is impractical to do so.

Relief Request RR-A6 only documented ultrasonic examination limitations based on interference caused by proximity to other nozzles. Other limitations have been identified during the performance of examinations during the first interval.

The primary limitation to full ASME Code volumetric coverage is nozzle configuration. The nozzle type used in the Fermi 2 reactor is a flanged nozzle as shown in Figure 1. This type of nozzle provides the best access for inspection of the nozzle types permitted in the ASME Code as shown in the Figures of IWB-2500-7. The Code required volume ($t_s/2$) extends into the nozzle outside blend radius. The curve of the radius section hinders the ability of transducers to maintain contact with the nozzle and also changes the effective beam angle. This limitation results in a typical maximum composite coverage of all Code required scans (0 {Longitudinal}, 45, and 60 {Parallel & Transverse} degree) between 60% and 70% depending on nozzle diameter and thickness. The maximum obtainable coverage is achieved by the 60-degree transverse (T) scan. Essentially all of the weld and heat affected zones are covered by this angle beam scan for the entire weld circumference on most nozzles. Typical scan limitations are shown in Figures 2A through 2C. The estimated volumetric coverage obtained is reported in Table 1.

Another limitation to full ASME Code volumetric coverage is the vessel taper at the bottom head to lower shell course weld. This geometric condition prevents full coverage of the bottom side of

the two jet pump instrumentation nozzles and the two recirculation suction nozzles. Composite coverage for these welds remains above 60%. This limitation also impacts the nozzle inner radius coverage for the two core spray nozzles as reported in Table 1.

The limitation originally described in RR-A6 of this relief request indicated a limitation of 46 degrees or 12.8% of the full circumference for 2 of 6 feedwater nozzles based on automated examination equipment accessibility. The examinations were performed manually and the limitation was less than originally described and accepted (see Figure 3). A part of the scan path was able to be performed for the full circumference. Additionally, Fermi examines these feedwater nozzles as specified in NUREG 0619 to detect cracking in the nozzle inner radius and bore areas where cracks have previously been detected in other BWRs. These exams were fully completed and no service related flaws have been detected.

All nozzle forgings received ultrasonic examination during manufacture and the nozzle to shell welds were subject to radiographic examination during fabrication of the reactor pressure vessel. All of the nozzle welds requiring volumetric examination by ASME Section XI have been completed during the first ten-year inspection interval and no service related defects have been detected. The nozzle inner radius ultrasonic examination techniques used at Fermi performed scanning from the blend radius; however, since this technique was designed to detect internal surface defects no credit has been taken for those exams.

Reactor Vessel Ultrasonic Examination techniques meet the requirements of ASME Section XI; ASME Section V, Article 4; and Regulatory Guide 1.150. Detroit Edison believes that the extent of examinations completed satisfy the intent of the ASME Code and 10 CFR 50.55a(g)(4) within the limits of accessibility for examination inherent to BWR pressure vessel design.

ALTERNATIVES:
Perform examination of the ASME Code volume to the extent practical.

APPLICABLE TIME PERIOD:
Relief is requested for the second 10-year inspection interval.

RR-A6 Table 1

LIMITED EXAMINATIONS

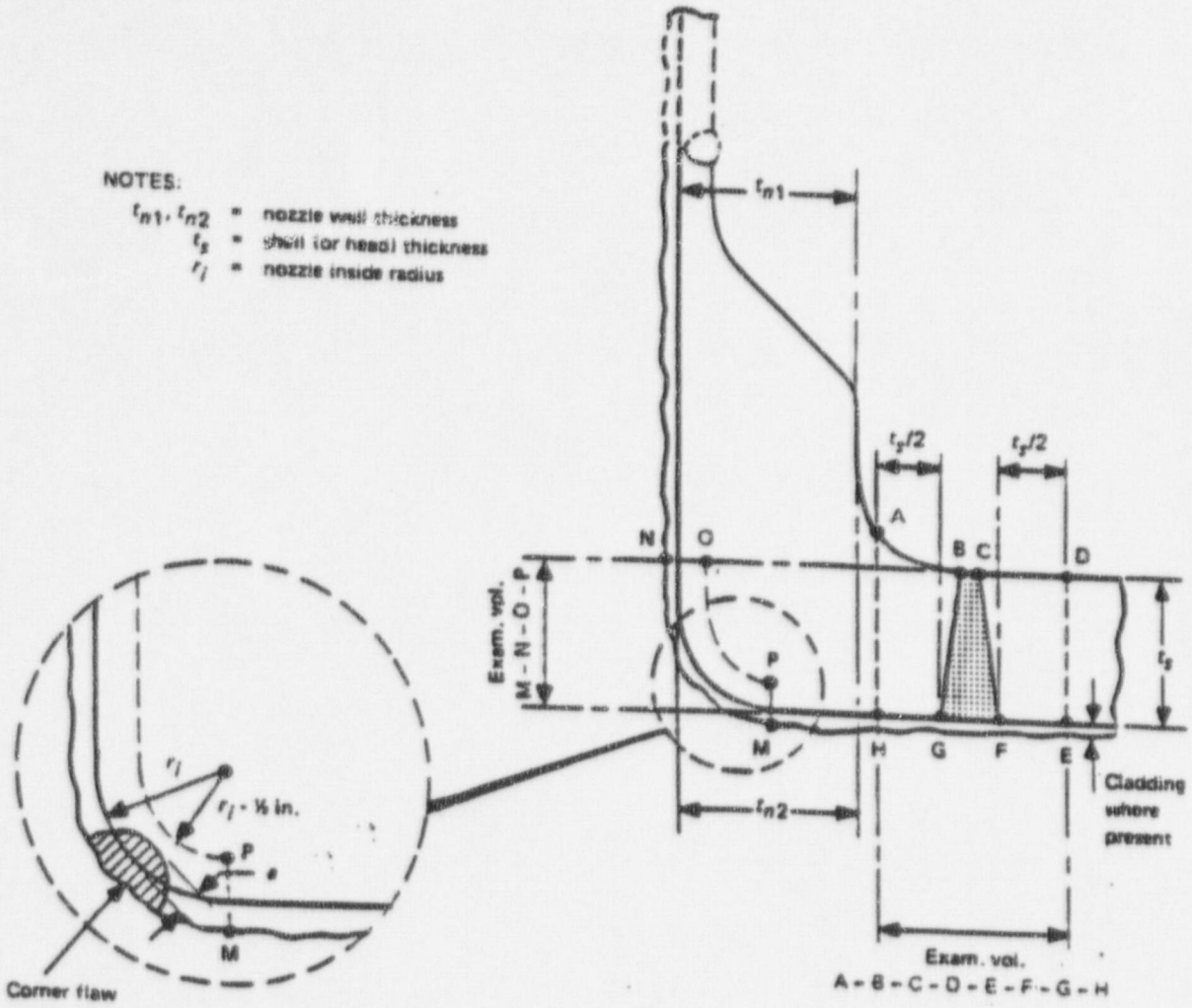
Category /Item	Weld Identification	Estimated Coverage	Limitation Description
B-D/B3.90 Nozzle Weld	8-316A, through 8-316-D	69.1%	Nozzle Blend Radius
B-D/B3.90 Nozzle Weld	4-316A 4-316D	~60%	Nozzle Blend Radius and Instrumentation Nozzles
B-D/B3.90 Nozzle Weld	4-316B, C E, & F	64.1%	Nozzle Blend Radius
B-D/B3.90 Nozzle Weld	14-316A 14-316B	68.9%	Nozzle Blend Radius
B-D/B3.90 Nozzle Weld	15-315	68%	Nozzle Blend Radius
B-D/B3.90 Nozzle Weld	13-314A through 13-314K	66.7%	Nozzle Blend Radius
B-D/B3.90 Nozzle Weld	5-314A 5-314B	65.6%	Nozzle Blend Radius and Bottom Head to Shell Taper
B-D/B3.90 Nozzle Weld	19-314A 19-314B	63.1%	Nozzle Blend Radius and Bottom Head to Shell Taper
B-D/B3.90 Nozzle Weld	2-318	61.4%	Nozzle Blend Radius
B-D/B3.90 Nozzle Weld	4-318A 4-318B	62%	Nozzle Blend Radius
B-D/B3.100 Nozzle Weld	19-314A 19-314B	80.2%	Bottom Head to Shell Taper

FERMI 2 TYPICAL NOZZLE CONFIGURATION

RR-A6 Figure 1

NOTES:

t_{n1}, t_{n2} = nozzle wall thickness
t_s = shell (or head) thickness
r_i = nozzle inside radius



EXAMINATION REGION[1]
Shell (or head) adjoining region
Attachment weld region
Nozzle cylinder region
Nozzle inside corner region

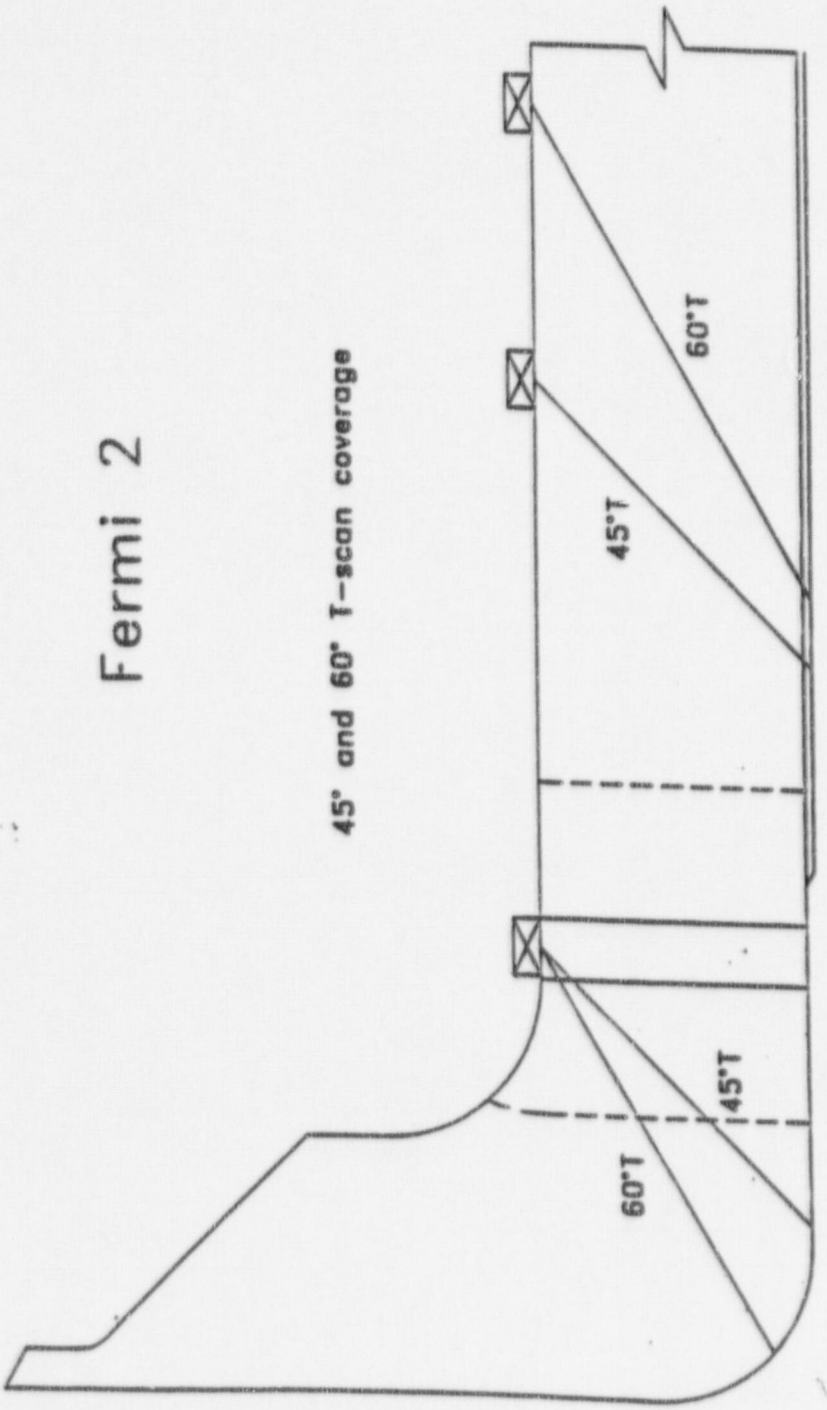
EXAMINATION VOLUME[2]
C-D-E-F
B-C-F-G
A-B-G-H
M-N-O-P

NOTES:
(1) Examination regions are identified for the purpose of differentiating the acceptance standards in IWB-3512.
(2) Examination volumes may be determined either by direct measurements on the component or by measurements based on design drawings.

FIG. IWB-2500-7(b) NOZZLE IN SHELL OR HEAD
(Examination Zones in Flange Type Nozzles Joined by Full Penetration Butt Welds)

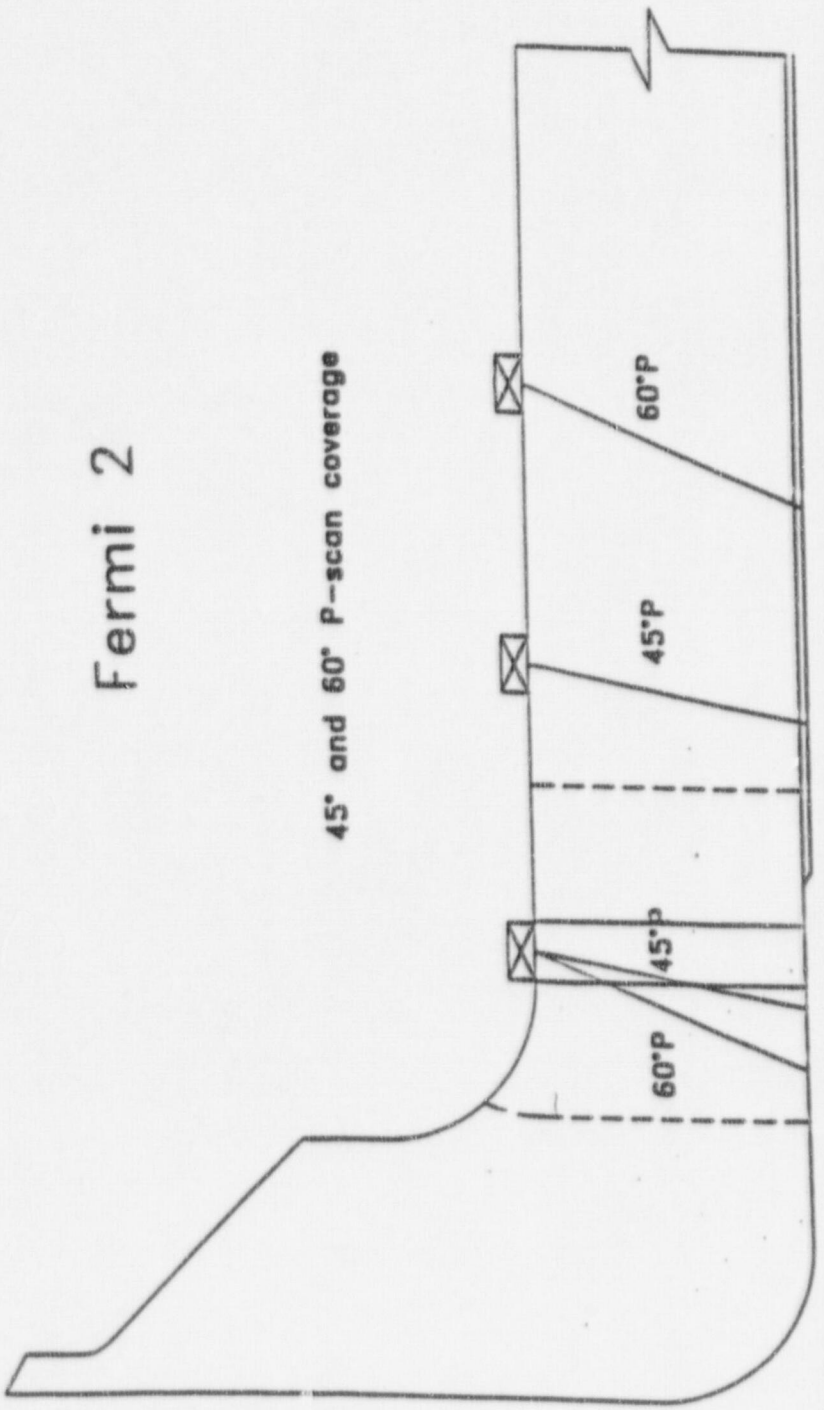
TYPICAL ULTRASONIC SCAN COVERAGE LIMITATIONS

RR-A6 Figure 2A



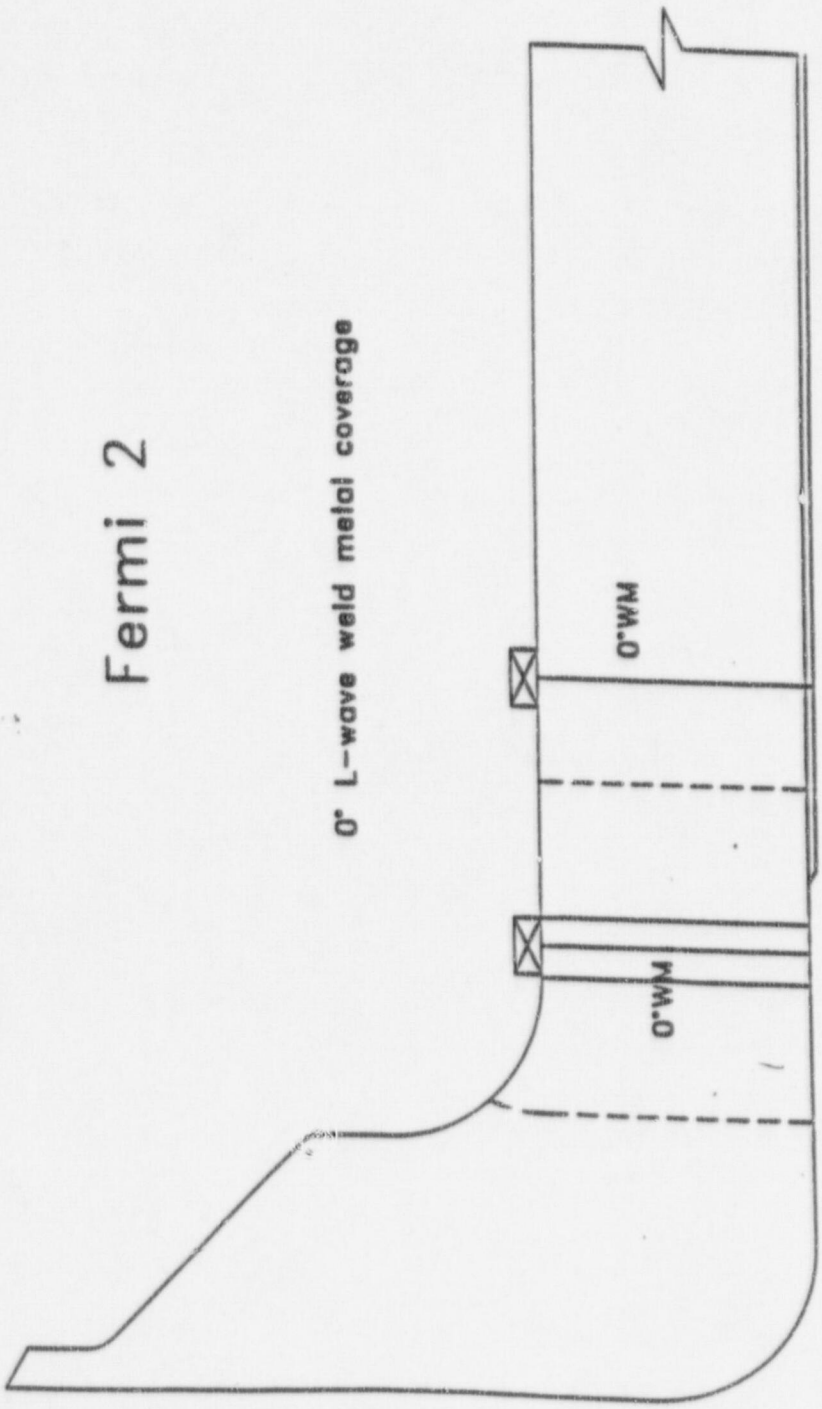
TYPICAL ULTRASONIC SCAN COVERAGE LIMITATIONS

RR-A6 Figure 2B



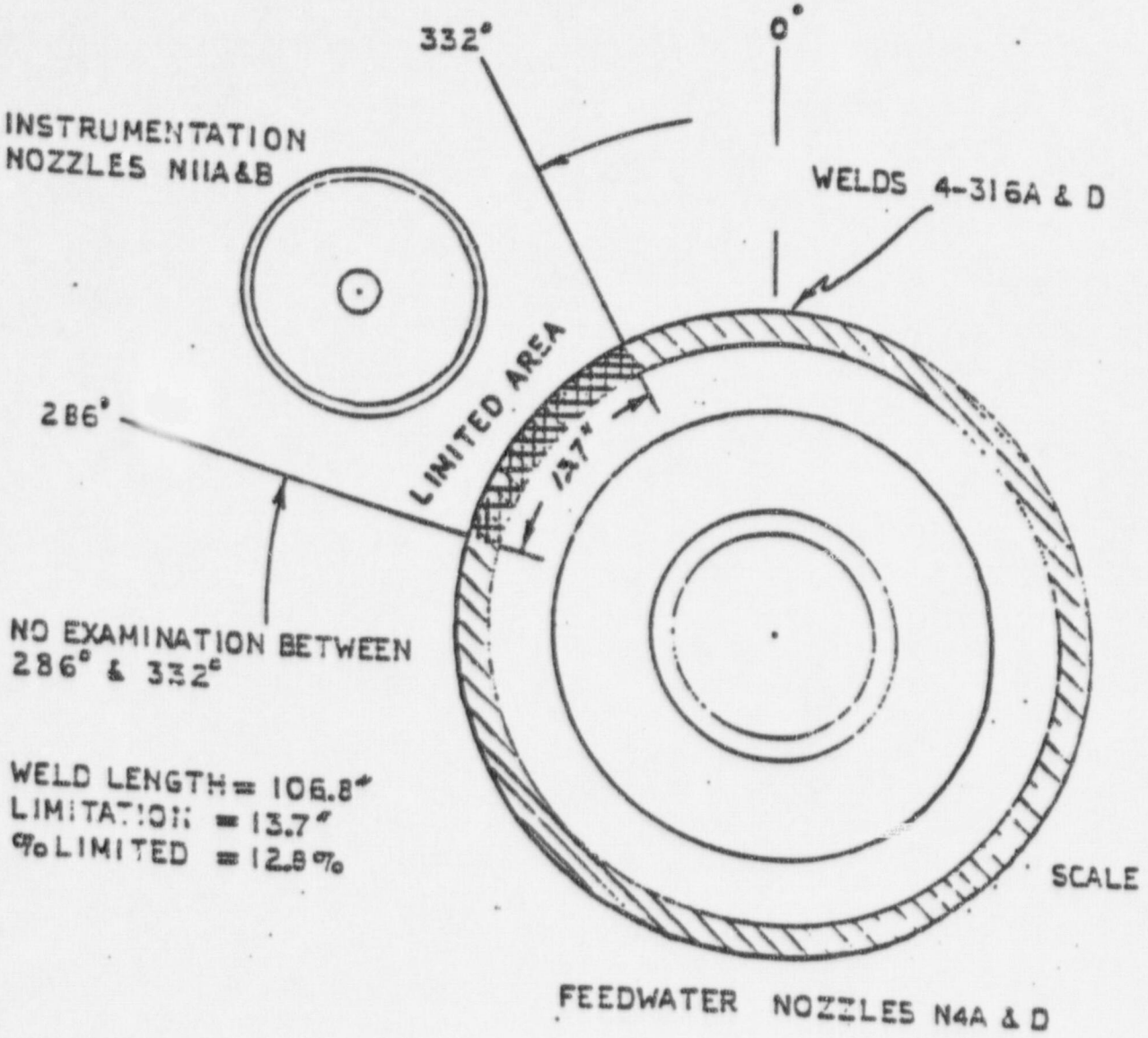
TYPICAL ULTRASONIC SCAN COVERAGE LIMITATIONS

RR-A6 Figure 2C



FERMI 2 ULTRASONIC SCAN COVERAGE LIMITATIONS

RR-A6 Figure 3



FEEDWATER NOZZLE EXAMINATION LIMITATIONS

SECOND INTERVAL RELIEF REQUEST
RR-A18

COMPONENT FUNCTION/DESCRIPTION:
Class 1, 2, & 3 Pressure Retaining Piping & Components

SYSTEM:
All systems included in the ISI NDE Program

ASME CODE CLASS:
Class 1, 2, and 3

ASME SECTION XI REQUIREMENTS:
ASME Section XI, 1989 Edition, Tables IWB-2500-1, IWC-2500-1 and IWD-2500-1 require the performance of a VT-2 examination during the specified pressure tests. IWA-2300 requires that personnel performing the VT-2 examinations be qualified by the owner or the owner's agent in accordance with owners qualification program having levels of competency comparable to SNT-TC-1A as defined in ANSI N45.2.6.

BASIS FOR RELIEF:
Pursuant to 10 CFR 50.55a(a)(3)(i) Detroit Edison is requesting relief from ASME Section XI requirements to certify VT-2 examiners in accordance with IWA-2300. Detroit Edison is proposing to use the alternatives specified in ASME Code Case N-546 (copy attached). This will eliminate the need to qualify VT-2 examination personnel in the same manner as NDE personnel. VT-2 requires no special knowledge of technical principles; it is simply an inspection for evidence of leakage. No special skills or technical training are required in order to observe water dripping from a component or bubbles forming on a surface wetted with a leak detection solution. Therefore, qualification in accordance with the provisions of the Code Case will not present any reduction in quality or safety. In fact, it will facilitate the qualification of those personnel most familiar with the walkdown of plant systems.

The Code Case is ASME approved indicating the ASME Code Committee members reached a consensus that the alternative provides essentially equivalent results to the requirements of IWA-2300. Detroit Edison agrees with the Code Committee that use of the alternative described in this Code Case will provide an acceptable level of quality and safety.

ALTERNATIVE:
Code Case N-546 provides the following alternative qualification rules for personnel such as licensed and nonlicensed operators, local leak rate personnel, system engineers, and inspection and nondestructive examination personnel.

(a) The individual must have at least 40 hours plant walkdown experience such as that gained by licensed and nonlicensed operators, local leak rate personnel, system engineers, and inspection and nondestructive examination personnel.
(b) At least 4 hours of training on Section XI requirements and plant specific procedures for VT-2 visual examination will be completed.
(c) Vision test requirements of IWA-2231 (1995 Edition) will be satisfied.

In addition, the following actions will ensure consistent quality in the performance of examinations.

1. Records of the training and qualifications specified in Code Case N-546 will be provided and maintained in accordance with the Fermi written practice.
2. Visual examination will be conducted in accordance with specific written procedures.
3. Visual examination procedures will provide for a documented independent review and evaluation of test results.

APPLICABLE TIME PERIOD:

Relief is requested for the second 10-year inspection interval.

CASES OF ASME BOILER AND PRESSURE VESSEL CODE

ISI NDE Program
Revision 2
Change 0
Part A Page 27

Approval Date: August 24, 1995

See Numerical Inqsx for expiration and any reaffirmation dates.

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

Inquiry: What alternative to the requirements of IWA-2300 may be used for qualification of VT-2 visual examination personnel?

Reply: It is the opinion of the Committee that VT-2 visual examination personnel need not be qualified nor certified to comparable levels of competence in accordance with the referenced standard (i.e., ANSI N45.2.6, ASNT SNT-TC-1A, or ASNT CP-189) provided the examination personnel are qualified in accordance with the following requirements.

(a) At least 40 hrs plant walkdown experience, such as that gained by licensed and nonlicensed operators, local leak rate personnel, system engineers, and inspection and nondestructive examination personnel.

(b) At least 4 hrs of training on Section XI requirements and plant specific procedures for VT-2 visual examination.

(c) Vision test requirements of IWA-2321, 1995 Edition.

SECOND INTERVAL RELIEF REQUEST
RR-A19

COMPONENT FUNCTION/DESCRIPTION:
Insulated portions of High Pressure Coolant Injection (HPCI) turbine/exhaust lines, and associated vents and drains.

SYSTEM:
High Pressure Coolant Injection (E41)

ASME CODE CLASS:

Class 2

ASME SECTION XI REQUIREMENTS:
ASME Section XI 1989, IWA-5213(d) (Test Condition Holding Time) and Code Case N-498-1 (Alternative Rules for 10-year Hydrostatic Pressure Testing) which is included in the Fermi Inservice Inspection Program, requires a 4 hour hold time after attaining nominal operating pressure conditions for insulated systems.

BASIS FOR RELIEF:
Pursuant to 10 CFR 50.55a(a)(3)(ii) Detroit Edison is requesting relief from ASME Section XI requirements to maintain a 4-hour hold time prior to the visual examination for the pressure test described in this relief request. Fermi proposes to perform the test using an alternative hold time of 20 minutes. This alternative is necessary because the 4-hour hold time could result in system conditions outside of Technical Specification operating limits.

As part of the Emergency Core Cooling System (ECCS), the HPCI system is not required to operate during normal plant operation. However, the system is periodically tested in accordance applicable inservice testing and Technical Specification requirements. These periodic tests are conducted to verify the operability of system components. The quarterly operability test (24.202.001) normally includes about 30 minutes of pump run time. In order to satisfy ASME Section XI hold time requirement, the test would require a HPCI pump run for greater than 4 hours (hold time plus exam time). Running the HPCI pump for this duration is not practical and represents an undue hardship on the facility without a compensating increase in the level of quality and safety.

Operating the HPCI pump for this amount of time would subject the facility to excessive heat loads. Control of these heat loads would require the operation of additional ECCS subsystems to remove heat from the suppression pool.

Extended operation of the HPCI pump would also challenge the Technical Specification limitation on maximum suppression pool (torus) water temperature. The Fermi Technical Specifications require the torus average water temperature to be maintained less than 105° F during testing which adds heat to the torus. Operating the HPCI pump for a period substantially longer than the system operability test could cause this temperature to be exceeded. If the torus average water temperature exceeds 110°, Technical Specifications require the reactor mode switch to be placed in the shutdown position.

Removal of the insulation from the subject components in order to use the ten minute hold time allowed by the Code or Code Case N-498-1, would be equally burdensome. The impacts associated with insulation removal and reinstallation, include personnel radiation exposure, radwaste generation, and limited manpower resources are not justified by a compensating increase in the level of quality and safety.

Performing a HPCI system hydrostatic test per IWA 5213 (d) would also be burdensome. A hydrostatic test would require installation of blank flanges and temporary pipe supports, and gagging or removal of relief valves. System out of service time, and radiation exposure incurred in carrying out a hydrostatic test would result in a hardship without a compensating increase in the level of quality and safety.

Other inspection and test activities performed that serve to verify continued system integrity include the following:

- Quarterly inservice testing of HPCI raises the pressure of the system to nominal operating conditions. Any leakage would migrate through the insulation over a period of time and would become evident.

- Nondestructive examination of circumferential welds per Section XI Table IWB-2500-1, Category C-F-2. The weld selections on this line were random selections because none of the welds exceeded the moderate or high stress criteria.

- Every 18 months this line is inspected in accordance with the Fermi Leakage Reduction Program per Technical Specification requirements.

ALTERNATIVE EXAMINATION:

The system pressure test described in Code Case N-498-1 will be conducted as required, except that a 20 minute hold time will be used in lieu of the 4 hour hold time requirement. The 20 minute hold time will allow time for abnormal leaks to migrate through the insulation without challenging the Technical Specification limitation on maximum torus water temperature. Any evidence of abnormal leakage will be investigated by locally removing insulation. A similar alternative for test performance was approved at another nuclear utilities (e.g., Hope Creek).

Reasonable assurance of system structural integrity is maintained through implementation of the alternative test and by the extent and frequency of other Technical Specification/ASME required system operability tests.

APPLICABLE TIME PERIOD:

Relief is requested for the second 10-year inspection interval.

SECOND INTERVAL RELIEF REQUEST
RR-A23

COMPONENT FUNCTION/DESCRIPTION:
Pressure Retaining Piping Welds (see attached Table for identification numbers)

SYSTEMS:
Reactor Recirculation (B31)
Residual Heat Removal (E11)
Feedwater (N21)

ASME CODE CLASS:
Class 1

ASME SECTION XI REQUIREMENTS:
ASME Section XI, 1989 Edition, Subsection IWB, Table IWB-2500-1, Category B-J, item 9.11 requires a volumetric and surface examination of circumferential piping welds greater than or equal to 4" diameter. Note 3 of Table IWB-2500-1 requires that the examination include essentially 100% of the weld length and volume specified in figure IWB-2500-8.

BASIS FOR RELIEF:
During the course of inservice examination, 4 of 156 Category B-J circumferential welds have been encountered that are impractical to fully examine in accordance with ASME Section XI (> 90% of length and volume). Pursuant to 10 CFR 50.55a(g)(5)(iii) Detroit Edison is requesting relief from ASME Section XI requirements to perform complete examinations of listed piping welds, as described above.

Fermi proposes to examine these welds to the extent practical within the limits of design and accessibility. Reasonable assurance of piping system structural integrity is provided by the Fermi ISI NDE Program as detailed in this relief request. Detroit Edison considers the proposed alternative examination to provide an acceptable level of quality and safety.

The adjacent weld, which is also a moderate stress weld, is fully examined. Inspections completed through the sixth refueling outage (RF06) have detected no reportable service induced defects in any carbon steel piping welds subject to ISI.

ALTERNATIVE EXAMINATION:
Partial examination of each weld to the greatest extent possible using appropriate surface and ultrasonic examination methods. Additionally, leakage inspections performed at the completion of each refueling outage per Category B-P include all of these welds.

The extent of partial examination and technical justification for each is provided below:

Reactor Recirculation (B31)

Category /Item	Weld Identification	Percentage Complete	Limitation Description	Alternative Examination
B-J/B9.11	FW-RS-2-A5	86% PT >90% UT	Pump Insulation Support Ring & Brackets	Examine accessible area

This stainless steel weld is a low stress random selection. The weld was given an IGSCC mitigation treatment (Induction Heat Stress Improvement) as defined in NUREG 0313 Rev. 2, prior to service. Fermi has also implemented an augmented inspection program in accordance with Generic Letter 88-01. The combined Code and GL-88-01 selections result in greater than 50% of all Reactor Recirculation System welds being inspected each interval. The inspection sample set is sufficiently large to provide for reliable detection of representative degradation. There is no decrease in the ability to detect system degradation as a result of this limitation. Re-designing or removing the obstructions to marginally increase coverage of this weld is impractical. It would also substantially increase man-hours and radiation dose without a compensating increase in plant safety. Detroit Edison believes this alternative provides an acceptable level of quality and safety.

RHR (E11)

Category /Item	Weld Identification	Percentage Complete	Limitation Description	Alternative Examination
B-J/B9.11	FW E11-2299-0W1	>50% UT 100% PT	Tee Configuration Limits UT Only	Examine accessible area

This stainless steel tee-to-pipe weld is a high stress weld selection. The weld was radiographed during construction and satisfied Section III acceptance criteria. There are also six other high stress locations in the RHR system that were fully examined. The surface of the weld is fully accessible for liquid penetrant examination. Ultrasonic examination is limited to effective scanning from the pipe side only because of reducing-tee configuration. The ultrasonic examination covers all of the base material on the pipe side of the weld and the weld root area. Because the examination covers the weld root area, which is also the thinnest section of this pipe-to-tee weld zone, there is adequate assurance that IGSCC or fatigue or cracking could be detected. Altering the weld design to increase exam coverage would be impractical.

Additionally, two adjacent welds on both sides of this weld are fully examined. Fermi has also implemented an augmented inspection program in accordance with Generic Letter 88-01. The combined Code and Generic Letter 88-01 selections result in greater than 50% of all susceptible welds being inspected each interval. The inspection sample set is sufficiently large to provide for reliable detection of representative degradation. There is no decrease in the ability to detect system degradation as a result of this limitation.

Radiographic examination was considered as an alternative but has the following limitations. The radiation emitted from the pipe would negatively impact the sensitivity of the examination. Performance of the examination would take approximately one shift to complete and prevent other outage activities from be performed during the radiography evolution. Radiographic examination of the weld would require draining of the recirculation loop piping and a portion of RHR. This would require plugging jet-pumps and recirc suction lines inside the vessel. RHR Shutdown cooling would not be available to remove decay heat. For these reasons radiography is not a feasible alternative for the ultrasonic examination.

Because of the acceptable initial condition, pressure test history and continued performance, the capability to complete the surface exam and greater than 50 percent of the exam volume including the root area, it is reasonable to conclude there is no significant impact on the level of plant quality and safety by the reduction in volumetric coverage of this weld. Detroit Edison believes this alternative provides an acceptable level of quality and safety.

Feedwater (N21)

Category /Item	Weld Identification	Percentage Complete	Limitation Description	Alternative Examination
B-J/B9.11	FW-N21-2336-0W1	~76% UT 100% MT	Tee to Valve Configuration	Examine accessible area

This carbon steel tee-to-pipe weld is a moderate stress weld selection category as defined in the Fermi UFSAR. The moderate stress category results in an inspection sample of 28% of all Category B9.11 circumferential welds. The increased inspection sample is comprised of welds with the highest probability of failure and results in added assurance of system integrity. This is a more conservative approach to selecting welds than a supplemental random selection to bring the examination sample to 25%, as specified in the Code. The inspection sample set exceeds ASME Code requirements and is sufficiently large to provide for reliable detection of system degradation.

The weld was radiographed during construction and satisfied Section III acceptance criteria. The valve body and weld ends were also radiographed in accordance with NB 2570. The surface of

the weld is fully accessible for magnetic particle examination. Ultrasonic examination is limited because of tee-to-valve configuration. The ultrasonic examination does cover the weld and the weld root area in at least one direction. The base material on the valve side is not fully covered in two directions. Altering the weld design to marginally increase coverage is impractical.

Because of the acceptable initial condition, pressure test history and continued performance, the capability to complete the surface exam and approximately 75% of the exam volume including the root area, it is reasonable to conclude there is no significant impact on the level of plant quality and safety by the reduction in volumetric coverage of this weld. Because the inspection sample population exceeds ASME Code requirements, there is no decrease in the ability to detect system degradation as a result of this limitation. Detroit Edison believes this alternative provides an acceptable level of quality and safety.

Feedwater (N21)

Category /Item	Weld Identification	Percentage Complete	Limitation Description	Alternative Examination
B-J/B9.11	FW-N21-2336-1W03	50% UT 100% MT	Sweepolet to Valve Configuration	Examine accessible area

This carbon steel reducer-to-valve weld is a high stress weld selection. The weld was radiographed during construction and satisfied Section III acceptance criteria. The valve body and weld ends were also radiographed in accordance with NB 2570. There are also eleven other high stress locations (includes terminal ends) in the Feedwater System that will be fully examined. The surface of the weld is fully accessible for magnetic particle examination. Ultrasonic examination is limited to effective scanning from the crown of the weld. The ultrasonic examination covers most of the base material on both sides of the weld in one direction. The entire weld and root was scanned in the circumferential direction. Additionally, the high stress weld directly adjacent to this weld was fully examined.

There are over 50 high stress carbon steel weld selections spread among the systems subject to inservice inspection. The Fermi Class 1 inspection population for all systems exceeds ASME Code requirements by 15 welds because moderate stress welds are included in the selection basis. The welds that were selected are the most probable locations for stress related failure. The selection methodology used was more stringent than required by Code. Because of the selection methodology and sample size there is no reduction in capability to detect system degradation as compared to Code requirements. Through the sixth refueling outage (RF06) there were no service induced defects detected. Industry experience does not indicate cracking of carbon steel butt welds to be a problem. All of these reasons indicate that it is impractical to alter the weld design to increase exam coverage for this weld.

Radiographic examination was considered as an alternative but is undesirable for the following reasons. Draining the feedwater line to perform the examination would make reactor water clean up unavailable and would negatively impact reactor vessel clarity potentially affecting refueling and inspection activities. It would also prevent drywell and steam tunnel outage activities from be performed during the radiography evolution adding critical path time to the outage schedule. The benefit of increasing the coverage of this weld by radiographic examination has only a small potential of increasing plant safety margin and a disproportionate impact on other plant activities. Because of these impacts and since the Fermi inspection program exceeds ASME Code requirements for the sampling program this alternative is not considered to be practical.

Because of the acceptable initial condition, pressure test history and continued performance, the capability to complete the surface exam and approximately 50 percent of the Code exam volume, it is reasonable to conclude there is no significant impact on the level of plant quality and safety by the reduction in volumetric coverage of this weld. Detroit Edison believes this alternative provides an acceptable level of quality and safety.

APPLICABLE TIME PERIOD:
Relief is requested for the second 10-year inspection interval.

SECOND INTERVAL RELIEF REQUEST
RR-A25

COMPONENT FUNCTION/DESCRIPTION:
Pressure Retaining Reactor Pressure Vessel (RPV) Circumferential Shell Welds (Welds 4-308A, 4-308B, 1-313, and 9-307; ref Figure 1)

SYSTEM:
Reactor (B11)

ASME CODE CLASS:
Class 1

ASME SECTION XI REQUIREMENTS:
ASME Section XI, 1989 Edition, Subsection IWB, Table IWB 2500-1, Examination Category B-A, Item No. B1.11, and the augmented examination requirement of 10CFR50.55a(g)(6)(ii)(A)(2) requires volumetric examination of essentially 100% of RPV circumferential weld and base material regions in the reactor pressure vessel each inspection interval.

BASIS FOR ALTERNATIVE:
Pursuant to 10CFR55.55a(a)(3)(i), and consistent with information contained in NRC Generic Letter 98-05, Detroit Edison is requesting an alternative from ASME Section XI requirements to examine essentially 100% of accessible Category B-A circumferential welds and is proposing permanent relief (for the remaining portion of the initial license period) from these examinations.

The basis for this request for inspection relief is documented in the report "BWR Vessel and Internals Project, BWR Reactor Pressure Vessel Shell Weld Inspection Recommendations (BWRVIP-05)," that was transmitted to the NRC in September 1995. The BWRVIP-05 report provides the technical basis for eliminating inspection of BWR RPV circumferential shell welds. The BWRVIP-05 report concludes that the probability of failure of the BWR RPV circumferential shell welds is orders of magnitude lower than that of the longitudinal shell welds. The NRC staff has conducted an independent risk-informed assessment of the analysis contained in BWRVIP-05. This assessment also concluded that the probability of failure of the BWR RPV circumferential welds is orders of magnitude lower than that of the longitudinal shell welds. Additionally, the NRC assessment demonstrated that inspection of BWR RPV circumferential welds does not measurably affect the probability of failure.

As discussed during the ACRS Full Committee meeting on July 9, 1998 the Staff has completed its evaluation of the BWR Vessel and Internals Project (BWRVIP) recommendations for reduced inspections of the reactor pressure vessel shell welds as described in the BWRVIP-05 report. Based on the Staff's review, it has been concluded that inservice inspection (ISI) of the BWR RPV circumferential welds is not necessary during the current license term since these welds

have low failure frequencies. The NRC issued a Final Safety Evaluation documenting acceptance of the BWRVIP-05 report on July 28, 1998.

The NRC Staff issued Generic Letter 98-05 regarding the use of the BWRVIP-05 report as the basis for BWR licensees to request relief from the requirements to conduct volumetric examinations of the BWR RPV circumferential welds. This independent NRC assessment utilized the FAVOR code to perform a probabilistic fracture mechanics (PFM) analysis to estimate RPV failure probabilities. Three key assumptions in the PFM analysis are: the neutron fluence was estimated to be end-of-license mean fluence, the chemistry values are mean values based on vessels types and the potential for beyond design basis events is considered.

Although BWRVIP-05 provides the technical basis supporting this relief request, the following information is provided to show the conservatism of the NRC analysis for the Fermi 2 Nuclear Power Plant. For plants with RPVs fabricated by Combustion Engineering the mean end-of-license neutron fluence use in the NRC PFM analysis was 20×10^{17} n/cm^2. However, at Fermi 2 the highest fluence anticipated at the end of the requested relief period (end of the initial license period) is 6.5×10^{17} n/cm^2. Thus, embrittlement due to fluence effects is much lower, and the NRC analysis is conservative for Fermi 2 in this regard. Therefore, there is significant conservatism in the already low circumferential weld failure probabilities as related to Fermi 2. Other Fermi 2 RPV shell weld information that the NRC staff has requested (GL 99-05) be included in requests for relief is provided in attached Table 1.

At an August 8, 1997 meeting with industry, the NRC staff indicated that the potential for, and consequences of, nondesign basis events (not addressed in the BWRVIP-05 report) should be considered. In particular, the NRC staff stated that nondesign basis cold over-pressure transients should be considered. It is highly unlikely that a BWR would experience a cold overpressure transient. For a BWR to experience such an event multiple operator errors would be required. At the August 8, 1997 meeting, the NRC staff described several types of events that could be precursors to BWR RPV cold over pressure transients. These were identified as precursors because no cold overpressure event has occurred at an U.S. BWR. Also at the August 8 meeting, the NRC staff identified one actual cold overpressure event that occurred during shutdown at a non-U.S. BWR. This event apparently included several operator errors that resulted in a maximum RPV pressure of 1150 psi with a temperature range of 79°F to 88°F.

As provided in the following discussion, Fermi 2 has in place procedures and Technical Specifications which monitor and control reactor pressure, temperature, and water inventory during all aspects of cold shutdown which would minimize the likelihood of a Low Temperature Over-Pressurization (LTOP) event from occurring. Additionally, these procedures are reinforced through operator training.

The Pressure Test procedures, which are used at Fermi 2, have sufficient procedural guidance to prevent a cold, over-pressurization event. Pressure testing is performed at the conclusion of each outage. The system leakage tests include requirements for operations management to perform a

have low failure frequencies. The NRC issued a Final Safety Evaluation documenting acceptance of the BWRVIP-05 report on July 28, 1998.

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The Pressure Test procedures, which are used at Fermi 2, have sufficient procedural guidance to prevent a cold, over-pressurization event. Pressure testing is performed at the conclusion of each outage. The system leakage tests include requirements for operations management to perform a

"pre-job briefing" with all essential personnel. This briefing details the anticipated testing evolution with special emphasis on: conservative decision making, plant safety awareness, lessons learned from similar in-house or industry operating experiences, the importance of open communications, and finally, the process in which the test would be aborted if plant systems responded in an adverse manner. Vessel temperature and pressure are required to be monitored throughout these tests to ensure compliance with the Technical Specification pressure-temperature curve.

Additionally, to ensure a controlled, deliberate pressure increase, the rate of pressure increase is administratively limited throughout the performance of the test. If the pressurization rate exceeds this limit, direction is provided to remove the CRD pumps which are used for pressurization, from service.

With regard to inadvertent system injection resulting in an LTOP condition, the high pressure make-up systems (High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) systems, as well as the normal feedwater supply (via the Reactor Feedwater Pumps) at Fermi 2 are all steam driven. During reactor cold shutdown conditions, no reactor steam is available for the operation of these systems. Therefore, it is not possible for these systems to contribute to an over-pressure event while the unit is in cold shutdown.

The Standby Feed Water (SBFW) system is an available high pressure electric driven make up system. The SBFW system does not automatically inject water into the RPV. The SBFW system requires deliberate operator action to open the injection isolation valve. Procedures are in place to administratively control the use of the SBFW system.

In the case of low pressure system initiation, the Fermi 2 pressure-temperature limit curves for hydrostatic testing as provided in Fermi Technical Specifications, permit pressures up to 312 psig at temperatures from 71^0F up to 100^0F. Above 100^0F, the permissible pressure increases immediately to near 600 psig and increases rapidly with increasing temperature. The shutoff head for the Core Spray and Residual Heat Removal Pumps are both below 400 psig. Therefore, the potential for an over-pressurization event which would exceed the pressure-temperature limits, due to an inadvertent actuation of this system is very low.

Procedural control is also in place to respond to an unexpected or unexplained rise in reactor water level, which could result from a spurious actuation of an injection system. Actions specified in this procedure included preventing condensate pump injection, securing ECCS system injection, tripping CRD pumps, terminating other injection sources, lowering RPV level via the RWCU system, and the steam line drains.

In addition to procedural barriers, Licensed Operator Training is given which further reduces the possibility of the occurrence of LTOP events. During Initial Licensed Operator Training the following topics are covered: Brittle fracture and vessel thermal stress; Operational Transient (OT) procedures, including the OT on reactor high level; Technical Specifications training,

including discussion of Pressure/Temperature (P/T) Limits; and Simulator Training of plant heatup and cooldown including performance of surveillance tests which ensure pressure-temperature curve compliance.

In addition to the above, continuous review of industry operating plant experiences is conducted to ensure that the Fermi 2 procedures consider the impact of actual events, including potential LTOP events. Appropriate adjustments to the procedures and associated training are then implemented to preclude similar situations from occurring at Fermi 2.

Based on the above, the probability of a cold over-pressure transient is considered to be highly unlikely.

The NRC staff transmitted a Request for Additional Information (RAI) regarding the BWRVIP-05 report to the BWR Vessel and Internals Project (BWRVIP). The BWRVIP provided a response to the RAI that included additional information on the BWRVIP PFM analysis, comparisons to the NRC Staff PFM analysis, and additional information regarding beyond design basis cold overpressure transients. We believe the BWRVIP-05 report and the NRC Final Safety Evaluation Report analysis provide sufficient basis to support this relief request.

Based on the documentation in BWRVIP-05, the risk-informed independent assessment performed by the NRC staff and the discussion above, permanent relief (for the remaining portion of the initial license period) from completing inspection of the RPV circumferential shell welds at Fermi 2 is justified.

TABLE 1

Fermi 2 RPV Shell Weld Information
Bounding Circumferential Weld

Neutron fluence at the end of the requested relief period (upper bound value)	6.5×10^{17} n/cm^2
Initial (unirradiated) reference temperature	-50°F
Weld Chemistry factor (CF)	236°F
Weld Copper content	0.23%
Weld Nickel content	1.0%
Increase in reference temperature due to irradiation (ΔRT_{NDT})	31.6°F
Margin term	31.6°F
Mean adjusted reference temperature (ART)	-18.4°F
Upper bound adjusted reference temperature (ART)	13.2°F

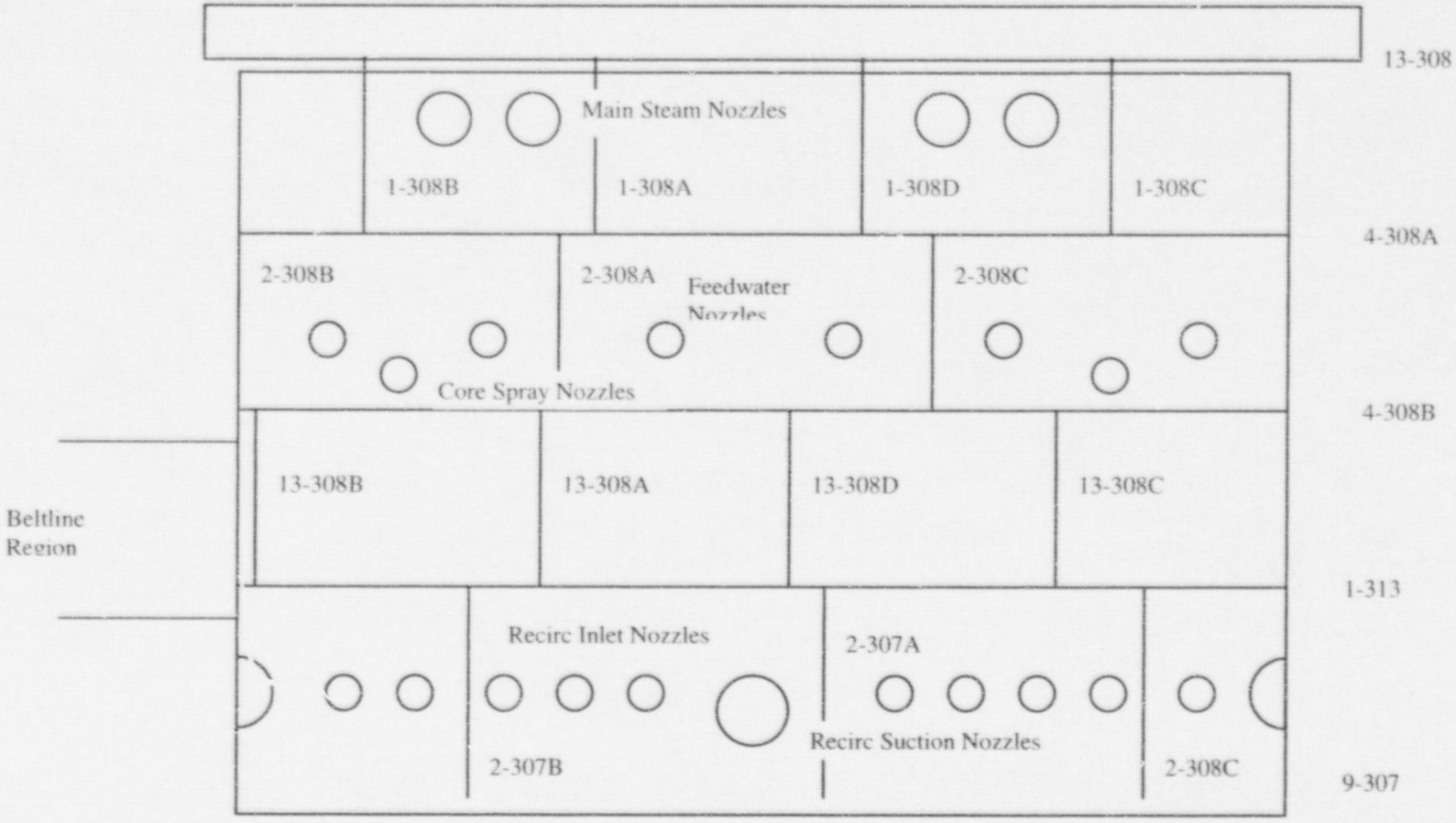
ALTERNATIVE:
The beltline circumferential weld (1-313) was partially examined during the first inspection interval (approximately 54% complete, RF02, Spring 1991). Additionally, Detroit Edison will perform examination of approximately 5% of the Fermi 2 RPV circumferential weld areas only at the intersection of longitudinal seams.

APPLICABLE TIME PERIOD:
Relief is requested for the remaining portion of the initial license period..

FERMI 2 SHELL WELD LAYOUT

RR-A25

Figure 1



SECOND INTERVAL RELIEF REQUEST
RR-A26

COMPONENT FUNCTION/DESCRIPTION:
Extension of Containment Piping Welds

SYSTEMS:
E11-Residual Heat Removal
E21-Core Spray
E41-High Pressure Coolant Injection
E51-Reactor Core Isolation Cooling
G51 Torus Water Management
P11-Demineralized Service Water
P44-Emergency Equipment Cooling Water
T46-Standby Gas Treatment
T48-Containment Atmosphere Control

ASME CODE CLASS:
Class 2

ASME SECTION XI REQUIREMENTS:
ASME Section XI, 1989 Edition, Subsection IWE-1220(d) provides an exemption from IWE required examinations for piping that is part of the containment system or which penetrates or is attached to the containment vessel. The exemption subsequently requires this piping to be examined in accordance with IWB or IWC as appropriate.

BASIS FOR RELIEF:
Pursuant to 10 CFR 50.55a(a)(3)(i) Detroit Edison is requesting relief from ASME Section XI requirements to perform the surface or volumetric examinations specified in the 1989 Edition of ASME Section XI for piping classified as extensions of containment. The proposed alternative of visual examination is consistent with the examination of other containment items that only require visual examination.

Detroit Edison has identified a new subset of piping which is considered an *extension of containment* (penetrates containment and within the outboard isolation valve) where the only reason for its selection is the containment function. This is because the system function is either not safety related (e.g., RHR containment/suppression pool spray lines) or that if the rules of IWC were applied, the piping would be exempt from examination per IWC 1220. This is because the piping is either open ended beyond the last shut off valve or the line process conditions are less than or equal to 275 psig and at a temperature equal to or less than 200°F. Since the piping selection is based solely on the containment function, it would not make sense to exempt the piping based on the lack of a safety related system/line function or configuration and design parameters of the process stream.

If the selected piping was subject to IWE requirements for Category E-B, Item E3.10 (containment penetration welds) the examination method would be a visual examination. Additionally, 10 CFR 55a(b)(2)(x)(c) has made containment weld inspection optional because there has been no degradation mechanism specific to containment welds. Application of the IWC rules for Category C-F-2 as specified in IWE-1220(d) would result in surface and volumetric examination as required depending on the nominal pipe wall thickness. As stated previously, considering only the IWC selection requirements, the piping could be exempted from examination. Since the only reason for selecting the subject piping is the containment function, it seems appropriate to apply the IWE inspection methodology rather than the IWC inspection methodology.

ALTERNATIVE EXAMINATION:

Detroit Edison proposes to perform a visual examination (VT-1) of all selected welds, except those selected based on the high or moderate stress categories defined in UFSAR 5.2.8.8, that will be examined as specified by Table IWC-2500-1 for category C-F. The sample size will be at least 7.5% of the total number of pressure retaining extension of containment welds subject to examination requirements. This percentage meets the 1989 Section XI selection rate requirements for Category C-F-2 pressure retaining welds. This alternative is equivalent to the IWE methodology for examination of penetration welds.

In addition to the visual examination, the extension of containment piping will be subject to 10 CFR 50 Appendix J leakage rate testing.

APPLICABLE TIME PERIOD:

Relief is requested for the second 10-year inspection interval.

SECOND INTERVAL RELIEF REQUEST
RR-A27

COMPONENT FUNCTION/DESCRIPTION:
Pressure Retaining Closure Head Nuts

SYSTEM:
Reactor (B11)

ASME CODE CLASS:
Class 1

ASME SECTION XI REQUIREMENTS:
ASME Section XI 1989, Table IWB 2500-1, Examination Category B-G-1, Item No. B6.10 (Closure Head Nuts) requires a surface examination of all reactor vessel nuts.

BASIS FOR RELIEF:
Pursuant to 10 CFR 50.55a(g)(5)(iii) Detroit Edison is requesting relief from ASME Section XI requirements to examine the surface of the reactor vessel nuts, because within the limits of design it is impractical to do so.

Table IWB 2500-1 specifies the surface exam method of examination but the examination figure has never been prepared.

The closure head nut configuration does not allow for an effective magnetic particle examination for service related defects. The MT method requires two-directional coverage to detect surface flaws. Only the external surface is capable of being satisfactorily examined in two directions. The threaded area could be examined for detection of radial reflectors using a central conductor. However service related planar defects would more likely be orientated circumferentially in the threads which would make effective examination impractical. Since the nuts receive a compressive load from the stud it is extremely unlikely that there would be any degradation on the external surface other than mechanical damage caused by installation and removal or corrosion. All RPV nuts received a surface examination for manufacturing defects by the material manufacturer.

Liquid penetrant examination is not practical because of the difficulty that would be associated with removing thread lubricant.

ALTERNATIVES:
Perform a VT-1 examination of all visible surfaces of the RPV nuts.

APPLICABLE TIME PERIOD
Relief is requested for the second 10-year inspection interval.

SECOND INTERVAL RELIEF REQUEST
RR-A28

COMPONENT FUNCTION/DESCRIPTION:
Pressure Retaining Bolted Connection Leakage

SYSTEM:
All Systems included in the ISI NDE Program Plan

ASME CODE CLASS:
Class 1, 2, and 3

ASME SECTION XI REQUIREMENTS:
ASME Section XI 1989, IWA 5250(a)(2) requires the following corrective measures if leakage is observed during VT-2 examination during the system pressure test at bolted mechanical joints; 1) remove all the bolting material associated with that joint, 2) perform a VT-3 examination for corrosion and 3) evaluate the conditions in accordance with IWA-3100.

BASIS FOR RELIEF:
Pursuant to 10 CFR 50.55a(a)(3)(ii) Detroit Edison is requesting relief from ASME Section XI requirements to remove bolting for visual examination when leakage is noted at a bolted connections. This request for relief is based on the hardship associated with removal without a compensating increase in the level of quality or safety.

Fermi 2 is a boiling water reactor (BWR) and the reactor coolant system and associated systems do not experience the corrosive environment from boric acid residues, as would a pressurized water reactor (PWR). Therefore, there is no reason to suspect degradation of bolting caused solely by the chemistry of leaking coolant.

The purpose of IWA-5250(a)(2) is to determine if inservice leakage has degraded the bolting material. Therefore bolting that is new or was visually examined during joint disassembly would not warrant removal. Additionally, bolting that is in air or gas service should also be excluded.

Bolting such as control rod drive (CRD) flange cap screws have a history of leaking upon return to service but decreases over time. This bolting is a chrome alloy material that is resistant to general corrosion. CRDs are rebuilt periodically and bolting is VT-1 examined and reinstalled or replaced as necessary.

Bolting in flanged joints are frequently visible because of the space between the flanges. And while flange or valve bonnet leakage is not desirable the prudent corrective measure may be to verify torque and re-tighten bolting as necessary.

The 1989 Code is too restrictive and does not allow for evaluation and application of prudent engineering judgement. Satisfying the Code requirement for removing bolting may require significant planning and scheduling due to operational concerns and personnel safety. In cases of

unisolatable or non-redundant piping, the requirement to remove the bolting in order to conduct the visual examination may necessitate shutdown of the plant and result in unnecessary plant transient cycles.

ALTERNATIVES:

Detroit Edison will document an evaluation of the flange leakage and determine the appropriate course of action. The evaluation will consider the potential for bolting degradation as well as the cause of the leakage. The evaluation will determine whether bolt tightening or removal is necessary to ensure joint integrity.

Should bolting removal be necessary, Detroit Edison proposes to remove the bolt nearest the leakage source, as specified in the 1990 Addenda of ASME Section XI. If the bolt shows evidence of significant degradation additional bolts for that connection will be removed and examined and evaluated in accordance with IWA-3100.

APPLICABLE TIME PERIOD

Relief is requested for the second 10-year inspection interval.

SECOND INTERVAL RELIEF REQUEST
RR-A29

COMPONENT FUNCTION/DESCRIPTION:
Austenitic Stainless Steel BWR Coolant Piping Welds

SYSTEM:
All Systems included in the ISI NDE Program Plan

ASME CODE CLASS:
Class 1 and 2

ASME SECTION XI REQUIREMENTS:
ASME Section XI 1989, IWB-2430 provides requirements for additional examinations when indications are revealed that exceed the acceptance standards of IWB-3000.

BASIS FOR RELIEF:
Pursuant to 10 CFR 50.55a(a)(3)(i) Detroit Edison is requesting relief from ASME Section XI requirements for additional weld examinations for welds subject to Generic Letter 88-01 and NUREG 0313 Revision 2, because these regulatory documents provide alternative sample expansion guidance that considers Intergranular Stress Corrosion Cracking (IGSCC) susceptibility. This methodology ensures that welds with similar risk, i.e. weld category, pipe size, system, and location, for cracking are examined while maintaining radiation exposure of examination personnel as low as reasonably achievable.

The Code specified expansion methodology only considers Code item numbers and not materials or susceptibility to degradation. For example, the Code item B9.11 would include carbon steel as well as stainless steel welds. The carbon steel welds would not be subject to IGSCC. Therefore, it would not be appropriate to include those items in the sample expansion.

ALTERNATIVES:
When examinations are being performed to satisfy the requirements of Generic Letter 88-01 and NUREG-0313 in addition to the Code requirements, sample expansion resulting from unacceptable IGSCC flaw indications will be performed using the methodology specified in Generic Letter 88-01 and NUREG-0313.

APPLICABLE TIME PERIOD
Relief is requested for the second 10-year inspection interval.

SECOND INTERVAL RELIEF REQUEST
RR-A30

COMPONENT FUNCTION/DESCRIPTION:
Pressure Retaining Piping Welds, Categories B-J and C-F-2

SYSTEM:
All Systems included in the ISI NDE Program Plan

ASME CODE CLASS:
Class 1 and 2

ASME SECTION XI REQUIREMENTS:
ASME Section XI 1989, Tables IWB-2500 and IWC 2500 require volumetric examination of pressure retaining welds in piping NPS 4 and larger. When ultrasonic examination is applicable, IWA-2232 requires conduct in accordance with Appendix I. Appendix I specifies that ultrasonic examination of piping welds be performed per Appendix III.

BASIS FOR RELIEF:
Pursuant to 10 CFR 50.55a(a)(3)(i) Detroit Edison is requesting relief from ASME Section XI requirements to use the amplitude based examination techniques described in Appendix III because more effective techniques are available.

The Utility Performance Demonstration Initiative (PDI) developed a program based on the 1992 Edition with the 1993 Addenda of ASME Section XI. This program requires that ultrasonic equipment, procedures, and examiners be qualified on flawed and notched specimens with configurations similar to those found in the plant. Consequently, the PDI Program provides a higher degree of reliability for detection and characterization of flaws when compared to the conventional amplitude-based ultrasonic techniques required by the 1989 Edition of ASME Section XI.

The NRC issued a letter to the Chairman of the BWR Owners Group on March 1, 1996 discussing the transition from the Intergranular Stress Corrosion Cracking (IGSCC) Qualification Program to the PDI Program for qualification requirements applicable to procedures and personnel for Generic Letter 88-01/NUREG-0313 examinations. The letter stated that personnel qualification and subsequent requalification for the IGSCC Program could be obtained through the PDI Program. The techniques developed and qualified through PDI are recognized as being superior to those specified in Appendix III.

ALTERNATIVES:

When examinations are being performed to satisfy the requirements of Generic Letter 88-01 and NUREG-0313, PDI qualified personnel and procedures will be used. For all other examinations, the techniques developed through the PDI program will be used by certified examination personnel trained in their use.

APPLICABLE TIME PERIOD

Relief is requested for the second 10-year inspection interval.

5.0 Program Support Drawings-

5.1 Inservice Inspection Classification Boundary Drawings

The systems or portions of systems subject to the examination requirements of the ISI-NDE Program for Fermi 2 and the associated Class 1, 2, and 3 boundaries are documented on ISI Classification Boundary Drawings. The ISI Classification Boundary Drawings are listed in Table A-5-5.1.

The system Inservice Inspection classifications, developed specifically to define the extent to which Section XI requirements will be applied, differ somewhat from the ASME Section III design classifications. These differences occur because systems, or portions of systems, have been optionally upgraded in design and because ISI classifications are limited to safety related systems which contain water, steam, or radioactive materials. The guidance provided by NUREG 0800, Regulatory Guide 1.26, and 10CFR50 were used in establishing these boundaries.

5.2 Inservice Inspection (ISI) Isometric Drawings for Class 1 and 2 Components and their Supports

The ASME Section XI, Class 1 and 2 isometrics referenced in Table A-5-5.2 of this program identify components subject to inservice inspection. Drawings are updated to conform to as-built configuration of plant piping systems following modifications.

TABLE A-5-5.1

FERMI-2 ISI CLASSIFICATION BOUNDARY DRAWINGS

Drawing Title	Dwg. No.	PIS No's Associated with Dwg.	ISI Code Class
Nuclear Boiler System	6M721-5808-1	B21	1
	6M721-5808-2		1
Main Steam Isolation Valve Leakage Control System	6M721-5808-1	B21-06	1
			2
Main and Reheat Steam Systems	6M721-5808-1	B21	1
	6M721-5822	N11/N30	2
Reactor Recirculation System-Nuclear Boiler System	6M721-5809	B31	1
Control Rod Drive System	6M721-5810-1	C11	2
			2
CRD Scram Discharge System	6M721-5810-2	C11	2
Stand-By-Liquid Control System	6M721-5811	C41	1
			2
Residual Heat Removal (RHR) Division I	6M721-5813-2	E11	1
			2
Residual Heat Removal (RHR) Division II	6M721-5813-1	E11	1
			2
RHR Service Water Make Up Decant and Overflow Systems	6M721-5813-3	E11	3
		P45	3
		R30	3
Core Spray System	6M721-5814	E21	1
			2
High Pressure Coolant Injection System (HPCI)	6M721-5815	E41	1
			2
Reactor Core Isolation Cooling System (RCIC)	6M721-5816	E51	1
Reactor Water Clean-Up	6M721-5818	G33	1

TABLE A-5-5.1 (Cont'd)

FERMI-2 ISI CLASSIFICATION BOUNDARY DRAWINGS

Drawing Title	Dwg. No.	PIS No's Associated with Dwg.	ISI Code Class
Fuel Pool Cooling and Clean-Up System	6M721-5819	G41	2
Torus Water Management System	6M721-5820	G51	2
Feedwater System	6M721-5821	N21	1
Sample Line Tie-In And Return Post Accident Sampling System	6M721-5824	P34	1 2
Emergency Equipment Cooling Water Division I	6M721-5825-1	P44	3
Emergency Equipment Cooling Water Division II	6M721-5825-2	P44	3
(Post Loca) Combustible Gas Control System	6M721-5830-2	T48	2

TABLE A-5-5.2

FERMI-2 ISI ISOMETRIC DRAWINGS

Class 1

Drawing	Description
6M721-2000-5	Index for Inservice Inspection Isometrics
6M721-2001-5	Legends and Symbols for Inservice Inspection Isometrics
6M721-2192-5	RCIC Steam Line in Drywell
6M721-2297-5	HPCI Steam Line in Drywell
6M721-2298-5	RHR Return Line Div. 1 (North)
6M721-2299-5	RHR From Recirc Pump Suction
6M721-2327-5	RHR Return Line Div. 2 (South)
6M721-3052-5	Core Spray Piping Div. 1 (North)
6M721-3053-5	Core Spray Piping Div. 2 (South)
6M721-3096-5	Reactor Water Clean-Up Suction From the RPV Bottom Head Drain
6M721-3536-5	Reactor Feedwater Piping (North)
6M721-3537-5	Reactor Feedwater Piping (South)
6M721-5351-5	Reactor Water Clean-Up Suction From the Recirc Loops
6M721-5352-5	Main Steam Loop A
6M721-5353-5	Main Steam Loop B
6M721-5354-5	Main Steam Loop C
6M721-5355-5	Main Steam Loop D
6M721-5356-5	Reactor Recirc Loop A Ring Header
6M721-5357-5	Reactor Recirc Loop A Pump Suction and Discharge
6M721-5358-5	Reactor Recirc Loop B Ring Header
6M721-5359-5	Reactor Recirc Loop B Pump Suction and Discharge
6M721-5360-5	Reactor Vessel No. 1
6M721-5361-5	Reactor Vessel No. 2
6M721-5362-5	Reactor Vessel No. 3
6M721-5363-5	Reactor Vessel No. 4
6M721-5364-5	Reactor Vessel No. 5
6M721-5365-5	Reactor Recirc Pump

Class 2

6M721-2095-5	Combustible Gas Control Return Header to Torus (Div. 1)
6M721-2097-5	Combustible Gas Control Return Header to Torus (Div. 2)
6M721-2979-5	Standby Liquid Control Explosive Valves and Line to Drywell Pen. X-42
6M721-3035-5	RHR Head Spray From Return Header to Drywell Penetration
6M721-3144-5	North Core Spray Pump Discharge to RPV
6M721-3145-5	North Core Spray Min. Low-Flow By-Pass & Test Line
6M721-3146-5	RHR Return (North) From RHRHX to Drywell Pen. No. X-13B
6M721-3147-5	Core Spreay Pump (South) Discharge to RPV Penet.
6M721-3148-5	Core Spray Pump (North) Suction From Supression Chamber

TABLE A-5-5.2
Class 2 cont'd

6M721-3149-5	Core Spray Pump (South) Suction From Supression Chamber
6M721-3150-5	South Core Spray Min Low-Flow By-Pass & Test Line
6M721-3151-5	RHR Return (South) From RHR HX to Drywell Pen. No. X-13A
6M721-3153-5	South RHT Pump Suction From Suppression Chamber
6M721-3154-5	North RHT Pump Suction From Suppression Chamber
6M721-3157-5	RHR Pump Discharge North
6M721-3158-5	RHR Pump (N & S) Discharge to Heat Exchanger
6M721-3159-5	RHR Containment Spray (North) From Header to RPV
6M721-3160-5	RHR Test Line & Suppression Chamber Spray Header (North)
6M721-3161-5	RHR Test Line (South) From 24" Header to Suppression Chamber
6M721-3162-5	HPCI Turbine Exhaust
6M721-3163-5	HPCI Booster Pump Suction From Suppression Chamber & Condensate Storage Header
6M721-3164-5	RHR Containment Spray (South) From Return Hdr. To Drywell Pen.
6M721-3167-5	HPCI Pump Discharge to South Reactor Feedwater Header
6M721-3169-5	HPCI From Pump Discharge to Condensate Storage System
6M721-3172-5	HPCI Steam Supply From RPV to HPCI Turbine Stop Valve
6M721-3177-5	RHR Pump Discharge (South)
6M721-3184-5	RHR Service Water Supply & Return to Hx's (Div. 2)
6M721-3258-5	Main Steam From Drywell to Turbine Manifold
6M721-3259-5	52" Main Steam Maniforld & Piping in Turbine Bldg.
6M721-3361-5	Standby Liquid Control Pump Suction
6M721-3519-5	RHR Head Spray
6M721-3669-5	RHR Supply Header to FPC System
6M721-4611-5	Relief Line From RHR HX (South)
6M721-4612-5	Relief Line From RHR HX (North)
6M721-5370-5	RHR Div. 2 Heat Exchanger B
6M721-5371-5	RHR Div. 1 Heat Exchanger A
6M721-5372-5	Control Rod Drive Scram Discharge Volume "A" North
6M721-5373-5	HPCI Booster to HPCI Main Pump
6M721-5374-5	Standby Liquid Control Pump Discharge & Test Tank Line
6M721-5375-5	Control Rod Drive Scram Discharge Volume "B" South

6.0 Inservice Inspection Program (Plan) Tables (NDE)

The accompanying table lists the components or areas that are to be examined during the interval. Listed in an order following the items presented in the ASME Section XI, Subsections IWB, IWC and IWD, the tables contain the following information:

Code Class: is the ASME Section XI Classification as determined in accordance with the Code of Federal Regulations (10CFR50.55a) and the guidance provided in Regulatory Guide 1.26, and NUREG 0800.

Interval: refers to the 120-month inspection interval as discussed in Section 2.0 of this document.

Code Category: is the Examination Category as defined by ASME Section XI, Subarticles IWB-2500, or IWC-2500, or IWD-2500.

Item Number: lists the Item No. as defined by ASME Section XI, Subarticles IWB-2500, IWC-2500, or IWD-2500.

Item numbers that are not applicable to Fermi 2 design were not included in Table A. This includes all Code Items specific to PWRs (Pressurizers, Steam Generators, Class 1 Heat Exchangers). Additionally, there are none of the following items applicable to BWRs. Category B-A Reactor Pressure Vessel repair welds, item B1.150. Category B-F dissimilar metal welds < 4" NPS, items B5.140 and B5.150. Pump casing or valve body welds in ASME Class 1 systems Category B-L-1 or B-M-1. Pump casing or valve body welds in ASME Class 2 systems Category G-G. Category C-B Nozzles in vessels, 0.5" in thickness.

Identification: Provides the unique identification for each weld or item.

Exam Required: identifies the method of examination proposed to satisfy the Code requirement for volumetric, surface, or visual examination. The specific examination selected is there shown for the component i.e. UT, PT, MT, or VT. (see list of abbreviations for expanded definitions).

Examination methods delineated in the tables are intended to be representative of the ISI practice to be used or of previous methods utilized. In either case, it should be recognized that either UT or RT are acceptable volumetric exams and either PT or MT are acceptable surface exams. Unique weld joint parameters may, of course, dictate more restrictive selection criteria; e.g., high background radiation will preclude RT, stainless materials will preclude MT, etc. It is intended that the process which selects exam methods for inspections under this plan treat UT and RT as interchangeable and PT and MT as interchangeable with consideration given to past practice in light of the reproducibility of results.

Relief Request: if applicable, indicates the request for relief applicable in accordance with 10CFR50.55a (g) (5) (iii). See Section 4.0 of this document.

Inspection Period: Indicates the scheduled period that the Code or Augmented examination (regulatory or licensing commitment) is to be completed. A period is defined as one of three 1/3 year time periods within the 120-month (10 year) interval when the specific examination is scheduled. A period can vary by +/- 1 year collectively over the 10 year interval. Each period contains the specific outage code indicating that the required exam has either been scheduled or completed.

Sel. Basis: shows the abbreviation for the basis for selection of a component for examination.

NOTE

A tentative schedule of specific examinations has been provided for the second 10 year interval. All exams are scheduled for inspection in accordance with the rules of ASME Section XI, IWA, IWB, IWC, IWD and IWF, and as augmented by specific commitments (e.g., NUREG 0313 or NUREG 0619). Future revisions to this program (plan) shall be issued to reflect actual examinations to be performed during each refuel outage as well as all examinations completed during previous outages.

Remarks: is reserved for additional information to explain, amplify, or provide added details necessary to clarify the examination requirements.

6.2 List of Abbreviations: The following abbreviations are used:

Plant Identification System (PIS) - Codes for Plant Systems

B11	-	PIS Number for the Reactor Pressure Vessel
B21	-	PIS Number for the Nuclear Boiler System
B31	-	PIS Number for the Reactor Recirculation System
C11	-	PIS Number for the Control Rod Drive System
C41	-	PIS Number for the Standby Liquid Control System
E11	-	PIS Number for the Residual Heat Removal System
E21	-	PIS Number for the Core Spray System
E41	-	PIS Number for the High Pressure Coolant Injection System
E51	-	PIS Number for the Reactor Core Isolation Cooling System
G11		PIS Number for the Rad Waste System
G33	-	PIS Number for the Reactor Water Cleanup System
G41	-	PIS Number for the Fuel Pool Cooling System
G51	-	PIS Number for the Torus Water Management System
N20	-	PIS Number for the Condensate System
N21	-	PIS Number for the Feedwater System
P11		PIS Number for the Condensate Storage and Transfer
N30	-	PIS Number for the Main Steam System
P34	-	PIS Number for the Post Accident Sampling System
P42	-	PIS Number for the Reactor Building Closed Cooling Water System
P44	-	PIS Number for the Emergency Equipment Cooling Water System
P45	-	PIS Number for the Emergency Equipment Service WaterSystem
P50		PIS Number for the Compressed Air System
R30	-	PIS Number for the Emergency Diesel Generator and Service Water System
T23		PIS Number for the Containment System
T46		PIS Number for the Standby Gas Treatment System
T48	-	PIS Number for the Combustible Gas Control System (T4804)
T49		PIS Number for the Primary Containment Pneumatic Supply System
T50	-	PIS Number for the Primary Containment Monitoring System
T71		PIS Number for Instrumentation

Acronyms Used to Identify Plant Systems

CGC	-	Combustible Gas Control
CRD	-	Control Rod Drive
CS	-	Core Spray
FPC	-	Fuel Pool Cleanup
HPCI	-	High Pressure Coolant Injection
RCIC	-	Reactor Core Isolation Cooling
RHR	-	Residual Heat Removal
RRC	-	Reactor Recirculation
RWCU	-	Reactor Water Cleanup
SDV	-	Scram Discharge Volume
SLC	-	Standby Liquid Control

Non-Destructive Examination Method Abbreviations

MT	-	Magnetic Particle Examination
PT	-	Liquid Penetrant Examination
UT	-	Ultrasonic Examination
VT	-	Visual Examination
VT-1	-	Visual Examination per IWA-2211
VT-2	-	Visual Examination per IWA-2212
VT-3	-	Visual Examination per IWA-2213
UT Mech.	-	UT Mechanized
UT Mech./Man.	-	UT Mechanized or Manual

Weld Selection Basis Abbreviations

HCU	-	High Cumulative Usage
HS	-	High Stress
MS	-	Moderate Stress
R	-	Random selection of structural discontinuity weld
TE	-	Terminal End
A	-	Augmented
DM	-	Dissimilar Metal Weld

Plant Component and Weld Terminology Abbreviations

CRDH	-	Control Rod Drive Housing
EXPJT	-	Pipe Expansion Joint
FBC	-	Flange Bolted Connection
FW	-	Field Weld
HX	-	Heat Exchanger
HXS	-	Heat Exchanger Shell
IBR	-	Inner Bore Region (Nozzle)
IRS	-	Inner Radius Section (Nozzle)
IIH	-	Incore Instrumentation Housing
LD	-	Longitudinal Downstream (Seam Weld)
LU	-	Longitudinal Upstream (Seam Weld)
PAD	-	Integral Attachment Weld Directly onto the Pressure Boundary of the Pipe
PSFW	-	Piping Support Field Weld
PS	-	Primary Steam (Nuclear Steam Supply System)
RD	-	Recirculation Discharge
RS	-	Recirculation Suction
SDV	-	Scram Discharge Volume
SW	-	Shop Weld
TRUNION	-	Hanger Support Welded Directly onto the Pressure Boundary of the Pipe
VBB	-	Valve Body and Bonnet Housing

Generic Miscellaneous Abbreviations

BWR	-	Boiling Water Reactor
DWG	-	Drawing
DW		Drywell
EF2	-	Enrico Fermi 2
in.	-	Inches
N/A	-	Not Applicable
NUREG	-	Nuclear Regulatory Guide
PWR	-	Pressurized Water Reactor
RR	-	Relief Request
RB	-	Reactor Builing
TB		Turbine Building
RPV	-	Reactor Pressure Vessel

Component Support Abbreviations

A	-	Anchor
C	-	Constant Support
G	-	Guide
R	-	Rigid Support
SP	-	Spring Hanger

Snubber Abbreviations

Mech	-	Mechanical Snubber
Hyd	-	Hydraulic Snubber

Outage Codes

XX	C or S
	Completed Exam or Scheduled Exam
	Refuel Outage Sequential Number

EXAMPLE: 07C - Seventh Refueling Outage, Completed Exam
08S - Eighth Refueling Outage, Scheduled Exam

NOTE: Modifications to the above Codes by inclusion of a "A" (Augmented Examination) "P" for (Partial Inspection) or an "L" for (Limited Examination) will be utilized as

necessary. Generally, the extent of the examination completed or limitations of the examination will be noted in the adjacent remarks column for each component.

Description of Building Floor Abbreviations:

DW – Primary Containment (Drywell)
RBB – Reactor Building Basement/Sub-basement
RB1 – Reactor Building First Floor
RB1 – Reactor Building Second Floor
RB1 – Reactor Bui!ding Third Floor
TB1 – Turbind Building First Floor
TB2 – Turbine Building Second Floor
TB3 – Turbine Building Third Floor

INSERVICE INSPECTION NDE PROGRAM

TABLE A

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-A									
B1.11	**Circumferential Shell Weld**								
4-308A		UT	All B-A Welds	5360-5	RR-A25	N/A	N/A		
4-308B		UT	All B-A Welds	5360-5	RR-A25	N/A	N/A		
1-313		UT	All B-A Welds	5360-5	RR-A25	N/A	N/A		
9-307		UT	All B-A Welds	5360-5	RR-A25	N/A	N/A		
B1.12	**Longitudinal Shell Weld**								
1-308A		UT	All B-A Welds	5360-5		08S			Note 14 Applies to all Category B-A Welds
1-308B		UT	All B-A Welds	5360-5		08S			
1-308C		UT	All B-A Welds	5360-5				12S	
1-308D		UT	All B-A Welds	5360-5				12S	
2-308A		UT	All B-A Welds	5360-5		08S			
2-308B		UT	All B-A Welds	5360-5				12S	
2-308C		UT	All B-A Welds	5360-5				12S	
15-308A		UT	All B-A Welds	5360-5				12S	
15-308B		UT	All B-A Welds	5360-5				12S	
15-308C		UT	All B-A Welds	5360-5		08S			
15-308D		UT	All B-A Welds	5360-5				12S	
2-307A		UT	All B-A Welds	5360-5		08S			
2-307B		UT	All B-A Welds	5360-5				12S	
2-307C		UT	All B-A Welds	5360-5				12S	
B1.21	**Circumferential Head Weld**								
5-319		UT	All B-A Welds	5360-5				11S	
4-319		UT	All B-A Welds	5360-5		08S	10S		08 - 2-319C to 2-319E 40% 10 - 2-319E to 2-319C 60%
6-306		UT	All B-A Welds	5360-5		08S	10S		One sided exam 180-360Deg, RF08, 0-180Deg, RF10
5-306		UT	All B-A Welds	5360-5	RR-A1				Inaccessible Weld
B1.22	**Meridional Head Weld**								
2-319A		UT	All B-A Welds	5360-5		08S			
2-319B		UT	All B-A Welds	5360-5		08S			
2-319C		UT	All B-A Welds	5360-5		08S			
2-319D		UT	All B-A Welds	5360-5				12S	
2-319E		UT	All B-A Welds	5360-5				12S	

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-A									
1-319A		UT	All B-A Welds	5360-5	RR-A1			12S	
1-319B		UT	All B-A Welds	5360-5		08S			
1-319C		UT	All B-A Welds	5360-5	RR-A1			12S	
1-319D		UT	All B-A Welds	5360-5			10S		
1-319E		UT	All B-A Welds	5360-5	RR-A1		10S		
1-319F		UT	All B-A Welds	5360-5			10S		
1-319G		UT	All B-A Welds	5360-5	RR-A1			12S	
1-319H		UT	All B-A Welds	5360-5		08S			
1-306A		UT	All B-A Welds	5360-5		08S			
1-306B		UT	All B-A Welds	5360-5			10S		
1-306C		UT	All B-A Welds	5360-5			10S		
1-306D		UT	All B-A Welds	5360-5		08S			
1-306E		UT	All B-A Welds	5360-5		08S			
1-306F		UT	All B-A Welds	5360-5				12S	
1-306G		UT	All B-A Welds	5360-5		08S			
1-306H		UT	All B-A Welds	5360-5				12S	
1-306J		UT	All B-A Welds	5360-5			10S		
1-306K		UT	All B-A Welds	5360-5		08S			
2-306A		UT	All B-A Welds	5360-5	RR-A1				Inaccessible Weld
2-306B		UT	All B-A Welds	5360-5	RR-A1				Inaccessible Weld
2-306C		UT	All B-A Welds	5360-5	RR-A1				Inaccessible Weld
2-306D		UT	All B-A Welds	5360-5	RR-A1				Inaccessible Weld
2-306E		UT	All B-A Welds	5360-5	RR-A1				Inaccessible Weld
2-306F		UT	All B-A Welds	5360-5	RR-A1				Inaccessible Weld
2-306G		UT	All B-A Welds	5360-5	RR-A1				Inaccessible Weld
B1.30	**Shell to Flange Weld**								
13-308		UT	All B-A Welds	5360-5	RR-A1	08SP		12SP	0-180Deg. RF-08, 180- 0Deg. RF-12
B1.40	**Head to Flange Weld**								
3-319		UT/MT	All B-A Welds	5360-5		08SP	10SP	12SP	1/3 of weld each scheduled Inspection Period

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-D									
B3.100	RPV Nozzle Inside Radius Section								
8-316A IRS		UT	All BD-IRS	5361-5			08S		
8-316B IRS		UT	All BD-IRS	5361-5			08S		
8-316C IRS		UT	All BD-IRS	5361-5			12S		
8-316D IRS		UT	All BD-IRS	5361-5			12S		
4-316A IRS		UT	All BD-IRS	5361-5			08S,	12SA	NUREG-0619
4-316A IRS		PT	All BD-IRS	5361-5			09SA		NUREG-0619
4-316B IRS		UT	All BD-IRS	5361-5			08S,	12SA	NUREG-0619
4-316B IRS		PT	All BD-IRS	5361-5			09SA		NUREG-0619
4-316C IRS		UT	All BD-IRS	5361-5		07SA	09SA	11S	NUREG-0619
4-316C IRS		PT	All BD-IRS	5361-5			09SA		NUREG-0619
4-316D IRS		UT	All BD-IRS	5361-5			08S,	12SA	NUREG-0619
4-316D IRS		PT	All BD-IRS	5361-5			09SA		NUREG-0619
4-316E IRS		UT	All BD-IRS	5361-5		07SA	09SA	11S	NUREG-0619
4-316E IRS		PT	All BD-IRS	5361-5			09SA		NUREG-0619
4-316F IRS		UT	All BD-IRS	5361-5		07SA	09SA	11S	NUREG-0619
4-316F IRS		PT	All BD-IRS	5361-5			09SA		NUREG-0619
14-316A IRS		UT	All BD-IRS	5361-5				12S	
14-316B IRS		UT	All BD-IRS	5361-5		08S			
15-315 IRS		UT	All BD-IRS	5361-5		08S			
13-314A IRS		UT	All BD-IRS	5361-5		08S			
13-314B IRS		UT	All BD-IRS	5361-5		08S			
13-314C IRS		UT	All BD-IRS	5361-5				12S	
13-314D IRS		UT	All BD-IRS	5361-5		08S			
13-314E IRS		UT	All BD-IRS	5361-5				12S	
13-314F IRS		UT	All BD-IRS	5361-5				12S	
13-314G IRS		UT	All BD-IRS	5361-5		08S			
13-314H IRS		UT	All BD-IRS	5361-5				12S	
13-314J IRS		UT	All BD-IRS	5361-5				12S	
13-314K IRS		UT	All BD-IRS	5361-5		08S			
5-314A IRS		UT	All BD-IRS	5361-5		08S			
5-314B IRS		UT	All BD-IRS	5361-5				12S	
19-314A IRS		UT	All BD Nozzles	5361-5	RR-A6			12S	
19-314B IRS		UT	All BD Nozzles	5361-5	RR-A6	08S			
2-318 IRS		UT	All BD Nozzles	5361-5				12S	
4-318A IRS		UT	All BD Nozzles	5361-5			09S		
4-318B IRS		UT	All BD Nozzles	5361-5			09S		

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-D									
4-316A IBR		UT	A	5361-5		08SA	10SA	12SA	NUREG-0619
4-316B IBR		UT	A	5361-5		08SA	10SA	12SA	NUREG-0619
4-316C IBR		UT	A	5361-5		07SA	09SA	11SA	NUREG-0619
4-316D IBR		UT	A	5361-5		08SA	10SA	12SA	NUREG-0619
4-316E IBR		UT	A	5361-5		07SA	09SA	11SA	NUREG-0619
4-316F IBR		UT	A	5361-5		07SA	09SA	11SA	NUREG-0619
B3.90	**RPV Nozzle to Vessel Weld**								
8-316A		UT	All B-D Nozzles	5361-5	RR-A6	08S			Note 14 Applies to all Category B-D Welds
8-316B		UT	All B-D Nozzles	5361-5	RR-A6	08S			
8-316C		UT	All B-D Nozzles	5361-5	RR-A6			12S	
8-316D		UT	All B-D Nozzles	5361-5	RR-A6			12S	
4-316A		UT	All B-D Nozzles	5361-5	RR-A6	08S			
4-316B		UT	All B-D Nozzles	5361-5	RR-A6	08S			
4-316C		UT	All B-D Nozzles	5361-5	RR-A6			11S	
4-316D		UT	All B-D Nozzles	5361-5	RR-A6	08S			
4-316E		UT	All B-D Nozzles	5361-5	RR-A6			11S	
4-316F		UT	All B-D Nozzles	5361-5	RR-A6			11S	
14-316A		UT	All B-D Nozzles	5361-5	RR-A6			12S	
14-316B		UT	All B-D Nozzles	5361-5	RR-A6	08S			
15-315		UT	All B-D Nozzles	5361-5	RR-A6	08S			
13-314A		UT	All B-D Nozzles	5361-5	RR-A6	08S			
13-314B		UT	All B-D Nozzles	5361-5	RR-A6	08S			
13-314C		UT	All B-D Nozzles	5361-5	RR-A6			12S	
13-314D		UT	All B-D Nozzles	5361-5	RR-A6	08S			
13-314E		UT	All B-D Nozzles	5361-5	RR-A6			12S	
13-314F		UT	All B-D Nozzles	5361-5	RR-A6			12S	
13-314G		UT	All B-D Nozzles	5361-5	RR-A6	08S			
13-314H		UT	All B-D Nozzles	5361-5	RR-A6			12S	
13-314J		UT	All B-D Nozzles	5361-5	RR-A6			12S	
13-314K		UT	All B-D Nozzles	5361-5	RR-A6	08S			
5-314A		UT	All B-D Nozzles	5361-5	RR-A6	08S			
5-314B		UT	All B-D Nozzles	5361-5	RR-A6			12S	
19-314A		UT	All B-D Nozzles	5361-5	RR-A6			12S	
19-314B		UT	All B-D Nozzles	5361-5	RR-A6	08S			
2-318		UT	All B-D Nozzles	5361-5	RR-A6			12S	

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-D									
	4-318A	UT	All B-D Nozzles	5361-5	RR-A6		09S		
	4-318B	UT	All B-D Nozzles	5361-5	RR-A6		09S		
B-E									
B4.11	**Partial Penetration Vessel Nozzle**								
	7-315	VT-2		5361-5		07S,	09S,	11S,	Each Refuel Outage - Note 4 applies to all B-E Items
	17-315	VT-2		5361-5		07S,	09S,	11S,	
B4.12	**Partial Penetration CRD Nozzle**								
	Control Rod Drive Nozzles Vessel to Stub Tube (185) 1-310-X__-Y__	VT-2		5363-5		07S,	09S,	11S,	25% Nozzles External Surfaces - Note 4
	Control Rod Drive Nozzles Vessel to Stub Tube to CRD Housing CRDH - X__-Y__ (185)	VT-2		5363-5		07S,	09S,	11S,	
B4.13	**Partial Penetration Insrumentation Nozzle**								
	2-315A	VT-2		5361-5		07S,	09S,	11S,	
	2-315B	VT-2		5361-5		07S,	09S,	11S,	
	2-315C	VT-2		5361-5		07S,	09S,	11S,	
	2-315D	VT-2		5361-5		07S,	09S,	11S,	
	2-315F	VT-2		5361-5		07S,	09S,	11S,	
	IIH-X__-Y__ (55)	VT-2		5363-5		07S			

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-F									
B5.10	Dissimilar Metal RPV Nozzle to Safe End Weld 4" NPS and Larger								
N5-A		UT	TE, DM, MS, A	3053-5			10SA		Notes 2 & 8 Cat. B
N5-A		PT	TE, DM, MS, A	3053-5			10SA		Notes 2 & 8 Cat. B
N5-B		UT	TE, DM, MS, A	3052-5		07S			Notes 2 & 8 Cat. B
N5-B		PT	TE, DM, MS, A	3052-5		07S			Notes 2 & 8 Cat. B
N-9		UT	TE, DM, A	5361-5			09S		Notes 2 & 8 Cat. B
N-9		PT	TE, DM, A	5361-5			09S		Notes 2 & 8 Cat. B
2-303A		UT	TE, DM, A	5358-5		08S			Notes 2 & 8 Cat. B
2-303A		PT	TE, DM, A	5358-5		08S			Notes 2 & 8 Cat. B
2-303B		UT	TE, DM, A	5358-5			09S		Notes 2 & 8 Cat. B
2-303B		PT	TE, DM, A	5358-5			09S		Notes 2 & 8 Cat. B
2-303C		UT	TE, DM, A	5358-5				12S	Notes 2 & 8 Cat. B
2-303C		PT	TE, DM, A	5358-5				12S	Notes 2 & 8 Cat. B
2-303D		UT	TE, DM, A	5358-5			09S		Notes 2 & 8 Cat. B
2-303D		PT	TE, DM, A	5358-5			09S		Notes 2 & 8 Cat. B
101-304E		UT	TE, DM, A	5358-5				12S	Notes 2 & 8 Cat. B
101-304E		PT	TE, DM, A	5358-5				12S	Notes 2 & 8 Cat. B
2-303F		UT	TE, DM, A	5356-5				12S	Notes 2 & 8 Cat. B
2-303F		PT	TE, DM, A	5356-5				12S	Notes 2 & 8 Cat. B
2-303G		UT	TE, DM, A	5356-5			09S		Notes 2 & 8 Cat. B
2-303G		PT	TE, DM, A	5356-5			09S		Notes 2 & 8 Cat. B
2-303H		UT	TE, DM, A	5356-5		07S			Notes 2 & 8 Cat. B
2-303H		PT	TE, DM, A	5356-5		07S			Notes 2 & 8 Cat. B
2-303J		UT	TE, DM, A	5356-5				11S	Notes 2 & 8 Cat. B
2-303J		PT	TE, DM, A	5356-5				11S	Notes 2 & 8 Cat. B
2-303K		UT	TE, DM, A	5356-5				12S	Notes 2 & 8 Cat. B
2-303K		PT	TE, DM, A	5356-5				12S	Notes 2 & 8 Cat. B
4-303A		UT	TE, DM, A	5357-5		07S			
4-303A		PT	TE, DM, A	5357-5		07S			
4-303B		UT	TE, DM, A	5359-5				11S	
4-303B		PT	TE, DM, A	5359-5				11S	
102-304A		UT	TE, DM, A	5361-5		07S			
102-304A		PT	TE, DM, A	5361-5		07S			
102-304B		UT	TE, DM, A	5361-5			10S		
102-304B		PT	TE, DM, A	5361-5			10S		
B5.130	Dissimilar Metal Piping Butt Weld 4" NPS and Larger								

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-F									
	SW-E11-2298-6WC	PT	DM, A	2298-5		07S			Notes 1 & 2, Category B
	SW-E11-2298-6WC	UT	DM, A	2298-5		07S			Notes 1 & 2, Category B
	SW-E11-2299-1WB	PT	DM, A	2299-5			09S		Notes 1 & 2, Category B
	SW-E11-2299-1WB	UT	DM, A	2299-5			09S		Notes 1 & 2, Category B
	SW-E11-2327-6WC	PT	DM, A	2327-5			11S		Notes 1 & 2, Category B
	SW-E11-2327-6WC	UT	DM, A	2327-5			11S		Notes 1 & 2, Category B
	SW-E21-3052-4WOX	PT	DM, A	3052-5		07S			Notes 1 , 2 & 8 Category B
	SW-E21-3052-4WOX	UT	DM, A	3052-5		07S			Notes 1 , 2 & 8 Category B
	SW-E21-3053-4WOX	PT	DM, A	3053-5			10S		Notes 1 , 2 & 8 Category B
	SW-E21-3053-4WOX	UT	DM, A	3053-5			10S		Notes 1 , 2 & 3 Category B
	SW-G33-3096-10WD	PT	DM, A	3096-5				12S	Notes 1 & 2 Category B
	SW-G33-3096-10WD	UT	DM, A	3096-5				12S	Notes 1 & 2, Category B
	SW-G33-3096-12WD	PT	DM, A	3096-5			09S		Notes 1 & 2, Category B
	SW-G33-3096-12WD	UT	DM, A	3096-5			09S		Notes 1 & 2, Category B
B5.20	Dissimilar Metal RPV Nozzle to Safe End Weld Less Than 4" NPS								
	15-315	PT	A			07S			Note 18
	15-315	UT	A			07S			Note 18

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-G-1									
B6.10	**RPV Closure Head Nuts Greater Than 2"**								
	326-02, 1 through 68	MT	>2" dia.	5362-5	RR-A27	08S	09S	11S	1/3 Each Period
B6.180	**Pump Studs Greater Than 2"**								
	RRC Pump A, Studs 1 through 16	UT	>2" dia.	5365-5		08S			
	RRC Pump B, Studs 1 through 16	UT	>2" dia.	5365-5				11S	
B6.190	**Pump Flange Surface, When Disassembled**								
	RRC Pump A, Flange	VT-1	>2" dia.	5365-5					Perform if disassembled
	RRC Pump B, Flange	VT-1	>2" dia.	5365-5					Perform if disassembled
B6.20	**RPV Closure Studs Greater Than 2", In-place**								
	326-01, 1 through 68	UT	>2" dia.	5362-5		08S	10S	11S	1/3 Each Period
B6.200	**Pump Nuts, Bushings, and Washers**								
	RRC Pump A Nuts, Bushings & Washers Set 1 - 16	VT-1	>2" dia.	5365-5		08S			
	RRC Pump B Nuts, Bushings & Washers Set 1 - 16	VT-1	>2" dia.	5365-5			11S		
B6.30	**RPV Closure Studs Greater Than 2", When Removed**								
	326-01, 1 through 68	MT	>2" dia.	5362-5			08S		48-51 Removed w/refueling chute
B6.40	**RPV, Threads in Flange**								
	1 through 68	UT	>2" dia.	5362-5		08S	09S	11S	1/3 Each Period
B6.50	**RPV Closure Washers and Bushings**								
	326-03, 1 through 68	VT-1	>2" dia.	5362-5		08S	09S	11S	1/3 Each Period

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-G-2									
B7.10	RPV Bolts, Studs, and Nuts 2" and Less								
	Spare Flange (0Deg)	VT-1	< 2" dia.	5361-5		08S			
	Spare Flange (180Deg)	VT-1	< 2" dia.	5361-5		08S			
	Instrumentation Nozzle	VT-1	< 2" dia.	5361-5			11S		
B7.50	Piping Bolts, Studs, and Nuts 2" and Less								
	FBC-E41-2297-01	VT-1	< 2" dia.	2297-5			09S		
	FBC-E51-2192-01	VT-1	< 2" dia.	2192-5			08S		
B7.60	Pump Bolts, Studs, and Nuts 2" and Less								
	Seal Bolting RRC Pump A	VT-1	< 2" dia.	5365-5			10S		
	Seal Bolting RRC Pump B	VT-1	< 2" dia.	5365-5			12S		
B7.70	Valve Bolts, Studs, and Nuts 2" and Less								
	FBC-B21-5352-01M	VT-1	< 2" dia.	5352-5		08S			
	B21-F013M-VBB	VT-1	< 2" dia.	5352-5		08S			
	FBC-B21-5352-01N	VT-1	< 2" dia.	5352-5		08S			
	B21-F013N-VBB	VT-1	< 2" dia.	5352-5		08S			
	FBC-B21-5352-01L	VT-1	< 2" dia.	5352-5		08S			
	B21-F013L-VBB	VT-1	< 2" dia.	5352-5		08S			
	B21-F022A-VBB	VT-1	< 2" dia.	5352-5				11S	
	B21-F028A-VBB	VT-1	< 2" dia.	5352-5			10S		
	FBC-B21-5353-01F	VT-1	< 2" dia.	5353-5			10S		
	B21-F013F-VBB	VT-1	< 2" dia.	5353-5			10S		
	FBC-B21-5353-01K	VT-1	< 2" dia.	5353-5		08S			
	B21-F013K-VBB	VT-1	< 2" dia.	5353-5		08S			
	FBC-B21-5353-01D	VT-1	< 2" dia.	5353-5				11S	
	B21-F013D-VBB	VT-1	< 2" dia.	5353-5				11S	
	FBC-B21-5353-01C	VT-1	< 2" dia.	5353-5			10S		
	B21-F013C-VBB	VT-1	< 2" dia.	5353-5			10S		
	FBC-B21-5353-01G	VT-1	< 2" dia.	5353-5		08S			
	B21-F013G-VBB	VT-1	< 2" dia.	5353-5		08S			
	B21-F022B-VBB	VT-1	< 2" dia.	5353-5				12S	
	B21-F028B-VBB	VT-1	< 2" dia.	5353-5				08S	
	FBC-B21-5354-01R	VT-1	< 2" dia.	5354-5				12S	
	B21-F013R-VBB	VT-1	< 2" dia.	5354-5				12S	
	FBC-B21-5354-01E	VT-1	< 2" dia.	5354-5			10S		

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-G-2									
	B21-F013E-VBB	VT-1	< 2" dia.	5354-5			10S		
	FBC-B21-5354-01B	VT-1	< 2" dia.	5354-5		08S			
	B21-F013B-VBB	VT-1	< 2" dia.	5354-5		08S			
	FBC-B21-5354-01J	VT-1	< 2" dia.	5354-5		08S			
	B21-F013J-VBB	VT-1	< 2" dia.	5354-5		08S			
	FBC-B21-5354-01H	VT-1	< 2" dia.	5354-5		08S			
	B21-F013H-VBB	VT-1	< 2" dia.	5354-5		08S			
	B21-F022C-VBB	VT-1	< 2" dia.	5354-5			10S		
	B21-F028C-VBB	VT-1	< 2" dia.	5354-5				11S	
	FBC-B21-5355-01P	VT-1	< 2" dia.	5355-5				12S	
	B21-F013P-VBB	VT-1	< 2" dia.	5355-5				12S	
	FBC-B21-5355-01A	VT-1	< 2" dia.	5355-5				12S	
	B21-F013A-VBB	VT-1	< 2" dia.	5355-5				12S	
	B21-F022D-VBB	VT-1	< 2" dia.	5355-5				12S	
	B21-F028D-VBB	VT-1	< 2" dia.	5355-5		08S			
	B31-F023A-VBB	VT-1	< 2" dia.	5357-5			09S		
	B31-F031A-VBB	VT-1	< 2" dia.	5357-5			09S		
	B31-F023B-VBB	VT-1	< 2" dia.	5359-5				11S	
	B31-F031B-VBB	VT-1	< 2" dia.	5359-5				11S	
	E11-F015A-VBB	VT-1	< 2" dia.	2298-5			09S		
	E11-F050A-VBB	VT-1	< 2" dia.	2298-5		08S			
	E11-F060A-VBB	VT-1	< 2" dia.	2298-5				12S	
	E11-F067-VBB	VT-1	< 2" dia.	2299-5			09S		
	E11-F009-VBB	VT-1	< 2" dia.	2299-5			09S		
	E11-F008-VBB	VT-1	< 2" dia.	2299-5				11S	
	E11-F008-VBB	VT-1	< 2" dia.	2299-5				12S	
	E11-F015B-VBB	VT-1	< 2" dia.	2327-5				11S	
	E11-F050B-VBB	VT-1	< 2" dia.	2327-5		08S			
	E11-F060B-VBB	VT-1	< 2" dia.	2327-5			10S		
	E21-F005A-VBB	VT-1	< 2" dia.	3052-5			09S		
	E21-F006A-VBB	VT-1	< 2" dia.	3052-5		08S			
	E21-F007A-VBB	VT-1	< 2" dia.	3052-5		08S			
	E21-F005B-VBB	VT-1	< 2" dia.	3053-5			09S		
	E21-F006B-VBB	VT-1	< 2" dia.	3053-5				11S	
	E21-F007B-VBB	VT-1	< 2" dia.	3053-5				12S	
	E41-F002-VBB	VT-1	< 2" dia.	2297-5				11S	
	E41-F003-VBB	VT-1	< 2" dia.	2297-5		08S			

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-G-2									
	E51-F007-VBB	VT-1	< 2" dia.	2192-5			09S		
	E51-F008-VBB	VT-1	< 2" dia.	2192-5				12S	
	G33-F004-VBB	VT-1	< 2" dia.	3096-5			09S		
	G33-F001-VBB	VT-1	< 2" dia.	3096-5		08S			
	G33-F101-VBB	VT-1	< 2" dia.	3096-5				12S	
	G33-F102-VBB	VT-1	< 2" dia.	3096-5				12S	
	G33-F100-VBB	VT-1	< 2" dia.	3096-5		08S			
	G33-F106-VBB	VT-1	< 2" dia.	3096-5				11S	
	G33-F120-VBB	VT-1	< 2" dia.	3096-5			08S		
	G33-F121-VBB	VT-1	< 2" dia.	3096-5			10S		
	G33-F220-VBB	VT-1	< 2" dia.	3096-5			10S		
	B21-F076A-VBB	VT-1	< 2" dia.	3537-5				11S	
	B21-F032A-VBB	VT-1	< 2" dia.	3537-5			09S		
	B21-F010A-VBB	VT-1	< 2" dia.	3537-5				12S	
	B21-F011A-VBB	VT-1	< 2" dia.	3537-5		08S			
	E41-F006-VBB	VT-1	< 2" dia.	3537-5			10S		
	B21-F076B-VBB	VT-1	< 2" dia.	3536-5				11S	
	B21-F032B-VBB	VT-1	< 2" dia.	3537-5				11S	
	B21-F010B-VBB	VT-1	< 2" dia.	3537-5			09S		
	B21-F011B-VBB	VT-1	< 2" dia.	3537-5		08S			
	E51-F013-VBB	VT-1	< 2" dia.	3537-5				11S	
B7.80	**CRD Bolts, Studs, and Nuts 2" and Less**								
	185 sets of Bolts, Studs and Nuts	Visual VT-1	< 2" dia.						When Disassembled

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-H									
B8.10	**RPV Integral Attachment Weld**								
3-306/4-309		MT	B-H Weld	5360-5		08S			10% of Weld length
3-306/4-309		UT	B-H Weld	5360-5		08SP			10% of Weld length
10-324B		MT	B-H Weld	5360-5		08S			Code Case N-509
8-319A		MT	B-H Weld	5360-5				12S	Supplemental exam for weld 1-391A, RR-A1
8-319B		MT	B-H Weld	5360-5				12S	Supplemental exam for weld 1-391C, RR-A1
8-319C		MT	B-H Weld	5360-5			10S		Supplemental exam for weld 1-391E, RR-A1
8-319D		MT	B-H Weld	5360-5				12S	Supplemental exam for weld 1-391G, RR-A1

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
B9.11	Circumferential Piping Weld 4" NPS or Larger								
	7-316A	MT	TE	5352-5		07S			
	7-316A	UT	TE	5352-5		07S			
	SW-PS-2-A1-A	MT	HS	5352-5		07S			
	SW-PS-2-A1-A	UT	HS	5352-5		07S			
	SW-PS-2-A1-B		HS	5352-5		07S			
	SW-PS-2-A1-B	UT	HS	5352-5		07S			
	FW-PS-2-A3	MT	HS	5352-5			09S		
	FW-PS-2-A3	UT	HS	5352-5			09S		
	SW-PS-2-A3-A	MT	HS	5352-5			09S		
	SW-PS-2-A3-A	UT		5352-5			09S		
	SW-PS-2-A3-C	MT		5352-5			10S		
	SW-PS-2-A3-C	UT	HS	5352-5			10S		
	SW-PS-2-A3-D	MT	HS	5352-5			10S		
	SW-PS-2-A3-D	UT	HS	5352-5			10S		
	SW-PS-2-A3-F	MT	HS	5352-5			09S		
	SW-PS-2-A3-F	UT	HS	5352-5			09S		
	SW-PS-2-A3-J	MT	HS	5352-5				11S	
	SW-PS-2-A3-J	UT	HS	5352-5				11S	
	FW-PS-2-A4	MT	MS	5352-5				11S	
	FW-PS-2-A4	UT	MS	5352-5				11S	
	SW-PS-2-A4-B	MT	MS	5352-5				12S	
	SW-PS-2-A4-B	UT	MS	5352-5				12S	
	FW-PS-2-A6	MT		5352-5			11S		
	FW-PS-2-A6	UT		5352-5			11S		
	7-316B	MT	TE	5353-5			09S		
	7-316B	UT	TE	5353-5			09S		
	SW-PS-2-B1-A	MT	MS	5353-5			09S		
	SW-PS-2-B1-A	UT	MS	5353-5			09S		
	SW-PS-2-B1-B	MT	MS	5353-5			09S		
	SW-PS-2-B1-B	UT	MS	5353-5			09S		
	FW-PS-2-B3	MT	MS	5353-5		08S			
	FW-PS-2-B3	UT	MS	5353-5		08S			
	SW-PS-2-B3-A	MT	MS	5353-5		08S			
	SW-PS-2-B3-A	UT	MS	5353-5		08S			
	SW-PS-2-B3-C	MT	HS, HCU	5353-5			10S		
	SW-PS-2-B3-C	UT	HS, HCU	5353-5			10S		

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-PS-2-B3-D	MT	HCU	5353-5				12S	
	SW-PS-2-B3-D	UT	HCU	5353-5				12S	
	SW-PS-2-B3-F	MT	HS, HCU	5353-5				11S	
	SW-PS-2-B3-F	UT	HS, HCU	5353-5				11S	
	SW-PS-2-B3-G	MT	HCU	5353-5				11S	
	SW-PS-2-B3-G	UT	HCU	5353-5				11S	
	SW-PS-2-B3-J	MT	HS	5353-5		07S			
	SW-PS-2-B3-J	UT	HS	5353-5		07S			
	SW-PS-2-B3-M	MT	HS	5353-5				12S	
	SW-PS-2-B3-M	UT	HS	5353-5				12S	
	SW-PS-2-B3-R	MT	HS	5353-5		08S			
	SW-PS-2-B3-R	UT	HS	5353-5		08S			
	SW-PS-2-B3-T	MT	MS	5353-5				11S	
	SW-PS-2-B3-T	UT	MS	5353-5				11S	
	FW-PS-2-B4	MT	MS	5353-5				11S	
	FW-PS-2-B4	UT	MS	5353-5				11S	
	7-316C	MT	TE	5354-5			10S		
	7-316C	UT	TE	5354-5			10S		
	SW-PS-2-C1-A	MT	MS	5354-5			10S		
	SW-PS-2-C1-A	UT	MS	5354-5			10S		
	SW-PS-2-C1-B	MT	MS	5354-5			10S		
	SW-PS-2-C1-B	UT	MS	5354-5			10S		
	FW-PS-2-C3	MT	MS	5354-5		07S			
	FW-PS-2-C3	UT	MS	5354-5		07S			
	SW-PS-2-C3-A	MT	MS	5354-5		08S			
	SW-PS-2-C3-A	UT	MS	5354-5		08S			
	SW-PS-2-C3-C	MT	HS	5354-5				11S	
	SW-PS-2-C3-C	UT	HS	5354-5				11S	
	SW-PS-2-C3-D	MT	R	5354-5				11S	
	SW-PS-2-C3-D	UT	R	5354-5				11S	
	SW-PS-2-C3-F	MT	MS	5354-5				12S	
	SW-PS-2-C3-F	UT	MS	5354-5				12S	
	SW-PS-2-C3-R	MT	HS	5354-5				11S	
	SW-PS-2-C3-R	UT	HS	5354-5				11S	
	SW-PS-2-C3-J	MT	HS	5354-5		08S			
	SW-PS-2-C3-J	UT	HS	5354-5		08S			
	SW-PS-2-C3-K	MT	R	5354-5		08S			

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-PS-2-C3-K	UT	R	5354-5		08S			
	SW-PS-2-C3-M	MT	HS	5354-5				12S	
	SW-PS-2-C3-M	UT	HS	5354-5				12S	
	SW-PS-2-C3-P	MT	MS	5354-5				12S	
	SW-PS-2-C3-P	UT	MS	5354-5				12S	
	SW-PS-2-C4	MT	MS	5354-5				12S	
	SW-PS-2-C4	UT	MS	5354-5				12S	
	7-316D	MT	TE	5355-5				12S	
	7-316D	UT Mech.	TE	5355-5				12S	
	SW-PS-2-D1-A	MT	HS	5355-5				12S	
	SW-PS-2-D1-A	UT	HS	5355-5				12S	
	SW-PS-2-D1-B	MT	HS	5355-5				12S	
	SW-PS-2-D1-B	UT	HS	5355-5				12S	
	FW-PS-2-D3	MT	HS	5355-5				11S	
	FW-PS-2-D3	UT	HS	5355-5				11S	
	SW-PS-2-D3-A	MT	HS	5355-5				11S	
	SW-PS-2-D3-A	UT	HS	5355-5				11S	
	SW-PS-2-D3-F	MT	MS	5355-5				12S	
	SW-PS-2-D3-F	UT	MS	5355-5				12S	
	SW-PS-2-D3-J	MT	HS	5355-5		07S			
	SW-PS-2-D3-J	UT	HS	5355-5		07S			
	SW-PS-2-X7D-W1	UT	MS	5355-5					Inaccessible for Examination
	SW-PS-2-X7D-W1	MT	MS	5355-5					Inaccessible for Examination
	FW-RS-2-A1	UT	A	5357-5				12SA	Note No. 2, Cat. B
	SW-RS-2-A1-W2	PT	R,A	5357-5		07S			Note No. 2, Cat. B
	SW-RS-2-A1-W2	UT	R,A	5357-5		07S			Note No. 2, Cat. B
	SW-RS-2-A2-W1	UT	A	5357-5			09S		Note No. 2, Cat. B; Code Case N-524
	FW-RS-2-A3	PT	R,A	5357-5		07S			Note No. 2, Cat. B
	FW-RS-2-A3	UT	R,A	5357-5		07S			Note No. 2, Cat. B
	FW-RS-2-A5	PT	R,A	5357-5	RR-A23		07S		Note No. 2, Cat. B
	FW-RS-2-A5	UT	R,A	5357-5			07S		Note No. 2, Cat. B
	FW-RD-2-A6	PT	R,A	5357-5			10S		Note No. 2, Cat. B
	FW-RD-2-A6	UT	R,A	5357-5			10S		Note No. 2, Cat. B
	FW-RD-2-A1-W1	PT	R, A	5357-5			10S		Note No. 2, Cat. B - UFSAR 5.2.3.2
	FW-RD-2-A1-W1	UT	R, A	5357-5			10S		Note No. 2, Cat. B
	FW-RD-2-A8	UT	A	5357-5				12SA	Note No. 2, Cat. B
	FW-RD-2-A2-W2	PT	R, A	5357-5				12S	Note No. 2, Cat. B - UFSAR 5.2.3.2

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-RD-2-A2-W2O	PT	R,A	5357-5				12S	Note 2, Category B-NE-83-842, NE-83-863
	SW-RD-2-A2-W2O	UT	R,A	5357-5				12S	Note 2, Category B-NE-83-842, NE-83-863
	SW-RD-2-A2-W2	PT	R,A	5357-5		07S			Note 2, Category B-NE-83-842, NE-83-863
	SW-RD-2-A2-W2	UT	R,A	5357-5		07S			Note 2, Category B-NE-83-842, NE-83-863
	FW-RD-2-A9	PT	A	5357-5		08SA			Note 2, Category B
	FW-RD-2-A9	UT	A	5357-5		08SA			Note 2, Category B
	SW-RD-2-A3-W7	PT	HS, A	5356-5		07S			Note 2, Category B
	SW-RD-2-A3-W7	UT	HS, A	5356-5		07S			Note 2, Category B
	SW-RD-2-A3-W9	PT	R, A	5356-5				11S	Note 2, Category B
	SW-RD-2-A3-W9	UT	R, A	5356-5				11S	Note 2, Category B
	FW-RD-2-A10	PT	HS, A	5356-5				12S	Note 2, Category B
	FW-RD-2-A10	UT	HS, A	5356-5				12S	Note 2, Category B
	SW-RD-2-A4-W2	PT	MS	5356-5				11S	Note 2, Category A
	SW-RD-2-A4-W2	UT	MS	5356-5				11S	Note 2, Category A
	FW-RD-2-A11	PT	HS, A	5356-5				11S	Note 2, Category B
	FW-RD-2-A11	UT	HS, A	5356-5				11S	Note 2, Category B
	FW-RD-2-A16	PT	R, A	5356-5			09S		Note 2, Category B
	FW-RD-2-A16	UT	R, A	5356-5			09S		Note 2, Category B
	FW-RD-2-A12	UT	A	5356-5			10SA		Note 2, Category B
	FW-RD-2-A13	PT	MS	5356-5			10S		Note 2, Category B
	FW-RD-2-A13	UT	MS	5356-5			10S		Note 2, Category B
	SW-RD-2-A6-W1	UT	A	5356-5				11SA	Note 2, Category A
	FW-RD-2-A14	PT	HS	5356-5				12S	Note 2, Category B
	FW-RD-2-A14	UT	HS	5356-5				12S	Note 2, Category B
	SW-RS-2-B1-W1	PT	R, A	5359-5				11S	Note 2, Category B
	SW-RS-2-B1-W1	UT	R, A	5359-5				11S	Note 2, Category B
	FW-RS-2-B2	UT	A	5359-5		08SA			Note 2, Category B
	SW-RS-2-B2-W10A	UT	A	5359-5			09SA		Note 2, Category B
	FW-RS-2-B4	UT	A	5359-5			10SA		Note 2, Category B
	SW-RS-2-B3-W1	UT	A	5359-5				12SA	Note 2, Category A
	FW-RD-2-B1-W1	PT	R, A	5359-5				11S	Note 2, Category B UFSAR 5.2.3.2
	FW-RD-2-B1-W1	UT	R, A	5359-5				11S	Note 2, Category B UFSAR 5.2.3.2;
	FW-RD-2-B7	UT	A	5359-5			10SA		

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	FW-RD-2-B2-W2	PT	R	5359-5		07S			Note 2, Category B UFSAR 5.2.3.2
	FW-RD-2-B2-W2	UT	R	5359-5		07S			Note 2, Category B UFSAR 5.2.3.2
	SW-RD-2-B2-W2O	PT	R	5359-5		07S			Note 2, Category B NE-83-842 & NE-83-863
	SW-RD-2-B2-W2O	UT	R	5359-5		07S			Note 2, Category B NE-83-842 & NE-83-863
	SW-RD-2-B2-W2	PT	R, A	5359-5			10S		Note 2, Category B NE-83-842 & NE-83-863
	SW-RD-2-B2-W2	UT	R, A	5359-5			10S		Note 2, Category B NE-83-842 & NE-83-863
	SW-RD-2-B3-W5	UT	A	5358-5		08SA			Note 2, Category B;
	SW-RD-2-B3-W6	UT	A	5358-5				11SA	Note 2, Category B
	SW-RD-2-B3-W7	PT	MS	5358-5			10S		Note 2, Category B
	SW-RD-2-B3-W7	UT	MS	5358-5			10S		Note 2, Category B
	SW-RD-2-B3-W8	UT	A	5358-5			10SA		Note 2, Category B
	FW-RD-2-B10	PT	HS	5358-5			10S		Note 2, Category B
	FW-RD-2-B10	UT	HS	5358-5			10S		Note 2, Category B
	SW-RD-2-B4-W2	PT	MS , A	5358-5				12S	Note 2, Category A
	SW-RD-2-B4-W2	UT	MS, A	5358-5				12S	Note 2, Category A
	FW-RD-2-B11	PT	HS	5358-5				11S	Note 2, Category B
	FW-RD-2-B11	UT	HS	5358-5				11S	Note 2, Category B
	SW-RD-2-B5-W2	PT	R, A	5358-5			09S		Note 2, Category A
	SW-RD-2-B5-W2	UT	R, A	5358-5			09S		
	FW-RD-2-B16	UT	A	5358-5			09SA		Note 2, Category B
	SW-RD-2-B8-W1	PT	R, A	5358-5		07S			Note 2, Category A
	SW-RD-2-B8-W1	UT	R, A	5358-5		07S			Note 2, Category A
	SW-RD-2-B8-W2	PT	R, A	5358-5		08S			Note 2, Category A
	SW-RD-2-B8-W2	UT	R, A	5358-5		08S			Note 2, Category A
	FW-RD-2-B13	PT	MS, A	5358-5		07S			Note 2, Category B
	FW-RD-2-B13	UT	MS, A	5358-5		07S			Note 2, Category B
	FW-RD-2-B18	PT	A	5358-5		07SA			Note 2, Category B
	FW-RD-2-B18	UT	A	5358-5		07SA			Note 2, Category B
	FW-RD-2-B14	PT	MS, A	5358-5				11S	Note 2, Category B
	FW-RD-2-B14	UT	MS, A	5358-5				11S	Note 2, Category B
	FW-RD-2-B19	UT	A	5358-5			10SA		Note 2, Category B
	FW-E11-2298-0W1	MT	HS	2298-5			10S		
	FW-E11-2298-0W1	UT	HS	2298-5			10S		

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-E11-2298-2WE	MT	R	2298-5				12S	
	SW-E11-2298-2WE	UT	R	2298-5				12S	
	FW-E11-2298-2W3	MT	R	2298-5			10S		
	FW-E11-2298-2W3	UT	R	2298-5			10S		
	FW-E11-2298-4W0	MT	R	2298-5		08S			
	FW-E11-2298-4W0	UT	R	2298-5		08S			
	SW-E11-2298-6WC	PT	DM, A	2298-5		07S			Note 1 & 2, Category B
	SW-E11-2298-6WC	UT	DM, A	2298-5		07S			Note 1 & 2, Category B
	FW-E11-2298-6W0	PT	HS, A	2298-5		07S			Note 2, Category B
	FW-E11-2298-6W0	UT	HS, A	2298-5		07S			Note 2, Category B
	FW-E11-2299-OW1	PT	HS, A	2299-5	RR-A23		09S		Note 2, Category B
	FW-E11-2299-OW1	UT	HS, A	2299-5	RR-A23		09S		Note 2, Category B
	SW-E11-2299-1WB	PT	DM, A	2299-5			09S		Note1 & 2, Category B
	SW-E11-2299-1WB	UT	DM, A	2299-5			09S		Note1 & 2, Category B
	FW-E11-2299-1W0	MT	R	2299-5				12S	
	FW-E11-2299-1W0	UT	R	2299-5				12S	
	SW-E11-2299-3WAM	MT	R	2299-5		07S			
	SW-E11-2299-3WAM	UT	R	2299-5		07S			
	SW-E11-2299-4WQ	MT	R	2299-5			10S		
	SW-E11-2299-4WQ	UT	R	2299-5			10S		
	FW-E11-2299-2WF3	MT	R	2299-5			09S		
	FW-E11-2299-2WF3	UT	R	2299-5			09S		
	SW-E11-2299-3WW	MT	R	2299-5				11S	
	SW-E11-2299-3WW	UT	R	2299-5				11S	
	FW-E11-2299-5W0	MT	HS	2299-5				12S	
	FW-E11-2299-5W0	UT	HS	2327-5				12S	
	FW-E11-2327-0W1	MT	HS	2327-5		07S			
	FW-E11-2327-0W1	UT	HS	2327-5		G7S			
	FW-E11-2327-3W4	MT	R	2327-5			10S		
	FW-E11-2327-3W4	UT	R	2327-5			10S		
	SW-E11-2327-4WB	MT	R	2327-5		08S			
	SW-E11-2327-4WB	UT	R	2327-5		08S			
	FW-E11-2327-0W6	MT	R	2327-5				11S	
	FW-E11-2327-0W6	UT	R	2327-5				11S	
	SW-E11-2327-6WC	PT	DM, A	2327-5				11S	Notes 1 & 2, Category B
	SW-E11-2327-6WC	UT	DM, A	2327-5				11S	Notes 1 & 2, Category B
	FW-E11-2327-6W0	PT	HS, A	2327-5				11S	Note 2 Category B

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	FW-E11-2327-6W0	UT	HS, A	2327-5				11S	Note 2 Category B
	SW-E21-3052-3WP	MT	HS	3052-5		07S			
	SW-E21-3052-3WP	UT	HS	3052-5		07S			
	SW-E21-3052-3WN	MT	HS	3052-5				11S	
	SW-E21-3052-3WN	UT	HS	3052-5				11S	
	SW-E21-3052-4WK	MT	MS	3052-5				12S	
	SW-E21-3052-4WK	UT	MS	3052-5				12S	
	FW-E21-3052-4WF1	MT	MS	3052-5				12S	
	FW-E21-3052-4WF1	UT	MS	3052-5				12S	
	SW-E21-3052-4W0X	PT	DM, A	3052-5		07S			Notes 1, 2, & 8, Category B
	SW-E21-3052-4W0X	UT	DM, A	3052-5		07S			Notes 1, 2, & 8, Category B
	SW-E21-3053-3WP	MT	HS	3053-5			09S		
	SW-E21-3053-3WP	UT	HS	3053-5			09S		
	SW-E21-3053-3WN	MT	HS	3053-5			09S		
	SW-E21-3053-3WN	UT	HS	3053-5			09S		
	SW-E21-3053-4WK	MT	MS	3053-5		08S			
	SW-E21-3053-4WK	UT	MS	3053-5		08S			
	FW-E21-3053-4WF2	MT	MS	3053-5				12S	
	FW-E21-3053-4WF2	UT	MS	3053-5				12S	
	SW-E21-3053-4W0X	PT	DM, A	3053-5			10S		Notes 1, 2, & 8, Category B
	SW-E21-3053-4W0X	UT	DM, A	3053-5			10S		Notes 1, 2, & 8, Category B
	FW-E41-2297-2W3	MT	R	2297-5		07S			
	FW-E41-2297-2W3	UT	R	2297-5		07S			
	FW-E41-2297-3W0	MT	R	2297-5			10S		
	FW-E41-2297-3W0	UT	R	2297-5			10S		
	FW-E41-2297-0W4	MT	R	2297-5		08S			
	FW-E41-2297-0W4	UT	R	2297-5		08S			
	SW-E51-2192-6WJ	MT	R	2192-5			09S		
	SW-E51-2192-6WJ	UT	R	2192-5			09S		
	FW-E51-2192-1VW5	MT	R	2192-5				11S	
	FW-E51-2192-1VW5	UT	R	2192-5				11S	
	FW-E51-2192-0W1	MT	HS	2192-5				11S	
	FW-E51-2192-0W1	UT	HS	2192-5				11S	
	FW-G33-3096-6WF4	MT	R	3096-5			10S		
	FW-G33-3096-6WF4	UT	R	3096-5			10S		
	SW-G33-3096-3WG	MT	R	3096-5		08S			
	SW-G33-3096-3WG	UT	R	3096-5		08S			

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-G33-3096-12WD	PT	DM, A	5351-5			09S		Note 1 & 2, Category B
	SW-G33-3096-12WD	UT	DM, A	5351-5			09S		Note 1 & 2, Category B
	SW-G33-3096-12WB	MT	HS	5351-5			09S		
	SW-G33-3096-12WB	UT	HS	5351-5			09S		
	FW-G33-3096-12WF2	UT	A	5351-5			10SA		Note 2, Category B
	FW-G33-3096-12WF3	PT	HS	5351-5			10S		Note 2, Category B
	FW-G33-3096-12WF3	UT	HS	5351-5			10S		Note 2, Category B
	SW-G33-3096-5WD	MT	MS	3096-5				11S	
	SW-G33-3096-5WD	UT	MS	3096-5				11S	
	FW-G33-3096-8W11	MT	R	5351-5			10S		
	FW-G33-3096-8W11	UT	R	5351-5			10S		
	FW-G33-3096-10WF3	PT	HS	5351-5		08S			Note 2, Category B
	FW-G33-3096-10WF3	UT	HS	5351-5		08S			Note 2, Category B
	FW-G33-3096-10WF1	PT	R	5351-5				12S	Note 2, Category B
	FW-G33-3096-10WF1	UT	R	5351-5				12S	Note 2, Category B
	SW-G33-3096-10WD	PT	DM, A	5351-5				12S	Note 1 & 2, Category B
	SW-G33-3096-10WD	UT	DM, A	5351-5				12S	Note 1 & 2, Category B
	FW-G33-3096-10WF4	PT	HS	5351-5		08S			
	FW-G33-3096-10WF4	UT	HS	5351-5		08S			
	FW-G33-3096-9WF1	PT	MS	5351-5		08S			
	FW-G33-3096-9WF1	UT	MS	5351-5		08S			
	SW-G33-3096-8WG	MT	R	5351-5				12S	
	SW-G33-3096-8WG	UT	R	5351-5				12S	
	FW-N21-2336-11W02	MT	HS	3537-5				11S	HPCI Selection
	FW-N21-2336-11W02	UT	HS	3537-5				11S	
	FW-N21-2336-2W0	MT	MS	3537-5		07S			
	FW-N21-2336-2W0	UT	MS	3537-5		07S			
	FW-N21-2336-0W13	MT	MS	3537-5			10S		
	FW-N21-2336-0W13	UT	MS	3537-5			10S		
	SW-N21-2336-13WC	MT	MS	3537-5		07S			
	SW-N21-2336-13WC	UT	MS	3537-5		07S			
	FW-N21-2336-13W14	MT	HS	3537-5				11S	
	FW-N21-2336-13W14	UT	HS	3537-5				11S	
	FW-N21-2336-14WF1	MT	MS	3537-5				12S	
	FW-N21-2336-14WF1	UT	MS	3537-5				12S	
	FW-N21-2336-14W15	MT	HS	3537-5			09S		
	FW-N21-2336-14W15	UT	HS	3537-5			09S		

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-N21-2336-15WP	MT	R	3537-5		07S			
	SW-N21-2336-15WP	UT	R	3537-5		07S			
	FW-N21-2336-15W0	MT	R	3537-5		07S			
	FW-N21-2336-15W0	UT	R	3537-5		07S			
	N4A	MT	R	3537-5		08S			
	N4A	UT	R	3537-5		08S			
	3-316A	MT	TE	3537-5		08S			
	3-316A	UT	TE	3537-5		08S			
	SW-N21-2336-13WE	MT	MS	3537-5		07S			
	SW-N21-2336-13WE	UT	MS	3537-5		07S			
	3-316B	MT	TE	3537-5		08S			
	3-316B	UT	TE	3537-5		08S			
	FW-N21-2336-16W19	MT	R	3537-5				11S	
	FW-N21-2336-16W19	UT	R	3537-5				11S	
	3-316C	MT	TE	3537-5				11S	
	3-316C	UT	TE	3537-5				11S	
	FW-N21-2336-1W02	MT	HS	3536-5				12S	RCIC Selection
	FW-N21-2336-1W02	UT	HS	3536-5				12S	RCIC Selection
	SW-N21-2336-1WB	MT	MS	3536-5				12S	RCIC Selection
	SW-N21-2336-1WB	UT	MS	3536-5				12S	RCIC Selection
	FW-N21-2336-1W03	MT	HS	3536-5	RR-A23		10S		RWCU Selection
	FW-N21-2336-1W03	UT	HS	3536-5			10S		RWCU Selection
	SW-N21-2336-1WD	MT	HS	3536-5			10S		RCIC Selection
	SW-N21-2336-1WD	UT	HS	3536-5			10S		RCIC Selection
	SW-N21-2336-1WU	MT	MS	3536-5		07S			RCIC Selection
	SW-N21-2336-1WU	UT	MS	3536-5		07S			RCIC Selection
	FW-N21-2336-0W1	MT	MS	3536-5			10S		
	FW-N21-2336-0W1	UT	MS	3536-5	RR-A23		10S		
	SW-N21-2336-1WL	MT	MS	3536-5		07S			
	SW-N21-2336-1WL	UT	MS	3536-5		07S			
	FW-N21-2336-12W0	MT	MS	3536-5			10S		
	FW-N21-2336-12W0	UT	MS	3536-5			10S		
	FW-N21-2336-0W3	MT	HS	3536-5				12S	
	FW-N21-2336-0W3	UT	HS	3536-5				12S	
	SW-N21-2336-3WC	MT	MS	3536-5			09S		
	SW-N21-2336-3WC	UT	MS	3536-5			09S		
	FW-N21-2336-3W4	MT	HS	3536-5			03C		

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	FW-N21-2336-3W4	UT	HS	3536-5			03C		
	SW-N21-2336-4WC	MT	MS	3536-5				11S	
	SW-N21-2336-4WC	UT	MS	3536-5				11S	
	FW-N21-2336-4W5	MT	HS	3536-5				11S	
	FW-N21-2336-4W5	UT	HS	3536-5				11S	
	3-316F	MT	TE	3536-5				12S	
	3-316F	UT	TE	3536-5				12S	
	SW-N21-2336-3WE	MT	MS	3536-5			09S		
	SW-N21-2336-3WE	UT	MS	3536-5			09S		
	3-316E	MT	TE	3536-5				12S	
	3-316E	UT	TE	3536-5				12S	
	3-316D	MT	TE	3536-5			10S		
	3-316D	UT	TE	3536-5			10S		
	1-318	MT	TE	5361-5				11S	
	1-318	UT	TE	5361-5				11S	
	3-318A	MT	R	5361-5			09S		
	3-318A	UT	R	5361-5			09S		
	3-318B	MT	R	5361-5			09S		
	3-318B	UT	R	5361-5			09S		
	N8A	PT	TE	5361-5		07S			Note 2, Category B
	N8A	UT	TE	5361-5		07S			
	N8B	PT	TE	5361-5			10S		
	N8B	UT	TE	5361-5			10S		
B9.12	Longitudinal Piping Weld 4" NPS or Larger								
	SW-PS-2-A1-ALU			5352-5					Code Case N-524
	SW-PS-2-A1-ALU			5352-5					Code Case N-524
	SW-PS-2-A1-ALD-I			5352-5		07S			Code Case N-524
	SW-PS-2-A1-ALD-I			5352-5		07S			Code Case N-524
	SW-PS-2-A1-ALD-O			5352-5		07S			Code Case N-524
	SW-PS-2-A1-ALD-O			5352-5		07S			Code Case N-524
	SW-PS-2-A1-BLU-I			5352-5		07S			Code Case N-524
	SW-PS-2-A1-BLU-I			5352-5		07S			Code Case N-524
	SW-PS-2-A1-BLU-O			5352-5		07S			Code Case N-524
	SW-PS-2-A1-BLU-O			5352-5		07S			Code Case N-524
	SW-PS-2-A1-BLD	MT		5352-5		07S			Code Case N-524
	SW-PS-2-A1-BLD	UT		5352-5		07S			Code Case N-524

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-PS-2-A3LU	MT		5352-5			09S		Code Case N-524
	SW-PS-2-A3LU	UT		5352-5			09S		Code Case N-524
	SW-PS-2-A3LD-O			5352-5			09S		Code Case N-524
	SW-PS-2-A3LD-O			5352-5			09S		Code Case N-524
	SW-PS-2-A3-ALU-O			5352-5			09S		Code Case N-524
	SW-PS-2-A3-ALU-O			5352-5			09S		Code Case N-524
	SW-PS-2-A3-ALD			5352-5			09S		Code Case N-524
	SW-PS-2-A3-ALD			5352-5			09S		Code Case N-524
	SW-PS-2-A3-LLD	MT		5352-5			09S		Code Case N-524
	SW-PS-2-A3-LLD	UT		5352-5			09S		Code Case N-524
	SW-PS-2-A3-LLU	MT		5352-5			09S		
	SW-PS-2-A3-LLU	UT		5352-5			09S		
	SW-PS-2-A4LU-0	MT		5352-5				11S	Code Case N-524
	SW-PS-2-A4LU-0	UT		5352-5				11S	Code Case N-524
	SW-PS-2-A4LD			5352-5				11S	Code Case N-524
	SW-PS-2-A4LD			5352-5				11S	Code Case N-524
	SW-PS-2-A4-BLU-0			5352-5				12S	Code Case N-524
	SW-PS-2-A4-BLU-0			5352-5				12S	Code Case N-524
	SW-PS-2-A4-BLD	MT		5352-5				12S	Code Case N-524
	SW-PS-2-A4-BLD	UT		5352-5				12S	Code Case N-524
	SW-PS-2-A6LU	MT		5352-5				11S	Code Case N-524
	SW-PS-2-A6LU	UT		5352-5				11S	Code Case N-524
	SW-PS-2-B1-ALU			5353-5			09S		Code Case N-524
	SW-PS-2-B1-ALU			5353-5			09S		Code Case N-524
	SW-PS-2-B1-ALD-I			5353-5			09S		Code Case N-524
	SW-PS-2-B1-ALD-I			5353-5			09S		Code Case N-524
	SW-PS-2-B1-ALD-O			5353-5			09S		Code Case N-524
	SW-PS-2-B1-ALD-O			5353-5			09S		Code Case N-524
	SW-PS-2-B1-BLU-I			5353-5			09S		Code Case N-524
	SW-PS-2-B1-BLU-I			5353-5			09S		Code Case N-524
	SW-PS-2-B1-BLU-O			5353-5			09S		Code Case N-524
	SW-PS-2-B1-BLU-O			5353-5			09S		Code Case N-524
	SW-PS-2-B1-BLD			5353-5			09S		Code Case N-524
	SW-PS-2-B1-BLD			5353-5			09S		Code Case N-524
	SW-PS-2-B3LU			5353-5		08S			Code Case N-524
	SW-PS-2-B3LU			5353-5		08S			Code Case N-524
	SW-PS-2-B3LD-O			5353-5		08S			Code Case N-524

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-PS-2-B3LD-O			5353-5		08S			Code Case N-524
	SW-PS-2-B3-ALU-O			5353-5		08S			Code Case N-524
	SW-PS-2-B3-ALU-O			5353-5		08S			Code Case N-524
	SW-PS-2-B3-ALD			5353-5		08S			Code Case N-524
	SW-PS-2-B3-ALD			5353-5		08S			Code Case N-524
	SW-PS-2-B3-TLU			5353-5			11S		Code Case N-524
	SW-PS-2-B3-TLU			5353-5			11S		Code Case N-524
	SW-PS-2-B3-TLD-I			5353-5				11S	Code Case N-524
	SW-PS-2-B3-TLD-I			5353-5				11S	Code Case N-524
	SW-PS-2-B3-TLD-O			5353-5				11S	Code Case N-524
	SW-PS-2-B3-TLD-O			5353-5				11S	Code Case N-524
	SW-PS-2-B4-LU-I			5353-5				11S	Code Case N-524
	SW-PS-2-B4-LU-I			5353-5				11S	Code Case N-524
	SW-PS-2-B4-LU-O			5353-5				11S	Code Case N-524
	SW-PS-2-B4-LU-O			5353-5				11S	Code Case N-524
	SW-PS-2-B4LD			5353-5				11S	Code Case N-524
	SW-PS-2-B4LD			5353-5				11S	Code Case N-524
	SW-PS-2-C1-ALU			5354-5			10S		Code Case N-524
	SW-PS-2-C1-ALU			5354-5			10S		Code Case N-524
	SW-PS-2-C1-ALD-I	MT		5354-5			10S		Code Case N-524
	SW-PS-2-C1-ALD-I	UT		5354-5			10S		Code Case N-524
	SW-PS-2-C1-ALD-O	MT		5354-5			10S		Code Case N-524
	SW-PS-2-C1-ALD-O	UT		5354-5			10S		Code Case N-524
	SW-PS-2-C1-BLU-I	MT		5354-5			10S		Code Case N-524
	SW-PS-2-C1-BLU-I	UT		5354-5			10S		Code Case N-524
	SW-PS-2-C1-BLU-O	MT		5354-5			10S		Code Case N-524
	SW-PS-2-C1-BLU-O	UT		5354-5			10S		Code Case N-524
	SW-PS-2-C1-BLD	MT		5354-5			10S		Code Case N-524
	SW-PS-2-C1-BLD	UT		5354-5			10S		Code Case N-524
	SW-PS-2-C3LU	MT		5354-5		08S			Code Case N-524
	SW-PS-2-C3LU	UT		5354-5		08S			Code Case N-524
	SW-PS-2-C3LD-O	MT		5354-5		07S			Code Case N-524
	SW-PS-2-C3LD-O	UT		5354-5		07S			Code Case N-524
	SW-PS-2-C3-ALU-O	MT		5354-5		08S			Code Case N-524
	SW-PS-2-C3-ALU-O	UT		5354-5		08S			Code Case N-524
	SW-PS-2-C3-ALD	MT		5354-5			08S		Code Case N-524
	SW-PS-2-C3-ALD	UT		5354-5			08S		Code Case N-524

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-PS-2-C3-PLU	MT		5354-5				12S	Code Case N-524
	SW-PS-2-C3-PLU	UT		5354-5				12S	Code Case N-524
	SW-PS-2-C3-PLD-I	MT		5354-5				12S	Code Case N-524
	SW-PS-2-C3-PLD-I	UT		5354-5				12S	Code Case N-524
	SW-PS-2-C3-PLD-O	UT		5354-5				12S	Code Case N-524
	SW-PS-2-C3-PLD-O	UT		5354-5				12S	Code Case N-524
	SW-PS-2-C4LU-I	UT		5354-5				12S	Code Case N-524
	SW-PS-2-C4LU-I	UT		5354-5				12S	Code Case N-524
	SW-PS-2-C4LU-O	UT		5354-5				12S	Code Case N-524
	SW-PS-2-C4LU-O	UT		5354-5				12S	Code Case N-524
	SW-PS-2-C4LD	MT		5354-5				12S	Code Case N-524
	SW-PS-2-C4LD	UT		5354-5				12S	Code Case N-524
	SW-PS-2-D1-ALU	MT		5355-5				12S	Code Case N-524
	SW-PS-2-D1-ALU	UT		5355-5				12S	Code Case N-524
	SW-PS-2-D1-ALD-I	MT		5355-5				12S	Code Case N-524
	SW-PS-2-D1-ALD-I	UT		5355-5				12S	Code Case N-524
	SW-PS-2-D1-ALD-O	MT		5355-5				12S	Code Case N-524
	SW-PS-2-D1-ALD-O	UT		5355-5				12S	Code Case N-524
	SW-PS-2-D1-BLU-I	MT		5355-5				12S	Code Case N-524
	SW-PS-2-D1-BLU-I	UT		5355-5				12S	Code Case N-524
	SW-PS-2-D1-BLU-O	MT		5355-5				12S	Code Case N-524
	SW-PS-2-D1-BLU-O	UT		5355-5				12S	Code Case N-524
	SW-PS-2-D1-BLD	MT		5355-5				12S	Code Case N-524
	SW-PS-2-D1-BLD	UT		5355-5				12S	Code Case N-524
	SW-PS-2-D3LU	MT		5355-5				11S	Code Case N-524
	SW-PS-2-D3LU	UT		5355-5				11S	Code Case N-524
	SW-PS-2-D3LD-O	MT		5355-5				11S	Code Case N-524
	SW-PS-2-D3LD-O	UT		5355-5				11S	Code Case N-524
	SW-PS-2-D3-ALU-O	MT		5355-5				11S	Code Case N-524
	SW-PS-2-D3-ALU-O	UT		5355-5				11S	Code Case N-524
	SW-PS-2-D3-ALD	MT		5355-5				11S	Code Case N-524
	SW-PS-2-D3-ALD	UT		5355-5				11S	Code Case N-524
	SW-RS-2-A1LD	UT		5357-5				12SA	Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A1-W2LU-I	PT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A1-W2LU-I	UT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A1-W2LU-O	PT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A1-W2LU-O	UT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-RS-2-A1-W2LD	PT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A1-W2LD	UT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A2-W1LU	UT		5357-5			09S		Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A2-W1LD-I	UT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A2-W1LD-O	UT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A3-LU-I	PT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A3-LU-I	UT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A3-LU-O	PT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A3-LU-O	UT		5357-5		07S			Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A5LU-I	PT		5357-5			10S		Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A5LU-I	UT		5357-5			10S		Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A5LU-O	PT		5357-5			10S		Note No. 2, Cat. B; Code Case N-524
	SW-RS-2-A5LU-O	UT		5357-5			10S		Note No. 2, Cat. B; Code Case N-524
	SW-RD-2-A6LD	PT		5357-5			10S		Code Case N-524
	SW-RD-2-A6LD	UT		5357-5			10S		Code Case N-524
	SW-RD-2-A8LD-I	UT		5357-5				12SA	Code Case N-524
	SW-RD-2-A8LD-O	UT		5357-5				12SA	Code Case N-524
	FW-RD-2-A2-W2	UT	R, A	5357-5				12S	Note No. 2, Cat. B - UFSAR 5.2.3.2
	SW-RD-2-A2-W2OLU	PT		5357-5				12S	Code Case N-524
	SW-RD-2-A2-W2OLU	UT		5357-5				12S	Code Case N-524
	SW-RD-2-A2-W2OLD	PT		5357-5			07S	12S	Code Case N-524
	SW-RD-2-A2-W2OLD	UT		5357-5				12S	Code Case N-524
	SW-RD-2-A2-W2LU	PT		5357-5		07S		12S	Code Case N-524
	SW-RD-2-A2-W2LU	UT		5357-5		07S			Code Case N-524
	SW-RD-2-A2-W2LD-A	PT		5357-5		07S			Code Case N-524
	SW-RD-2-A2-W2LD-A	UT		5357-5		07S			Code Case N-524
	SW-RD-2-A2-W2LD-B	PT		5357-5		07S			Code Case N-524
	SW-RD-2-A2-W2LD-B	UT		5357-5		07S			Code Case N-524
	SW-RD-2-A9LU-A	PT		5357-5		08SA			Code Case N-524
	SW-RD-2-A9LU-A	UT		5357-5		08SA			Code Case N-524
	SW-RD-2-A9LU-B	PT		5357-5		08SA			Code Case N-524
	SW-RD-2-A9LU-B	UT		5357-5		08SA			Code Case N-524
	SW-RD-2-A9LD-A	PT		5356-5		08SA			Code Case N-524
	SW-RD-2-A9LD-A	UT		5356-5		08SA			Code Case N-524
	SW-RD-2-A9LD-B	PT		5356-5		08SA			Code Case N-524
	SW-RD-2-A9LD-B	UT		5356-5		08SA			Code Case N-524
	SW-RD-2-A3-W7LD	PT		5356-5		07S			Code Case N-524

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-RD-2-A3-W7LD	UT		5356-5		07S			Code Case N-524
	SW-RD-2-A3-W9LU	PT		5356-5				11S	Code Case N-524
	SW-RD-2-A3-W9LU	UT		5356-5				11S	Code Case N-524
	SW-RD-2-A10LD	PT		5356-5				12S	Note 2, Category B; Code Case N-524
	SW-RD-2-A10LD	UT		5356-5				12S	Note 2, Category B; Code Case N-524
	SW-RD-2-A4-W2LU-I	PT		5356-5				11S	Note 2, Category B; Code Case N-524
	SW-RD-2-A4-W2LU-I	UT		5356-5				11S	Note 2, Category B; Code Case N-524
	SW-RD-2-A4-W2LD	PT		5356-5				11S	Note 2, Category A; Code Case N-524
	SW-RD-2-A4-W2LD	UT		5356-5				11S	Note 2, Category A; Code Case N-524
	SW-RD-2-A11LD	PT		5356-5				11S	Note 2, Category B; Code Case N-524
	SW-RD-2-A11LD	UT		5356-5				11S	Note 2, Category B; Code Case N-524
	SW-RD-2-A16LU	PT		5356-5			09S		Note 2, Category B; Code Case N-524
	SW-RD-2-A16LU	UT		5356-5			09S		Note 2, Category B; Code Case N-524
	SW-RD-2-A12LD	UT		5356-5			10SA		Note 2, Category B; Code Case N-524
	SW-RD-2-A12LD	PT		5356-5			10SA		Note 2, Category B; Code Case N-524
	FW-RD-2-A13LD	PT		5356-5			10S		Note 2, Category B; Code Case N-524
	FW-RD-2-A13LD	UT		5356-5			10S		Note 2, Category B; Code Case N-524
	SW-RD-2-A6-W1LU	UT		5356-5				11SA	Note 2, Category B; Code Case N-524
	SW-RD-2-A6-W1LD-I	UT		5356-5				11SA	Note 2, Category A; Code Case N-523
	SW-RD-2-A14LD	PT		5359-5				12S	Note 2, Category B; Code Case N-524
	SW-RD-2-A14LD	UT		5356-5				12S	Note 2, Category B; Code Case N-524
	SW-RS-2-B1-W1LU	PT		5359-5				11S	Note 2, Category B; Code Case N-524
	SW-RS-2-B1-W1LU	UT		5359-5				11S	Note 2, Category B; Code Case N-524
	SW-RS-2-B1-W1LD-I	PT		5359-5				11S	Note 2, Category B; Code Case N-524
	SW-RS-2-B1-W1LD-I	UT		5359-5				11S	Note 2, Category B; Code Case N-524
	SW-RS-2-B1-W1LD-O	PT		5359-5				11S	Note 2, Category B; Code Case N-524
	SW-RS-2-B1-W1LD-O	UT		5359-5				11S	Note 2, Category B; Code Case N-524
	SW-RS-2-B2LU	UT		5359-5		08SA			Note 2, Category B; Code Case N-524
	SW-RS-2-B2LU	PT		5359-5		08SA			Note 2, Category B; Code Case N-524
	SW-RS-2-B2LD	UT		5359-5		08SA			Note 2, Category B; Code Case N-524
	SW-RS-2-B2LD	PT		5359-5		08SA			Note 2, Category B; Code Case N-524
	SW-RS-2-B2-W10ALU-A	UT		5359-5			09SA		Note 2, Category B; Code Case N-524
	SW-RS-2-B2-W10ALU-B	UT		5359-5			09SA		Note 2, Category B; Code Case N-524
	SW-RS-2-B2-W10ALD	UT	A	5359-5			09SA		Note 2, Category B; Code Case N-524

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	SW-RS-2-B4LD	UT	A	5359-5			10SA		Note 2, Category B; Code Case N-524
	SW-RS-2-B3-W1LU	UT		5359-5				12SA	Note 2, Category A; Code Case N-524
	SW-RS-2-B3-W1LD-O	UT	A	5359-5				12SA	Note 2, Category A; Code Case N-524
	SW-RS-2-B3-W1LD-I	UT	A	5359-5				12SA	Note 2, Category A; Code Case N-524
	SW-RD-2-B7LU	UT		5359-5			10SA		
	SW-RD-2-B2-W2OLU	PT		5359-5		07S			Code Case N-524
	SW-RD-2-B2-W2OLU	UT		5359-5		07S			Code Case N-524
	SW-RD-2-B2-W2OLD	PT		5359-5		07S			Note 2, Category B; Code Case N-524
	SW-RD-2-B2-W2OLD	UT		5359-5		07S			Note 2, Category B; Code Case N-524
	SW-RD-2-B2-W2LU	PT		5359-5		07S			Note 2, Category B; Code Case N-524
	SW-RD-2-B2-W2LU	UT		5359-5		07S			Note 2, Category B; Code Case N-524
	SW-RD-2-B2-W2LD-A	PT		5359-5			10S		Note 2, Category B; Code Case N-524
	SW-RD-2-B2-W2LD-A	UT		5359-5			10S		Note 2, Category B; Code Case N-524
	SW-RD-2-B2-W2LD-B	PT		5359-5			10S		Note 2, Category B; Code Case N-524
	SW-RD-2-B2-W2LD-B	UT		5359-5			10S		Note 2, Category B; Code Case N-524
	SW-RD-2-B3-W5LU-A	PT		5358-5		08SA			Note 2, Category B; Code Case N-524
	SW-RD-2-B3-W5LU-A	UT		5358-5		08SA			Note 2, Category B; Code Case N-524
	SW-RD-2-B3-W5LU-B	PT		5358-5		08SA			Note 2, Category B; Code Case N-524
	SW-RD-2-B3-W5LU-B	UT		5358-5		08SA			Note 2, Category B; Code Case N-524
	SW-RD-2-B3-W6LD	UT	A	5358-5				11SA	Note 2, Category B; Code Case N-524
	SW-RD-2-B3-W7LD	PT		5358-5			10S		Note 2, Category B; Code Case N-524
	SW-RD-2-B3-W7LD	UT		5358-5			10S		Note 2, Category B; Code Case N-524
	SW-RD-2-B3-W8LU	UT		5358-5			10SA		Note 2, Category B; Code Case N-524
	FW-RD-2-B10LD	PT		5358-5			10S		Note 2, Category B; Code Case N-524
	FW-RD-2-B10LD	UT		5358-5			10S		Note 2, Category B; Code Case N-524
	SW-RD-2-B4-W2LU-I	PT		5358-5				12S	Note 2, Category A; Code Case N-524
	SW-RD-2-B4-W2LU-I	UT		5358-5				12S	Note 2, Category A; Code Case N-524
	SW-RD-2-B4-W2LD	PT		5358-5				12S	Note 2, Category A; Code Case N-524
	SW-RD-2-B4-W2LD	UT		5358-5				12S	Note 2, Category A; Code Case N-524
	FW-RD-2-B11LD	PT		5358-5				11S	Code Case N-524

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	FW-RD-2-B11LD	UT		5358-5				11S	Code Case N-524
	SW-RD-2-B5-W2LU-I	PT		5358-5			09S		Code Case N-524
	SW-RD-2-B5-W2LU-I	UT		5358-5			09S		Code Case N-524
	SW-RD-2-B5-W2LD	PT		5358-5			09S		Code Case N-524
	SW-RD-2-B5-W2LD	UT		5358-5			09S		Code Case N-524
	SW-RD-2-B16LU	UT		5358-5			09SA		Code Case N-524
	SW-RD-2-B8-W1LU	PT		5358-5		07S			Code Case N-524
	SW-RD-2-B8-W1LU	UT		5358-5		07S			Code Case N-524
	SW-RD-2-B8-W1LD-I	PT		5358-5		07S			Code Case N-524
	SW-RD-2-B8-W1LD-I	UT		5358-5		07S			Code Case N-524
	SW-RD-2-B8-W2LU-I	PT		5358-5		08S			Code Case N-524
	SW-RD-2-B8-W2LU-I	UT		5358-5		08S			Code Case N-524
	SW-RD-2-B8-W2LD	PT		5358-5		08S			Code Case N-524
	SW-RD-2-B8-W2LD	UT		5358-5		08S			Code Case N-524
	SW-RD-2-B13LD	PT		5358-5		07S			Code Case N-524
	SW-RD-2-B13LD	UT		5358-5		07S			Code Case N-524
	SW-RD-2-B18LU	PT		5358-5		07SA			Code Case N-524
	SW-RD-2-B18LU	UT		5358-5		07SA			Code Case N-524
	SW-RD-2-B14LD	PT		5358-5				11S	Code Case N-524
	SW-RD-2-B14LD	UT		5358-5				11S	Code Case N-524
	SW-RD-2-B19LU	UT		5358-5			10SA		Code Case N-524
	SW-E11-2298-6WCLD	PT	DM, A	2298-5		07S			Code Case N-524
	SW-E11-2298-6WCLD	UT	DM, A	2298-5		07S			Code Case N-524
	SW-E11-2298-6W0LU	PT	HS, A	2298-5		07S			Code Case N-524
	SW-E11-2298-6W0LU	UT	HS, A	2298-5		07S			Code Case N-524
	SW-E11-2299-0W1LD	PT		2299-5			09S		Code Case N-524
	SW-E11-2299-0W1LD	UT		2299-5			09S		Code Case N-524
	SW-E11-2299-1WBLU	PT		2299-5			09S		Code Case N-524
	SW-E11-2299-1WBLU	UT		2299-5			09S		Code Case N-524
	SW-E11-2327-6WCLD	PT		2327-5				11S	Code Case N-524
	SW-E11-2327-6WCLD	UT		2327-5				11S	Code Case N-524
	SW-E11-2327-6W0LU	PT		2327-5				11S	Code Case N-524
	SW-E11-2327-6W0LU	UT		2327-5				11S	Code Case N-524
B9.21	**Circumferential Piping Weld Less Than 4" NPS**								
	FW-G33-3096-16WF22	PT	R	3096-5		07S			
	FW-G33-3096-16WF22	UT	R	3096-5		07S			

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-J									
	FW-G33-3096-16WF14	MT	HS	3096-5			10S		
	FW-G33-3096-16WF15	MT	R	3096-5				11S	
	FW-G33-3096-16WF17	MT	R	3096-5				12S	
	FW-G33-3096-H	MT	HS	3096-5				12S	
B9.31	Branch Pipe Connection Weld 4" NPS or Larger								
	SW-PS-2-A3-L	MT	HS	5352-5			09S		
	SW-PS-2-A3-L	UT	HS	5352-5			09S		
	SW-PS-2-B3-H	MT	R	5353-5		07S			
	SW-PS-2-B3-H	UT	R	5353-5		07S			
	SW-PS-2-D3-E	MT	R	5355-5				12S	
	SW-PS-2-D3-E	UT	R	5355-5				12S	
	SW-RD-2-A1-W1	PT	R, A	5357-5		07S			Note No. 2, Cat. A
	SW-RD-2-A1-W1	UT	R, A	5357-5		07S			Note No. 2, Cat. A
	SW-RD-2-A3-W3	PT	R, A	5356-5			09S		Note 2, Category B
	SW-RD-2-A3-W3	UT	R, A	5356-5			09S		Note 2, Category B
	SW-RS-2-B3-W2	PT	R	5359-5				11S	Note 2, Category A
	SW-RS-2-B3-W2	UT	R	5359-5				11S	Note 2, Category A
	SW-RD-2-B3-W4	PT	R, A	5358-5				12S	Note 2, Category A
	SW-RD-2-B3-W4	UT	R, A	5358-5				12S	Note 2, Category A
	FW-E11-2299-5WF5	MT	MS	2299-5		08S			
	FW-E11-2299-5WF5	UT	MS	2299-5		08S			

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-K-1									
B10.10	**Piping Integral Attachment Weld**								
	SW-PS-2-A2-AA1	MT	> 5/8" T	5352-5		07S			ISI Eval. 99-055; Code Case N-509
	SW-PS-2-A2-AA2	MT	> 5/8" T	5352-5		07S			ISI Eval. 99-055; Code Case N-509
	SW-PS-2-A2-AA3	MT	> 5/8" T	5352-5		07S			ISI Eval. 99-055; Code Case N-509
	SW-PS-2-A2-AA4	MT	> 5/8" T	5352-5		07S			ISI Eval. 99-055; Code Case N-509
	SW-N21-2336-20WP	MT	> 5/8" T	3537-5			10S		Code Case N-509
	SW-N21-2336-20WC	MT	> 5/8" T	3537-5			10S		Code Case N-509
	SW-N21-2336-20WD	MT	> 5/8" T	3537-5			10S		Code Case N-509
	SW-N21-2336-20WE	MT	> 5/8" T	3537-5			10S		Code Case N-509
B10.20	**Pump Integral Attachment Weld**								
	SW-B31-5365-Pump A-WA	PT	> 5/8" T	5365-5				12S	Code Case N-509
B-L-2									
B12.20	**Pump Casing**								
	Recirc Pump A-Casing B3101C001A	VT-3	Visual VT-3	5365-5					Only if Disassembled
	Recirc Pump B-Casing B3101C001B	VT-3	Visual VT-3	5365-5					Only if Disassembled

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-M-2									
B12.50	**Valve Body**								
B21F022A		VT-3	>4" NPS	5352-5					Only if Disassembled
B21F022B		VT-3	>4" NPS	5353-5					Only if Disassembled
B21F022C		VT-3	>4" NPS	5354-5					Only if Disassembled
B21F022D		VT-3	>4" NPS	5355-5					Only if Disassembled
B21F028A		VT-3	>4" NPS	5352-5					Only if Disassembled
B21F028B		VT-3	>4" NPS	5353-5					Only if Disassembled
B21F028C		VT-3	>4" NPS	5354-5					Only if Disassembled
B21F028D		VT-3	>4" NPS	5355-5					Only if Disassembled
B21F013A		VT-3	>4" NPS	5355-5					Only if Disassembled
B21F013B		VT-3	>4" NPS	5354-5					Only if Disassembled
B21F013C		VT-3	>4" NPS	5353-5					Only if Disassembled
B21F013D		VT-3	>4" NPS	5353-5					Only if Disassembled
B21F013E		VT-3	>4" NPS	5354-5					Only if Disassembled
B21F013F		VT-3	>4" NPS	5353-5					Only if Disassembled
B21F013G		VT-3	>4" NPS	5353-5					Only if Disassembled
B21F013H		VT-3	>4" NPS	5354-5					Only if Disassembled
B21F013J		VT-3	>4" NPS	5354-5					Only if Disassembled
B21F013K		VT-3	>4" NPS	5353-5					Only if Disassembled
B21F013L		VT-3	>4" NPS	5352-5					Only if Disassembled
B21F013M		VT-3	>4" NPS	5352-5					Only if Disassembled
B21F013N		VT-3	>4" NPS	5352-5					Only if Disassembled
B21F013P		VT-3	>4" NPS	5355-5					Only if Disassembled
B21F013R		VT-3	>4" NPS	5354-5					Only if Disassembled
B31F031A		VT-3	>4" NPS	5357-5					Only if Disassembled
B31F031B		VT-3	>4" NPS	5359-5					Only if Disassembled
B31F023A		VT-3	>4" NPS	5357-5					Only if Disassembled
B31F023B		VT-3	>4" NPS	5359-5					Only if Disassembled
E11F015A		VT-3	>4" NPS	2298-5					Only if Disassembled
E11F015B		VT-3	>4" NPS	2327-5					Only if Disassembled
E11F050A		VT-3	>4" NPS	2298-5					Only if Disassembled
E11F050B		VT-3	>4" NPS	2327-5					Only if Disassembled
E11F060A		VT-3	>4" NPS	2298-5					Only if Disassembled
E11F060B		VT-3	>4" NPS	2327-5					Only if Disassembled
E11F008		VT-3	>4" NPS	2299-5					Only if Disassembled
E11F009		VT-3	>4" NPS	2299-5					Only if Disassembled
E11F608		VT-3	>4" NPS	2299-5					Only if Disassembled

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-M-2									
	E11F067	VT-3	>4" NPS	2299-5					Only if Disassembled
	E11F022	VT-3	>4" NPS	3519-5					Only if Disassembled
	E11F023	VT-3	>4" NPS	3519-5					Only if Disassembled
	E21F005A	VT-3	>4" NPS	3052-5					Only if Disassembled
	E21F005B	VT-3	>4" NPS	3053-5					Only if Disassembled
	E21F006A	VT-3	>4" NPS	3052-5					Only if Disassembled
	E21F006B	VT-3	>4" NPS	3053-5					Only if Disassembled
	E21F007A	VT-3	>4" NPS	3052-5					Only if Disassembled
	E21F007B	VT-3	>4" NPS	3053-5					Only if Disassembled
	E41F002	VT-3	>4" NPS	2297-5					Only if Disassembled
	E41F003	VT-3	>4" NPS	2297-5					Only if Disassembled
	E41F006	VT-3	>4" NPS	5352-5					Only if Disassembled
	E51F013	VT-3	>4" NPS	3536-5					Only if Disassembled
	E51F001	VT-3	>4" NPS	3096-5					Only if Disassembled
	E51F004	VT-3	>4" NPS	3096-5					Only if Disassembled
	E51F106	VT-3	>4" NPS	5351-5					Only if Disassembled
	E51F100	VT-3	>4" NPS	5351-5					Only if Disassembled
	E51F102	VT-3	>4" NPS	5351-5					Only if Disassembled
	N21F010A	VT-3	>4" NPS	3537-5					Only if Disassembled
	N21F010B	VT-3	>4" NPS	3536-5					Only if Disassembled
	N21F076A	VT-3	>4" NPS	3537-5					Only if Disassembled
	N21F076B	VT-3	>4" NPS	3536-5					Only if Disassembled
	N21F032A	VT-3	>4" NPS	3537-5					Only if Disassembled
	N21F032B	VT-3	>4" NPS	3536-5					Only if Disassembled
	N21F011A	VT-3	>4" NPS	3537-5					Only if Disassembled
	N21F011B	VT-3	>4" NPS	3536-5					Only if Disassembled

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-N-1									
B13.10	**Reactor Vessel Interior**								
	Shroud Head	VT-3	Vessel Interior			07SP			Vessel Internal are Examined using remote Visual Techniques
	Shroud Head Bolts	VT-3	Vessel Interior			07SP			
	Shroud Head Bolts	UT	A						Note No. 9
	Steam Separator Assy.	VT-3	Vessel Interior			07SP			
	Feedwater Sparger	VT-3	Vessel Interior			07SP			NUREG 0619 at least once every 4 Cycles
	Core Spray Sparger and Interior Piping	VT-3	Vessel Interior, A			07S			Note No. 12
	Top Guide	VT-3	Vessel Interior			07SP			Note No. 16
	Instrumentation Lines	VT-3	Vessel Interior, A			07SP			Note No. 7
	Sample Holders	VT-3	Vessel Interior			07SP			
	Guide Rod Holders	VT-3	Vessel Interior				09SP	12SP	
	Core Shroud	VT-3	Vessel Interior			07SP			Note No. 19
	Core Shroud	VT-1	Vessel Interior, A			07SP			Note No. 19
	Core Shroud	UT	Vessel Interior, A						Note No. 19
	Recirculation Inlet Nozzle	VT-3	Vessel Interior			08SP	10SP		
	Jet Pump Components	VT-3	Vessel Interior, A			07SP			Note No. 17
	Jet Pump Hold Down Beams	VT-3	Vessel Interior			07SP			
	Jet Pump Hold Down Beams	UT	Vessel Interior, A				09S		Note No. 3
	Steam Dryer Assembly	VT-3	Vessel Interior			07SP			Note No. 11
	Control Rod Drive Housings	VT-3	Vessel Interior						Only if Accessible
	Flux Monitor Housings	VT-3	Vessel Interior						Only if Accessible
	CDP and SLC Line	VT-3	Vessel Interior						Only if Accessible
	Access Hole Cover	VT-3	Vessel Interior, A				09S		Note No. 13

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-N-2									
B13.20	**RPV Interior Welded Attachments Within Beltline Region**								
	Jet Pump Riser Brace Arms	VT-1	Vessel Interior, A			07SP			
	Surveillance Specimen Bracket	VT-1	Attachment Weld			07SP			
B13.30	**RPV Interior Welded Attachments Beyond Beltline Region**								
	Steam Dryer Support Lugs	VT-3	Interior Attachment Beyond Beltline			07SP			
	Core Spray Piping Brackets	VT-3	Interior Attachment Beyond Beltline			07SP			
	Feedwater Sparger Brackets	VT-3	Interior Attachment Beyond Beltline			07SP			
B-N-3									
B13.40	**Welded Core Support Structure**								
	Lower Core Shroud	VT-3	Core Support, A						Note No. 19
	Shroud Welds	UT	A				09S		Note No. 19
	Core Support Assy.	VT-3	A			08SP			
	Peripheral Fuel Support	VT-3	A			08SP			
B-O									
B14.10	**Welds in CRD Housings**								
	CRDH-X02-Y27-W1	PT	10% Peripheral Housing Welds	5363-5		08S			
	CRDH-X02-Y31-W1	PT	10% Peripheral Housing Welds	5363-5			10S		
	CRDH-X02-Y35-W1	PT	10% Peripheral Housing Welds	5363-5				11S	
	CRDH-X02-Y39-W1	PT	10% Peripheral Housing Welds	5363-5				12S	
	CRDH-X02-Y27-W2	PT	10% Peripheral Housing Welds	5363-5		08S			
	CRDH-X02-Y31-W2	PT	10% Peripheral Housing Welds	5363-5			10S		
	CRDH-X02-Y35-W2	PT	10% Peripheral Housing Welds	5363-5				11S	
	CRDH-X02-Y39-W2	PT	10% Peripheral Housing Welds	5363-5				12S	

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
B-P									
B15.X	**Class 1 Pressure Retaining Boundary**								
	B21, B31, C41, E11, E21, E41, E51, G33, N21, P34	VT-2	Class1 Pressure Retaining Boundary			07S,	09S,	11S	X Includes items - B15.10, B15.50, B15.60 and B15.70. Each Refueling Outage; Note 15
	B21, B31, C41, E11, E21, E41, E51, G33, N21, P34		Class1 Pressure Retaining Boundary					12S	X Includes items - B15.11, B15.51, B15.61 and B15.71. Each Interval, Code Case N-498-1
C-A									
C1.10	**Shell Circumferential Weld**								
	SW-E11-D2-HX-11	UT	Gross Structural Discontinuity	5370-5		08S			
C1.20	**Head Circumferential Weld**								
	SW-E11-D2-HX-05	UT	Gross Structural Discontinuity	5370-5				11S	
C-B									
C2.21	**Nozzle to Shell (or Head) Weld**								
	SW-E11-D2-HX-01	MT	Shell - T >.5"	5370-5		08S			
	SW-E11-D2-HX-01	UT	Shell - T >.5"	5370-5		08S			
	SW-E11-D2-HX-10	MT	Shell - T >.5"	5370-5				11S	
	SW-E11-D2-HX-10	UT	Shell - T >.5"	5370-5				11S	
C2.22	**Nozzle Inside Radius Section**								
	SW-E11-D2-HX-01 IRS	UT				08S			
	SW-E11-D2-HX-10 IRS	UT						11S	

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
C-C									
C3.10	Integrally Welded Attachment (Vessel)								
	SW-E11-D2-HXS-05	MT	10%	5370-5		08S			Code Case N-509
	SW-E11-D2-HXS-06	MT	10%	5370-5		08S			Code Case N-509
	SW-E11-D2-HXS-07	MT	10%	5370-5		08S			Code Case N-509
	SW-E11-D2-HXS-09	MT	10%	5370-5		08S			Code Case N-509
	SW-E11-D2-HXS-10	MT	10%	5370-5		08S			Code Case N-509
	SW-E11-D2-HXS-11	MT	10%	5370-5		08S			Code Case N-509
	SW-E11-D2-HXS-12	MT	10%	5370-5		08S			Code Case N-509
	SW-E11-D2-HXS-13	MT	10%	5370-5			09S		Code Case N-509
	SW-E11-D2-HXS-14	MT	10%	5370-5			09S		Code Case N-509
	SW-E11-D2-HXS-15	MT	10%	5370-5			09S		Code Case N-509
	SW-E11-D2-HXS-16	MT	10%	5370-5			09S		Code Case N-509
	SW-E11-D2-HXS-17	MT	10%	5370-5				11S	Code Case N-509
	SW-E11-D2-HXS-18	MT	10%	5370-5				11S	Code Case N-509
	SW-E11-D2-HXS-19	MT	10%	5370-5				11S	Code Case N-509
	SW-E11-D2-HXS-20	MT	10%	5370-5				11S	Code Case N-509
	SW-E11-D2-HXS-21	MT	10%	5370-5				11S	Code Case N-509
	SW-E11-D2-HXS-22	MT	10%	5370-5				11S	Code Case N-509
	SW-E11-D2-HXS-23	MT	10%	5370-5				11S	Code Case N-509
	SW-E11-D2-HXS-24	MT	10%	5370-5				11S	Code Case N-509
C3.20	Integrally Welded Attachment (Piping)								
	C11-50-2113-G262A	MT	10%	5375-5				11S	Code Case N-509
	C11-50-2113-G262B	MT	10%	5375-5				11S	Code Case N-509
	C11-50-2113-G262C	MT	10%	5375-5				11S	Code Case N-509
	C11-50-2113-G262D	MT	10%	5375-5				11S	Code Case N-509
	C11-50-2113-G262E	MT	10%	5375-5				11S	Code Case N-509
	C11-50-2113-G262F	MT	10%	5375-5				11S	Code Case N-509
	C11-50-2113-G262G	MT	10%	5375-5				11S	Code Case N-509
	C11-50-2113-G262H	MT	10%	5375-5				11S	Code Case N-509
	SW-E11-3151-4WE	MT	10%	3151-5				12S	Code Case N-509
	SW-E11-3151-4WF	MT	10%	3151-5				12S	Code Case N-509
	SW-E11-3151-4WG	MT	10%	3151-5				12S	Code Case N-509
	SW-E11-3151-4WH	MT	10%	3151-5				12S	Code Case N-509
	SW-E11-3151-4WJ	MT	10%	3151-5				12S	Code Case N-509
	SW-E11-3151-4WK	MT	10%	3151-5				12S	Code Case N-509
	PSFW-E21-3147-301	MT	10%	3147-5		07S			Code Case N-509

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
C-C									
	PSFW-E41-3167-IWE	MT	10%	3167-5			10S		Code Case N-509
	PSFW-E41-3167-IWF	MT	10%	3167-5			10S		Code Case N-509
	PSFW-E41-3167-IWG	MT	10%	3167-5			10S		Code Case N-509
	PSFW-E41-3167-IWH	MT	10%	3167-5			10S		Code Case N-509
C-F-1									
	C5.11								
	FW-C41-2979-81S82	PT	R	2979-5				12S	
	FW-C41-2979-72S73	PT	R	2979-5		08S			
	FW-C41-2979-63S64	PT	R	2979-5			09S		
	FW-C41-2979-64S65	PT	R	2979-5			09S		
	FW-C41-2979-P	PT	R	2979-5		07S			
	FW-C41-2979-L	PT	R	2979-5			10S		
	FW-C41-2979-50S51	PT	R	2979-5				11S	
	FW-C41-2979-17S18	PT	R	2979-5				12S	
	FW-C41-2979-2S3	PT	R	2979-5		08S			
	FW-C41-2979-11S12	PT	R	2979-5			10S		
	FW-C41-2979-1S2	PT	R	2979-5		08S			
	FW-C41-3361-1WF25	PT	R	3361-5				11S	
	FW-C41-3361-02W1	PT	R	3361-5		07S			
	FW-C41-3361-1WF22	PT	R	3361-5				12S	
	FW-C41-5058-54S55	PT	R	5374-5			09S		
	FW-C41-5058-65S66	PT	R	5374-5				11S	

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
C-F-2									
	C5.12								
	SW-E41-3162-11WOLD	VT-1	R	3162-5	RR-A26	08S			Note 21
	C5.21								
	SW-C11-2113-303-A	MT	R	5372-5				11S	
	SW-C11-2113-303-A	UT	R	5372-5				11S	
	FW-C11-2113-249-B	MT	R	5372-5				12S	
	FW-C11-2113-249-B	UT	R	5372-5				12S	
	SW-C11-2113-172-A	MT	R	5375-5			09S		
	SW-C11-2113-172-A	UT	R	5375-5			09S		
	FW-E11-3146-OW1	MT	TE	3146-5				11S	
	FW-E11-3146-OW1	UT	TE	3146-5				11S	
	SW-E11-3146-6WE	MT	HS	3146-5			10S		
	SW-E11-3146-6WE	UT	HS	3146-5			10S		
	FW-E11-3146-6W10	MT	MS	3146-5		07S			
	FW-E11-3146-6W10	UT	MS	3146-5		07S			
	SW-E11-3146-6WH	MT	HS	3146-5		07S			
	SW-E11-3146-6WH	UT	HS	3146-5		07S			
	FW-E11-3146-5WO	MT	MS	3146-5		08S			
	FW-E11-3146-5WO	UT	MS	3146-5		08S			
	FW-E11-3151-7W11	MT	MS	3151-5			10S		
	FW-E11-3151-7W11	UT	MS	3151-5			10S		
	FW-E11-3151-10W0	MT	TE	3151-5				11S	
	FW-E11-3151-10W0	UT	TE	3151-5				11S	
	FW-E11-3151-3WF2	MT	MS	3151-5			09S		
	FW-E11-3151-3WF2	UT	MS	3151-5			09S		
	SW-E11-3157-1WB	MT	R	3157-5				12S	
	SW-E11-3157-1WB	UT	R	3157-5				12S	
	FW-E11-3158-1W2	MT	R	3158-5			09S		
	FW-E11-3158-1W2	UT	R	3158-5			09S		
	SW-E11-3158-4WD	MT	R	3158-5				11S	
	SW-E11-3158-4WD	UT	R	3158-5				11S	
	FW-E11-3158-10WF4	MT	TE	3158-5		07S			
	FW-E11-3158-10WF4	UT	TE	3158-5		07S			
	SW-E11-3158-8WG	MT	R	3158-5				11S	
	SW-E11-3158-8WG	UT	R	3158-5				11S	
	FW-E11-3158-9WF2	MT	R	3158-5			09S		

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
C-F-2									
	FW-E11-3158-9WF2	UT	R	3158-5			09S		
	SW-E11-3177-6WD	MT	R	3177-5				11S	
	SW-E11-3177-6WD	UT	R	3177-5				11S	
	SW-E11-3177-9WE	MT	R	3177-5			09S		
	SW-E11-3177-9WE	UT	R	3177-5			09S		
	SW-E21-3145-9WD	VT-1	R	3145-5	RR-A26	08S			Note 21
	SW-E21-3147-19WB	MT	R	3147-5		08S			
	SW-E21-3147-19WB	UT	R	3147-5		08S			
	FW-E41-3167-0W1	MT	TE	3167-5			09S		
	FW-E41-3167-0W1	UT	TE	3167-5			09S		
	FW-E41-3167-9WO	MT	TE	3167-5				11S	
	FW-E41-3167-9WO	UT	TE	3167-5				11S	
	FW-E41-3167-1W2	MT	R	3167-5				12S	
	FW-E41-3167-1W2	UT	R	3167-5				12S	
	FW-E41-3169-2W0	MT	R	3167-5			09S		
	FW-E41-3169-2W0	UT	R	3169-5			09S		
	FW-E41-3172-0W1	MT	TE	3172-5			10S		
	FW-E41-3172-0W1	UT	TE	3172-5			10S		
	FW-E41-3172-0W8	MT	R	3172-5				12S	
	FW-E41-3172-0W8	UT	R	3172-5				12S	
	SW-N30-3258-1WJ	MT	MS	3258-5			10S		
	SW-N30-3258-1WJ	UT	MS	3258-5			10S		
	SW-N30-3258-7WK	MT	MS	3258-5			09S		
	SW-N30-3258-7WK	UT	MS	3258-5			09S		
	SW-N30-3258-13WJ	MT	MS	3258-5				12S	
	SW-N30-3258-13WJ	UT	MS	3258-5				12S	
	SW-N30-3258-19WJ	MT	MS	3258-5		07S			
	SW-N30-3258-19WJ	UT	MS	3258-5		07S			
	FW-N30-3259-4WO	PT	TE	3258-5		08S			
	FW-N30-3259-4WO	UT	TE	3258-5		08S			
C5.22									
	SW-N30-3258-1WJLU	MT		3258-5			10S		
	SW-N30-3258-1WJLU	UT		3258-5			10S		
	SW-N30-3258-7WKLU	MT		3258-5			09S		
	SW-N30-3258-7WKLU	UT		3258-5			09S		
	SW-N30-3258-13WJLU	MT		3258-5				12S	

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
C-F-2									
	SW-N30-3258-13WJLU	UT		3258-5				12S	
	SW-N30-3258-19WJLU	MT		3258-5		07S			
	SW-N30-3258-19WJLU	UT		3258-5		07S			
	C5.51								
	SW-E11-3035-5WE	MT	R	3035-5		07S			
	SW-E11-3035-7WB	MT	R	3035-5		09S			
	SW-E11-3153-13WD	MT	R	3153-5		08S			
	SW-E11-3153-13WD	UT	R	3153-5		08S			
	SW-E11-3154-4WC	MT	R	3154-5			09S		
	SW-E11-3154-4WC	UT	R	3154-5			09S		
	FW-E11-3154-13WO	MT	TE	3154-5			09S		
	FW-E11-3154-13WO	UT	TE	3154-5			09S		
	FW-E11-3154-4WO	MT	TE	3154-5				12S	
	FW-E11-3154-4WO	UT	TE	3154-5				12S	
	FW-E11-3157-OW6	MT	TE	3157-5		07S			
	FW-E11-3157-OW6	UT	TE	3157-5		07S			
	FW-E11-3159-OW1	MT	HS	3159-5		08S			
	FW-E11-3159-OW1	UT	HS	3159-5		08S			
	FW-E11-3160-OW2	VT-1	R	3160-5	RR-A26			11S	Note 21
	SW-E11-3161-1WH	MT	R	3161-5				12S	
	SW-E11-3161-4WB	MT	R	3161-5	RR-A26		10S		Note 21
	SW-E11-3161-4WB	UT	R	3161-5	RR-A26		10S		Note 21
	SW-E11-3161-4WK	VT-1	R	3161-5	RR-A26			12S	Note 21
	FW-E11-3161-4WF5	VT-1	R	3161-5	RR-A26			12S	Note 21
	FW-E11-3164-4W5	MT	R	3164-5				12S	
	FW-E11-3164-4W5	UT	R	3164-5				12S	
	FW-G41-3669-0W9	MT	MS	3669-5				12S	
	SW-G41-3669-3WB	MT	R	3669-5			10S		
	FW-E11-4611-1WF2	VT-1	R	4611-5	RR-A26			12S	Note 21
	FW-E11-4611-1W2	VT-1	R	4611-5	RR-A26			12S	Note 21
	FW-E11-4612-3WF4	VT-1	R	4612-5	RR-A26			12S	Note 21
	FW-E11-4612-4WF1	VT-1	R	4612-5	RR-A26			12S	Note 21
	FW-E11-4612-4W5	VT-1	R	4612-5	RR-A26		10S		Note 21
	FW-E11-4612-7W8	VT-1	R	4612-5	RR-A26		10S		Note 21
	FW-E11-4612-8WF3	VT-1	R	4612-5	RR-A26		10S		Note 21
	FW-E11-4612-9WO	VT-1	R	4612-5	RR-A26			11S	Note 21

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
C-F-2									
	FW-E21-3144-0W4	MT	TE	3144-5			10S		
	FW-E21-3144-0W4	UT	TE	3144-5			10S		
	FW-E21-3144-OW1	MT	TE	3144-5		07S			
	FW-E21-3145-11WO	MT	R	3145-5					
	SW-E21-3147-5WJ	MT	R	3147-5		08S			
	SW-E21-3147-5WJ	UT	R	3147-5		08S			
	SW-E21-3147-15WF	MT	R	3147-5				11S	
	SW-E21-3147-15WF	UT	R	3147-5				11S	
	SW-E21-3147-15WG	MT	R	3147-5			10S		
	SW-E21-3147-15WG	UT	R	3147-5			10S		
	FW-E21-3147-16W17	MT	R	3147-5		07S			
	FW-E21-3147-16W17	UT	R	3147-5		07S			
	FW-E21-3148-7W0	MT	TE	3148-5			09S		
	FW-E21-3148-7W0	UT	TE	3148-5			09S		
	FW-E21-3148-0W8	MT	TE	3148-5				12S	
	FW-E21-3148-0W8	UT	TE	3148-5				12S	
	SW-E21-3148-5WD	MT	R	3148-5		08S			
	SW-E21-3149-4WD	MT	R	3149-5		07S			
	SW-E21-3149-4WD	UT	R	3149-5		07S			
	SW-E21-3149-6WC	MT	R	3149-5				12S	
	SW-E21-3149-6WC	UT	R	3149-5				12S	
	SW-E21-3149-6WL	MT	R	3149-5				11S	
	SW-E21-3149-6WL	UT	R	3149-5				11S	
	SW-E41-3162-1WU	MT	R	3162-5			10S		
	SW-E41-3162-1WU	UT	R	3162-5			10S		
	FW-E41-3162-1W2	MT	R	3162-5			10S		
	FW-E41-3162-1W2	UT	R	3162-5			10S		
	FW-E41-3162-9WF0	MT	TE	3162-5				12S	
	FW-E41-3162-9WF0	UT	TE	3162-5				12S	
	FW-E41-3162-11WF1	VT-1	R	3162-5	RR-A26		09S		Note 21
	FW-E41-3162-11WF4	VT-1	R	3162-5	RR-A26		09S		Note 21
	FW-E41-3162-11WF5	VT-1	R	3162-5	RR-A26		09S		Note 21
	FW-E41-3162-11WO	VT-1	R	3162-5	RR-A26	08S			Note 21
	SW-E41-3162-11WC	VT-1	R	3162-5	RR-A26	08S			Note 21
	FW-E41-3163-8W0	MT	TE	3163-5				11S	
	FW-E41-3163-8W0	UT	TE	3163-5				11S	
	FW-E41-3163-7W0	MT	TE	3163-5		07S			

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
C-F-2									
	FW-E41-3163-7W0	UT	TE	3163-5		07S			
	SW-E41-5373-GW3	MT	R	5373-5			09S		
	SW-E41-5373-GW3	MT	R	5373-5			09S		
	FW-T48-04-2095-11W12	MT	R	2095-5		07S			
	FW-T48-04-2095-7W8	MT	R	2095-5			10S		
	SW-T48-04-2095-5WD	MT	R	2095-5				11S	
	FW-T48-04-2095-19WO	MT	MS	2095-5	RR-A26	08S			Note 21
	SW-T48-04-2095-WSW3	MT	R	2095-5				11S	
	SW-T48-04-2097-18WC	MT	R	2097-5			10S		
	FW-T48-04-2097-8W9	MT	R	2097-5		07S			
	SW-T48-04-2097-21WB	VT-1	R	2097-5	RR-A26	07S			Note 21
	FW-T48-04-2097-20W21	MT	MS	2097-5	RR-A26	07S			Note 21
	SW-T48-04-2097-25WF	VT-1	R	3258-5	RR-A26	07S			Note 21
	SW-T48-04-2097-20WD	MT	MS	3258-5	RR-A26			11S	Note 21
C5.81	Branch Connection Weld								
	FW-E11-3146-15FW01	MT	MS	3146-5				12S	
	SW-E11-3146-5WC	MT	MS	3146-5		07S			
	SW-E11-3146-5WM	MT	HS	3146-5			10S		
	SW-E11-3146-7WC	MT	HS	3146-5				12S	
	SW-E11-3151-8WD	MT	HS	3151-5		08S			
	FW-E11-3157-4WF01	MT	R	3157-5				12S	
	SW-E11-3160-1WD	MT	HS	3160-5			09S		
	SW-E21-3144-5WE	MT	R	3144-5				11S	
	SW-N30-3258-13WB	MT	R	3258-5		08S			

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
C-H									
C.7X									
	E11 Residual Heat Removal System	VT-2	Class 2 Boundary	-1 5813-2 58		08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
	E21 Core Spray System	VT-2	Class 2 Boundary	5814		08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
	E41 High Pressure Coolant Injection	VT-2	Class 2 Boundary	5815	RR-A19	08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
	G41 Fuel Pool Cooling & Cleanup System	VT-2	Class 2 Boundary	5819		08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
	G51 Torus Water Management System	VT-2	Class 2 Boundary	5820		08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
	B21 Main Steam	VT-2	Class 2 Boundary	5808-1 5808-2		08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
	N30 Main & Reheat Steam System	VT-2	Class 2 Boundary	5822		08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
	P34 Post Accident Sampling	VT-2	Class 2 Boundary	5824		08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
	T48-04 Containment Atmosphere, Control System	VT-2	Class 2 Boundary	5830-1 5830-2		08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
	T50 Primary Containment Monitoring System	VT-2	Class 2 Boundary	5831		08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
C7.X	Class 2 Pressure Retaining Boundary								
	C11-Control Rod Drive System	VT-2	Class 2 Boundary	5810-1		08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
	C41 Standby liquid Control System	VT-2	Class 2 Boundary	5811		08S	10S		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
	C11-Control Rod Drive System	VT-2	Class 2 Boundary	5810-1				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1
	C41 Standby liquid Control System	VT-2	Class 2 Boundary	5811				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1
	E11 Residual Heat Removal System	VT-2	Class 2 Boundary	-1 5813-2 58				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
C-H									
	E21 Core Spray System	VT-2	Class 2 Boundary	5814				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1
	E41 High Pressure Coolant Injection	VT-2	Class 2 Boundary	5815				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1
	G41 Fuel Pool Cooling & Cleanup System	VT-2	Class 2 Boundary	5819				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1
	G51 Torus Water Management System	VT-2	Class 2 Boundary	5820				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1
	B21 Main Steam	VT-2	Class 2 Boundary	5808-1 5808-2				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1
	N30 Main & Reheat Steam System	VT-2	Class 2 Boundary	5822				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1
	P34 Post Accident Sampling	VT-2	Class 2 Boundary	5824				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1
	T48-04 Containment Atmosphere, Control System	VT-2	Class 2 Boundary	5830-1 5830-2				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1
	T50 Primary Containment Monitoring System	VT-2	Class 2 Boundary	5831				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
D-B									
	D2.40								
	E11-3184-G08	VT-3	Integral Attachment Weld	3184-2			09S		
	P44-3048-G10	VT-3	Integral Attachment Weld	3048-2		07S			
	D2.10 Pressure Retaining Components								
	E11 Residual Heat RemovalSystem Functional Boundary	Visual, VT-2	System Function	Class 3 System		08S	10S	12S	Note 15 Perform Each Period; Code Case 498-1
	P42 Reactor Building Closed Cooling Water	Visual, VT-2	System Function	Class 3 System		08S	10S	12S	Note 15 Perform Each Period; Code Case 498-1
	P44 Emergency Equipment Cooling Water	Visual, VT-2	System Function	Class 3 System		08S	10S	12S	Note 15 Perform Each Period; Code Case 498-1
	P45 Emergency Equipment Service Water	Visual, VT-2	System Function	Class 3 System		08S	10S	12S	Note 15 Perform Each Period; Code Case 498-1
	R30 Emergency Diesel Generator & Service Water	Visual, VT-2	System Function	Class 3 System		08S	10S	12S	Note 15 Perform Each Period; Code Case 498-1
	D2.20 Integral Attachment (Supports and Restraints)								
	P45-3360-G11	VT-3	Integral Attachment Weld	3360-2				11S	

Category / Item	Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period 1	2	3	Remarks
N/A									
	N/A								
	FW-N21-3109-18W0	UT	NUREG 0313	3109-1		08S			Note 2, Category D
	SW-N21-01-B002-AWSE	UT	NUREG 0313	3109-1		08S			Note 2, Category D
	FW-N21-3109-29WO	UT	NUREG 0313	3109-1				11S	Note 2, Category D
	SW-N21-01-B001-AWSE	UT	NUREG 0313	3109-1				11S	Note 2, Category D
	FW-N20-3107-0W1	UT	NUREG 0313	3107-1			10S		Note 2, Category D
	SW-N20-03-B013-BWSE	UT	NUREG 0313	3107-1			10S		Note 2, Category D
	FW-N20-3107-0W17	UT	NUREG 0313	3107-1		07S			Note 2, Category D
	SW-N20-03-B014-BWSE	UT	NUREG 0313	3107-1		07S			Note 2, Category D
	FW-N20-3105-24W0	UT	NUREG 0313	3105-1			10S		Note 2, Category D
	SW-N20-03-B013-AWSE	UT	NUREG 0313	3105-1			10S		Note 2, Category D
	FW-N20-3105-16W0	UT	NUREG 0313	3105-1		07S			Note 2, Category D
	SW-N20-03-B014-AWSE	UT	NUREG 0313	3105-1		07S			Note 2, Category D
	FW-N20-3105-0W23	UT	NUREG 0313	3105-1			09S		Note 2, Category D
	SW-N20-03-B011-BWSE	UT	NUREG 0313	3105-1			09S		Note 2, Category D
	FW-N20-3105-0W15	UT	NUREG 0313	3105-1				12S	Note 2, Category D
	SW-N20-03-B012-BWSE	UT	NUREG 0313	3105-1				12S	Note 2, Category D
	FW-N20-3105-22WO	UT	NUREG 0313	3105-1			09S		Note 2, Category D
	SW-N20-03-B011-AWSE	UT	NUREG 0313	3105-1			09S		Note 2, Category D
	FW-N20-3105-14WO	UT	NUREG 0313	3105-1				12S	Note 2, Category D
	SW-N20-03-B012-AWSE	UT	NUREG 0313	3105-1				12S	Note 2, Category D
	FW-N20-3105-OW21	UT	NUREG 0313	3105-1				11S	Note 2, Category D
	SW-N20-03-B009-BWSE	UT	NUREG 0313	3105-1				11S	Note 2, Category D
	FW-N20-3105-0W13	UT	NUREG 0313	3105-1		08S			Note 2, Category D
	SW-N20-03-B010-BWSE	UT	NUREG 0313	3105-1		08S			Note 2, Category D

NOTE 1

SECTION XI REQUIREMENTS: Examination Category B-F, Pressure Retaining Dissimilar Metal Welds, and Examination Category B-J, Pressure Retaining Welds in Piping.

The code does not define a transition point between the Reactor Pressure Vessel and piping components. Specifically, the code does not define whether a vessel nozzle to safe end weld is a piping weld or a reactor pressure vessel weld. In addition, the nozzle to safe end weld is considered a terminal end in accordance with Category B-J Footnote (1)(a).

To further complicate the situation, examination categories B-F and B-J contain duplicate examination requirements for dissimilar metal pressure retaining welds in piping.

DETROIT EDISON INTERPRETATIONS: Nozzle to safe end welds will be considered pressure retaining piping welds and subject to the examination requirements of Examination Category B-F (Item Nos. B5.10 and B5.20) and Category B-J (Item No. B9.11 and B9.21).

Dissimilar metal piping welds will be subject to the examination requirements of Examination Categories B-F (Item Nos. B5.130 and B5.140) and B-J (Item No.B9.11 or B9.21).

Since the examination requirements of Examination Categories B-F and B-J are identical for a given size and type of weld, the examinations performed will be used to satisfy the requirements of both Examination Categories.

NOTE 2

Reference Detroit Edison Documents NRC-88-0243, NRC-89-0297, and NRC-90-0103, in response to Generic Letter 88-01 and NUREG 0313 Rev. 2. Detroit Edison has committed to the inservice inspection requirements for austenitic stainless steel welds in accordance with the guidelines of Generic Letter 88-01. All applicable welds have been classified according to NUREG 0313 Rev. 2 requirements with the required percentages of welds being included in this program. The applicable category (GL-88-01) is identified in the remarks column. All welds identified as augmented selections will only be examined by volumetric techniques (i.e. ultrasonic). All inspections will be performed utilizing procedures and personnel qualified to current Utility PDI Guidelines. Sample expansion, if required, shall follow the NRC Staff recommendations provided in NUREG 0313 Rev 2 (Relief Request RR-A29). Methods and criteria for crack evaluation and repair shall be in conformance with IWB-3600 of Section XI of the 1989 Edition of ASME Boiler and Pressure Vessel Code. The previous requirement (now superseded) was an 80 month augmented inspection cycle per NUREG 0313 Rev. 1 with inspections being performed per IE Bulletin 83-02. Detroit Edison requested that Non-Safety

Related, Category D welds be removed from GL-88-01 scope per NRC-92-090. The NRC response (TAC No. M84117, 12-18-1992) modified the inspection interval such that inspection of the subject piping welds on a sampling basis of at least 10 percent of the weld population be performed during each refueling outage.

NOTE 3

Per the EF-2 UFSAR Subsection 4.5.1.2.7, Detroit Edison had agreed to ultrasonically inspect the RPV Jet Pump Hold Down Beams at each Reactor Refueling Outage until sufficient experience was gained to change the frequency of inspection. If a cracked beam was detected, it would be replaced prior to return to power operation. Due to the failure of a jet pump hold down beam at another plant, SIL No. 330, Supplements 1 and 2, and RICSIL No. 065 were issued. As a result, during RF04 all jet pump hold down beams were replaced with beam assemblies that are less susceptible to IGSCC than the original assemblies. Subsequent UT and alternative inspections will be performed at future refueling outages based on industry experiences and the recommendations provided in IE Bulletin 80-07 and NUREG/CR-3052.

NOTE 4

External surfaces - 25% nozzles among each group of penetrations of comparable size and function.

NOTE 5

Component supports and the associated integrally welded attachments are selected for examination in accordance with Code Cases N-491-1 (Alternative Requirements for Selection and Examination of Component Supports) and N-509 Alternative Rules for the Selection and Examination of Integrally Welded Attachments).

NOTE 6

Visual examination of snubbers covers only the snubber unit, except for those snubber supports selected in accordance with Code Case N-491-1. The balance of the support (Integral and nonintegral attachments including lugs, bolting, pins, clamps, and support steel) will be visually examined in accordance with subsection IWF requirements.

NOTE 7

Per SIL 420 an inspection will be performed on the jet pump sensing lines and support brackets when convenient. This inspection will determine if the weld between the support brackets and the vertical run of the sensing line is intact. Additionally the inspection should concentrate on the jet pumps closest to the recirculation outlet nozzles.

NOTE 8

Per NRC Information Notice No. 90-30 all dissimilar metal welds containing Inconel 600 series base materials, Alloy 82 and 182 weld butter, and/or filler metal shall be examined following the guidelines of SIL 455, Revision 1, Supplement 1 (effective 6-90). It is essential and required that all examinations be performed by the use of 45° and 60° refracted longitudinal waves for crack detection and sizing in the Alloy 182 material and the low alloy material. All scanning of welds will be performed in both an axial and circumferential direction followed by a 45° shear wave if indications are identified using refracted longitudinal techniques. Examination of nozzle welds shall be extended into the area of Alloy 182 Weld Material Buttering. The purpose of this additional/supplemental examination is to assure that Alloy 182 Butter Cracking in the nozzle bore has not occurred and extended into the low alloy nozzle material.

NOTE 9

Per SIL 433, Supplement 1, an Ultrasonic (UT) inspection of the entire shroud head bolt length was performed on the 48 shroud head bolts for evidence of cracking during RF04. Based on industry experience additional inspections will be performed at subsequent refuel outages.

NOTE 10

During RF-06 the Reactor Recirculation Pumps were modified to the 4th generation design configuration. This configuration was designed to mitigate known causes to shaft and cover cracking and provides for ultrasonic inspection of the shaft without requiring complete pump disassembly and removal. This change out also included change out of the rotating element to a welded impeller and added rotating baffle. In addition, the hydrostatic bearing was modified to a non-welded design. The need to completely disassemble is reduced by modification to the 4th generation configuration. The following augmented inspections will be performed if the pump is disassembled. Per SIL 415, a supplemental liquid penetrant or volumetric inspection of the suction splitters will be performed if visual inspections identify cracking of the suction splitters or attachment welds. Per RICSIL 038 and NRC Information Notice 89-20 inspections will be performed on the hydrostatic bearing and baffle plate. Inspection of the heater/cooler assembly should be performed if the pump is disassembled. Disassembly of the pump for inspections will be evaluated prior to each refuel outage based upon industry experience and hours of operation

NOTE 11

Per SIL 474 a visual inspection will be performed on the steam dryer drain channel welds during refueling outages. The steam dryer assembly, dryer banks, and welds will be visually inspected each refueling outage.

NOTE 12

Per IE Bulletin 80-13, and SIL 289, Revision 1, Supplement 2, a visual inspection will be performed on the core spray internal piping each Refuel Outage. Inspection points will include those specifically identified in IE Bulletin 80-13 and SIL 289, Revision 1, Supplement 2. The inspection plan will follow the inspection recommendations provided in BWRVIP-18.

NOTE 13

Per SIL 462 inspection of the shroud support access hole cover will be performed at the end of the first 10-year interval or during the plants tenth year of operation. Subsequent reinspections will be based on industry experience.

NOTE 14

All Inservice Examinations of the Reactor Pressure Vessel Welds will be performed using both manual and mechanical examination techniques and will most likely be performed from the outside of the vessel. All examinations will be conducted in accordance with the requirements of Regulatory Guide 1.150, Revision 1, to the extent practical (Ref. NRC-87-0078).

Limitations encountered which affect the examination volume as prescribed by ASME Section XI will be documented in an examination report as required by Regulatory Guide 1.150, Revision 1, Appendix A. Regulatory Guide 1.150, Revision 1, Appendix A, recommends the use of the 2 percent notch which penetrates the internal (clad) surface of calibration blocks for detection of near surface flaws in that region. This is the calibration and examination method that shall be used.

Indications, regardless of amplitude, will be recorded on tape during the mechanized examination for analysis. Similarly, signal responses will be scrutinized during the manual examination process and indications will be recorded for further analysis and resolution.

NOTE 15

Visual inspections for leakage required by ASME section XI Code Categories B-P, C-H, and D-B are performed using site procedures. Test Packages for all tests performed are developed utilizing the Inservice Inspection Classification Boundary Drawings listed on Table A-5-5.1 as the basis.

All components on the following systems are included in the Class 1 inspections: B21, B31, C41, E11, E21, E41, E51, G33, N21, P34.

All components on the following systems are included in the Class 2 inspections: C11, C41, E11, E21, E41, G41, G51, N11, N30, P34, T4804, T50.

All components on the following systems are included in the Class 3 inspections: E11, P42, P44, P45, R30.

NOTE 16

Per RICSIL No. 059 and SIL No. 554 inspection of the top guide beams should be performed at grid locations where fuel and blade guides have been removed for other reasons. Inspection of selected grid locations will be performed during refueling outages. Additionally, ultrasonic inspection should be considered if cracking is found or as recommended by SIL No. 554.

NOTE 17

Per SIL No. 551, inspection should be performed of at least 50% of the Jet Pump Riser Brace welds at each Refueling Outage. Per SIL No. 574 a visual inspection of the jet pump adjusting screw tack welds should be performed during each refueling outage. Based upon acceptable inspection results, future inspections of at least 50% of the tack welds each outage is sufficient. Repairs if required will be performed in accordance with the recommendations of SIL No. 574 as appropriate. In addition, verification of contact will be performed on the restrainer screws and wedge assembly to the inlet mixer per the recommendations of RICSIL-078. These inspections will be performed in conjunction with the inspection of those jet pump assemblies selected for examination. The extent of inspection frequency will follow the recommendation provided in BWRVIP-41.

NOTE 18

Per recommendation of SIL No. 571 augmented inspection of this stainless steel nozzles should be performed after 15 years of operation. The inspection boundary for this weld shall be extended to include all stainless steel material accessible for ultrasonic examination. If linear surface indications are found, ultrasonic examination should be used to determine crack depth.

NOTE 19

Visual inspection of the core shroud and shroud welds will be performed in accordance with the recommendations contained in BWRVIP "BWR Core Shroud Inspection and Flaw Evaluation Guideline" (BWRVIP-01) utilizing techniques detailed in BWRVIP "Reactor Pressure Vessel and Internals Examination Guidelines"(BWRVIP-03). SIL No. 572, Rev 1 inspection recommendations have been superceded. Fermi 2 has committed to perform future inspections per the guidance of the BWRVIP. Visual inspections will be performed as an enhanced VT-1 inspection with the capability to resolve a 1/2-mil wire on the inspection surface. The BWRVIP has imposed additional guidelines for

inspection based on years of operation, materials, and conductivity. Based on the above, during RF-06 a baseline inspection of the shroud welds (H-3, H-4, H-5, and H-7) was completed (approximately 90% volumetric coverage) utilizing an augmented ultrasonic phased array technique with no indication of service induced flaws. Future Core Shroud inspections will be performed in accordance with the BWRVIP "Guidelines for Reinspection of BWR Core Shrouds (BWRVIP - 07). Evaluation of anomalies shall be per the BWR Core Shroud Evaluation Reports (BWRVIP-01 and GENE-523-A53-0494). Additional references include SIL 572, Rev 1, RICSIL 054, Rev 1, RICSIL 068, RICSIL 077, Information Notices 93-079 and 94-042 and Generic Letter GL 94-03. GL 94-03 required advanced notification to the NRC of the proposed plan for Core Shroud inspection, evaluation and/or repair.

NOTE 20

Additional augmented examinations were performed during RF04 and changes were made to inspection schedule for selected nozzle welds following Turbine Generator Event and subsequent RPV chemistry transient for detection of IGSCC initiation.

Note 21

The new containment inspection requirements of ASME Section XI 1992 in effect for the Second Ten-year inspection interval changed the way containment system piping (between the isolation valves) are classified for ISI. IWE-1220(d) specifies that containment system piping is exempt from IWE requirements but shall be examined in accordance with the appropriate classification specified in the construction Design Specifications. This varies from the assumptions made during the first interval, when no IWE requirements were imposed. Relief Request RR-A26 documents Detroit Edison's proposed alternative examination requirements.

PART - B

INSERVICE INSPECTION-NONDESTRUCTIVE TESTING (ISI-NDE) PROGRAM (PLAN) FOR COMPONENT SUPPORTS

1.0 Applicable Code

The Fermi 2 Inservice Inspection Program (Plan) for Component Supports is implemented in accordance with the requirements of ASME Section XI of the Boiler and Pressure Vessel Code, 1989 Edition with no Addenda.

2.0 Program Description

Visual examination and functional testing requirements in accordance with ASME Section XI, Subsection IWF and Code Case N-491-1 for all component supports, except snubbers, are addressed in this section. The Inservice Inspection and Testing Program (Plan) for snubbers can be found in Part C of this document.

All component supports to be examined will receive a VT-3 visual examination to determine the general mechanical and structural condition of the component support. Component supports with moving parts (other than pin connections) will also receive a VT-3 visual examination to determine conditions relating to the operability of the component support.

2.1 Supports To Be Examined

In accordance with ASME Section XI, those component supports selected for examination shall be the supports of those components that are required to be examined under IWB, IWC and IWD. Components included in this program have been selected using the selection criteria specified in Code Case N-491-1 (reference ISI Evaluation 99-056).

Component supports determined not to have integrity for intended service are defined as inoperable. Additional examinations will be performed as defined per Code Case N-491-1 paragraph 2430 for component supports determined to be inoperable.

Supports scheduled to be examined are listed in the Tables found in Section 5.0, Part B of this document.

3.0 Exemptions

Per ASME Section XI Code Case N-491-1 component supports exempt from the examination requirements of paragraph 2000 are those connected to components and items exempted from examination under IWB-1220, IWC-1220, IWD-1220, and IWE-1220. In addition, portions of supports that are inaccessible by being encased in concrete, buried underground or encapsulated by guard pipe are also exempt from the examination requirements of paragraph 2000.

The Inservice Inspection Classification Boundary Drawings listed in Part A, Section 5.0 provide coded system functional drawings identifying all piping and components exempt from examination.

4.0 Relief Requests

No Relief Requests are included in Part B of this program for the second ten-year interval. If requests for relief become necessary they will be processed as described in Part A, 4.0.

5.0 Inservice Inspection Program (Plan) Table B (Component Supports)

5.1 The accompanying table lists the component supports to be examined during the second inspection interval. The table is divided into ISI Class - 1, 2, and 3. The table contains the following information:

Code Class: The ASME Section XI Classification as determined in accordance with the Code of Federal Regulations (10CFR50.55a) and the guidance provided in Regulatory Guide 1.26, and NUREG 0800.

Unique Identification: Identifies the specific component support subject to examination. The identification number consists of the system number, isometric line number, and the support number.

Exam Method Selected: Identifies the code required method of examination (i.e. visual) and the specific examination selected for each component shown (i.e. VT-3).

Type: Identifies the type of component support to be examined.

Relief Request: If applicable, indicates the request for relief applicable in accordance with 10CFR50.55a(g)(5)(iii). See Part-A, Section 4.0 of this document.

Interval: Refers to the 120 month inspection interval as discussed in Section 2.0 of this document.

Period: Defined as the 3 year period within the 120 month (10 year) interval when the specific examination is scheduled. There are 3 periods in each 10 year interval and they can vary by +/- 1 year collectively over the 10 year period. Each period contains the specific outage code indicating that the required exam has either been scheduled or completed.

Remarks: Is reserved for additional information to explain, amplify, or provide added details necessary to clarify the examination requirements.

5.1 List of Abbreviations: For definitions of abbreviations used in the following tables, refer to Part-A, Section 6.2 of this document.

INSERVICE INSPECTION NDE PROGRAM

TABLE B

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period 1	2	3	Remarks
1	B11-5360-Skirt	VT-3	A		08S			RPV Skirt & Bolting
1	B11-5360-STAB-A	VT-3	G		07S			RPV Stabilizer Supports
1	B11-5360-STAB-B	VT-3	G		08S			RPV Stabilizer Supports
1	B11-5360-STAB-C	VT-3	G			10S		RPV Stabilizer Supports
1	B11-5360-STAB-D	VT-3	G			09S		RPV Stabilizer Supports
1	B11-5360-STAB-E	VT-3	G				11S	RPV Stabilizer Supports
1	B11-5360-STAB-F	VT-3	G				12S	RPV Stabilizer Supports
1	B11-5360-STAB-G	VT-3	G				11S	RPV Stabilizer Supports
1	B11-5360-STAB-H	VT-3	G		08S			RPV Stabilizer Supports
1	B21-2192-G02	VT-3	SP				12S	
1	B21-2192-G13	VT-3	G				12S	
1	B21-2297-G14	VT-3	G			10S		
1	B21-5352-HA1	VT-3	SP		07S			
1	B21-5353-HB2	VT-3	SP		08S			
1	B21-5354-AC1	VT-3	A			10S		
1	B21-5354-HC3	VT-3	SP		08S			
1	B21-5355-GD1	VT-3	G		07S			
1	B31-5356-HA4	VT-3	SP				12S	
1	B31-5357-HA1	VT-3	SP			10S		
1	B31-5357-HA7	VT-3	C		08S			
1	B31-5358-HB3	VT-3	SP		07S			
1	B31-5359-HB6	VT-3	C			10S		
1	B31-5359-HB7	VT-3	C			09S		
1	E11-2298-G01	VT-3	SP				11S	
1	E11-2299-G03	VT-3	SP				11S	
1	E11-2327-G03	VT-3	R			09S		
1	E11-3053-G01	VT-3	SP		08S			
1	E21-3052-G02	VT-3	SP			09S		
1	E21-3053-G03	VT-3	R				12S	
1	E41-2297-G05	VT-3	SP				12S	
1	E51-2192-G11	VT-3	SP		07S			
1	G33-3096-G01	VT-3	SP			10S		
1	G33-3096-G04	VT-3	SP		07S			
1	G33-3096-G10	VT-3	SP				11S	
1	G33-3096-G32	VT-3	G				11S	
1	N21-3536-G02	VT-3	SP			09S		
1	N21-3536-G03	VT-3	SP				12S	

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period 1	2	3	Remarks
1	N21-3536-G07	VT-3	SP				11S	
1	N21-3537-G04	VT-3	SP			10S		
1	N21-3537-G06	VT-3	SP			10S		
2	B21-2586-G02	VT-3	R				12S	Augmented exam - See ISI 99-056
2	B21-2587-G06	VT-3	SP				11S	Augmented exam - See ISI 99-056
2	B21-2590-G12	VT-3	SP			10S		Augmented exam - See ISI 99-056
2	B21-2592-G04	VT-3	R		07S			Augmented exam - See ISI 99-056
2	B21-2594-G06	VT-3	SP					Augmented exam - See ISI 99-056
2	B21-4095-G06	VT-3	R		07S			Augmented exam - See ISI 99-056
2	C11-2113-G262	VT-3	G				11S	
2	C11-2113-G266	VT-3	R			09S		
2	C11-2113-G274	VT-3	G			09S		
2	C11-2113-G294	VT-3	G		07S			
2	E11-3035-G02	VT-3	R			10S		
2	E11-3035-G05	VT-3	SP			09S		
2	E11-3035-G19	VT-3	G			10S		
2	E11-3035-G24	VT-3	R				12S	
2	E11-3146-G30	VT-3	G				12S	
2	E11-3146-G32	VT-3	SP			09S		
2	E11-3146-G36	VT-3	R			10S		
2	E11-3151-G05	VT-3	SP				11S	
2	E11-3151-G25A	VT-3	R		07S			
2	E11-3151-G29	VT-3	R			09S		
2	E11-3153-G10	VT-3	G		08S			
2	E11-3153-G12	VT-3	SP			09S		
2	E11-3153-G16	VT-3	R				12S	
2	E11-3154-G05	VT-3	SP			10S		
2	E11-3154-G09	VT-3	R		08S			
2	E11-3154-G22	VT-3	R				11S	
2	E11-3154-G28	VT-3	R			09S		
2	E11-3157-G04	VT-3	SP		07S			
2	E11-3157-G24	VT-3	R			09S		
2	E11-3157-G29	VT-3	R			10S		
2	E11-3158-G33	VT-3	R		08S			
2	E11-3158-G46	VT-3	R			09S		
2	E11-3158-G50	VT-3	SP				12S	
2	E11-3159-G06	VT-3	R		07S			

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period 1	2	3	Remarks
2	E11-3159-G09	VT-3	R				11S	
2	E11-3160-G01	VT-3	SP		08S			
2	E11-3160-G19	VT-3	G				12S	
2	E11-3161-G11	VT-3	R				12S	
2	E11-3161-G15	VT-3	R		08S			
2	E11-3164-G11	VT-3	G		07S			
2	E11-3164-G17A	VT-3	R				12S	
2	E11-3164-G21	VT-3	SP		08S			
2	E11-3177-G18	VT-3	R			10S		
2	E11-3177-G19	VT-3	R		08S			
2	E11-3177-G30	VT-3	G			10S		
2	E11-4611-G04	VT-3	SP				12S	
2	E11-4611-G09	VT-3	R				12S	
2	E11-4611-G15	VT-3	R		08S			
2	E11-4612-G10	VT-3	R				11S	
2	E11-4612-G12	VT-3	G		08S			
2	E11-5370-G01	VT-3	G				11S	Div 2 RHR HTX Supports
2	E11-5370-G02	VT-3	G		08S		12S	Div 2 RHR HTX Supports
2	E11-5370-G03	VT-3	G			09S		Div 2 RHR HTX Supports
2	E11-5370-G04	VT-3	G				11S	Div 2 RHR HTX Supports
2	E11-5370-G05	VT-3	A		08S			Div 2 RHR HTX Supports
2	E21-3144-G03	VT-3	SP		08S			
2	E21-3144-G06	VT-3	A				11S	
2	E21-3144-G11	VT-3	R			10S		
2	E21-3144-G16	VT-3	R		08S			
2	E21-3144-G20	VT-3	R				11S	
2	E21-3145-G05	VT-3	SP				12S	
2	E21-3147-G13	VT-3	R				12S	
2	E21-3147-G20	VT-3	G			09S		
2	E21-3147-G35	VT-3	R		07S			
2	E21-3147-G39	VT-3	SP			10S		
2	E21-3148-G29	VT-3	R			09S		
2	E21-3148-G37	VT-3	SP			10S		
2	E21-3148-G48	VT-3	R				12S	
2	E21-3149-G05	VT-3	SP				11S	
2	E21-3149-G06	VT-3	R				11S	
2	E21-3150-G02	VT-3	R		07S			

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period 1	2	3	Remarks
2	E41-3162-G01	VT-3	SP			09S		
2	E41-3162-G03	VT-3	R			09S		
2	E41-3162-G13	VT-3	G				12S	
2	E41-3163-G01	VT-3	SP		08S			
2	E41-3163-G12	VT-3	R				12S	
2	E41-3167-G01	VT-3	R		07S			
2	E41-3167-G13	VT-3	SP			10S		
2	E41-3167-G15	VT-3	R				12S	
2	E41-3169-G100	VT-3	G		08S			
2	E41-3169-G13	VT-3	SP			09S		
2	E41-3169-G17	VT-3	R			10S		
2	E41-3172-G01	VT-3	SP		08S			
2	E41-3172-G14	VT-3	R				11S	
2	E41-3172-G18	VT-3	G				11S	
2	N30-3258-G02	VT-3	C		07S			
2	N30-3258-G07	VT-3	C		07S			
2	N30-3258-G17(A-D)	VT-3	R			10S	12S	
2	N30-3259-G02	VT-3	C			09S		
2	N30-3259-G25	VT-3	R			09S		
2	N30-3259-G73	VT-3	SP				12S	
2	P11-3566-G10	VT-3	SP		07S			
2	T48-2095-G01	VT-3	SP		08S			
2	T48-2095-G07B	VT-3	R				11S	
2	T48-2095-G10A	VT-3	R			10S		
2	T48-2095-G19	VT-3	G				11S	
2	T48-2095-G22	VT-3	R			09S		
2	T48-2095-G24A	VT-3	R			10S		
2	T48-2095-G25	VT-3	R		07S			
2	T48-2095-G26A	VT-3	R				12S	
2	T48-2097-G07	VT-3	R			10S		
2	T48-2097-G13B	VT-3	R		07S			
2	T48-2097-G17	VT-3	R				11S	
2	T48-2097-G19	VT-3	G				11S	
2	T48-2097-G21	VT-3	R		07S			
2	T48-2097-G22A	VT-3	R		08S			
2	T48-2097-G25A	VT-3	R		08S			
2	T48-2097-G34	VT-3	G			09S		

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period 1	2	3	Remarks
3	E11-2179-G20	VT-3	R		07S			
3	E11-2180-G14	VT-3	G				12S	
3	E11-2183-G07	VT-3	G			10S		
3	E11-2183-G15	VT-3	R		08S			
3	E11-2184-G12	VT-3	R			10S		
3	E11-2184-G22	VT-3	G		08S			
3	E11-3184-G04	VT-3	G				12S	
3	E11-3184-G08	VT-3	R			09S		
3	E11-3184-G10	VT-3	R				11S	
3	E11-3184-G18	VT-3	R		07S			
3	E11-3185-G40	VT-3	R			09S		
3	E11-3185-G53	VT-3	SP			09S		
3	E11-3185-G58	VT-3	SP				12S	
3	E11-3185-G60	VT-3	G			09S		
3	P42-3340-G06	VT-3	SP			09S		
3	P44-3047-G28	VT-3	G				11S	
3	P44-3048-G10	VT-3	SP			10S		
3	P44-3084-G10	VT-3	R		07S			
3	P44-3084-G15	VT-3	R			10S		
3	P44-3189-G38	VT-3	SP		08S			
3	P44-3189-G42	VT-3	R			10S		
3	P44-3189-G47	VT-3	R		07S			
3	P44-3336-G01	VT-3	A			09S		
3	P44-3336-G15	VT-3	R				11S	
3	P44-3337-G13	VT-3	R				12S	
3	P44-3337-G16	VT-3	R			10S		
3	P44-3345-G02	VT-3	G		08S			
3	P44-3345-G08	VT-3	R			09S		
3	P44-3346-G02	VT-3	G				11S	
3	P44-3346-G12	VT-3	R				12S	
3	P44-3347-G10	VT-3	R		07S			
3	P44-3347-G14	VT-3	R				12S	
3	P44-3348-G12	VT-3	A		07S			
3	P44-3348-G29B	VT-3	R				11S	
3	P44-3351-G03	VT-3	R				12S	
3	P44-3351-G28	VT-3	R		08S			
3	P44-3351-G41	VT-3	SP				12S	

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period 1	2	3	Remarks
3	P44-3368-G09	VT-3	G			10S		
3	P44-3368-G31	VT-3	R				11S	
3	P44-3368-G38	VT-3	R				12S	
3	P44-3558-G14	VT-3	R				12S	
3	P44-3559-G12	VT-3	R			10S		
3	P44-EECW Head Tank Sprts (Div. 2)	VT-3			08S			
3	P44-EECW Htr Sprts (Div. 1)	VT-3					12S	
3	P45-2178-G09	VT-3	R			09S		
3	P45-2204-G11	VT-3	R				11S	
3	P45-3352-G02	VT-3	G				12S	
3	P45-3352-G06	VT-3	R		07S			
3	P45-3353-G05	VT-3	R			10S		
3	P45-3353-G07	VT-3	SP				11S	
3	P45-3353-G26	VT-3	R		08S			
3	P45-3359-G03	VT-3	G		08S			
3	P45-3359-G11	VT-3	SP				11S	
3	P45-3360-G07	VT-3	G			09S		
3	P45-3360-G11	VT-3	R				11S	
3	R30-2176-G17	VT-3	G		07S			
3	R30-2176-G28	VT-3	A			10S		
3	R30-2176-G31	VT-3	G		08S			
3	R30-2177-G04	VT-3	R			09S		
3	R30-2177-G27	VT-3	R				11S	
3	R30-2177-G31	VT-3	G		08S			
3	R30-2181-G04	VT-3	R				11S	
3	R30-2181-G15	VT-3	R			10S		
3	R30-2182-G02	VT-3	G			09S		
3	R30-2182-G14	VT-3	R		07S			

PART - C

INSERVICE INSPECTION-NONDESTRUCTIVE EXAMINATION (ISI-NDE) PROGRAM (PLAN) FOR SNUBBERS

1.0 Applicable Code

The Inservice Inspection Program (Plan) for Nondestructive Examination (NDE) of snubbers will be implemented in accordance with the requirements of the EF-2 Technical Specifications and Section XI of the ASME Boiler and Pressure Vessel Code, 1989 Edition. Upon completion of the improved technical specification project, inspection and test requirments will be transferred to the Technical Requirements Manual (TRM). Section 5.1 titled "Augmented Inservice Inspection Program for Snubbers TRM 5.1 will continue the use of the original Technical Specification requirements for testing of snubbers that have been previously approved for use at Fermi. Justification for use of this alternative is provided in Relief Request RR-C3.

2.0 Program Description

2.1 Visual Examinations

2.1.1 Visual Examination Frequency/Schedule

Visual examinations are required on all safety related snubbers. These safety related snubbers are listed in Table C, provided in Part C, Section 5.0. Visual examination frequency is established per TRM 5.1, in accordance with the rules of Generic Letter 90-09.

Snubbers which appear inoperable as a result of the visual inspection shall be classified as Unacceptable and may be reclassified as Acceptable for the purposes of establishing the next visual inspection interval, provided that:

1) The cause for the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and

2) The affected snubber is functionally tested in the as-found condition and determined operable per the functional testing acceptance criteria.

The next visual inspection interval shall be determined based upon the total number of unacceptable snubbers found during the previous visual inspection, relative to the total snubber population.

2.1.2 Extent of Visual Examination

All inspections are performed by personnel qualified and certified in accordance with IWA-2300. The frequency of examination and testing of snubbers as described in the relief request applies only to the snubber unit. The balance of the component support (integral and nonintegral attachments, including lugs, bolting, pins, clamps, and support steel) is examined in accordance with the requirements of IWF and Code Case N-491-1. This is due to the examination frequency of the snubber being more frequent than for component supports. The component support portion of the snubber (lugs, bolting, pins, clamps and support steel) is examined separately once each interval per the required sampling rates of Code Case N-491-1.

2.1.3 Additional Examinations:

For the snubber support (integral and nonintegral attachments, including lugs, bolting, pins, clamps, and support steel) IWF-2430 provides the requirements for additional examinations to be performed when corrective measures are required (per IWF-3000).

2.2 Functional Testing

2.2.1 Functional Testing Extent, Frequency, and Sampling Plan

Functional testing of all safety related snubbers is scheduled to coincide with scheduled refueling outages at intervals of approximately 18 months. Testing is performed utilizing the sampling plans and acceptance criteria provided in TRM 5.1 The representative sample is randomly chosen from the various types of snubbers installed in the plant and is reviewed before beginning the testing to ensure, as far as practical, that the samples are representative of the various configurations, operating environments, range of size and capacity of each type of snubber. The total number of snubbers functionally tested is dependent upon the sample plan chosen and the number of failures.

If a snubber fails the inservice functional test requirements, that snubber, or its replacement, shall be retested at the time of the next scheduled functional testing but shall not be included in the sample plan.

2.2.2 Functional Testing Acceptance Criteria

The functional testing acceptance criteria for all sizes of snubber includes verification that, activation (restraining action) is achieved within the specified range in both tension and compression; snubber bleed or release rate where required, is present in both tension and compression, within the specified range; and for mechanical snubbers, the force required to initiate or maintain motion of the snubber is within the specified range in both directions of travel.

2.2.3 Functional Testing Failure Analysis

Snubbers which fail the inservice functional test require an engineering evaluation and additional testing. Corrective measures are in accordance the requirements of TRM 5.1.

An engineering evaluation is performed on the components to which the inoperable snubbers are attached. The purpose of this evaluation is to determine if the components to which the inoperable snubbers are attached were adversely affected by the inoperability of the snubbers, in order to ensure that the components remain capable of meeting their designed service. An engineering evaluation shall be made of each failure to meet the functional testing acceptance criteria to determine the cause of the failure. The results of this evaluation shall be used, if applicable, in selecting snubbers to be tested in an effort to determine the operability of other snubbers, irrespective of type, which may be subject to the same failure mode. If any snubber selected for functional testing either fails to activate or fails to move, the cause will be evaluated and, if caused by manufacturer or design deficiency, all snubbers of the same type subject to the same defect shall be functionally tested.

If additional samples are selected in accordance with the sampling plans, the selection of snubbers shall be based upon the engineering evaluation.

2.3 Snubber Service Life Monitoring

The service life of various components are established by engineering information and shall be adjusted based upon test results and failure histories. The purpose of this program is to ensure that the service life of critical components is not exceeded during a period when the snubber is required to be operable.

3.0 Exemptions - None.

4.0 Relief Requests

4.1 Relief Request Description (Format)

Relief Requests are included where specific requirements of ASME Section XI are determined to be impractical. All Relief Requests include the following information:

4.1.1 **Component Function/Description**: Identification of the component(s) for which relief is requested.

4.1.2 **System**: The applicable plant system(s) associated with the Relief Request.

4.1.3 **ASME Code Class**: The applicable ASME code classification

4.1.4 **ASME Section XI Requirements**: Identification of the specific ASME Section XI requirement that has been determined to be impractical.

4.1.5 **Basis for Relief**: Information to support Detroit Edison's determination that the ASME Code requirement is impractical. The following data will be provided, if applicable:

- Reference to the regulatory basis paragraph
- Detailed technical information supporting proposed alternate scope of examination.
- Description of the proposed alternative examination's impact on plant safety (if any) and justification of any change in the overall level of plant safety.

4.1.6 **Alternate Examination**: Alternate examination(s) that are proposed will be identified. Both alternate examination(s) that are performed in lieu of the Section XI examination requirement(s) and alternate examination(s) that supplement partially completed Section XI examination requirement(s) will be identified.

4.1.7 **Applicable Time Period**: A statement identifying when the Relief Request would apply during the inspection period or interval

4.2 Relief Requests

The following Relief Request(s) are included in this section:

RELIEF REQUEST NUMBER	GENERAL DESCRIPTION
RR-C1	DELETED
RR-C2	DELETED
RR-C3	Snubber Examination and Testing
RR-C4	Rotation of Snubbers per Code Case N-508-1

SECOND INTERVAL RELIEF REQUEST
RR-C3

COMPONENT FUNCTION/DESCRIPTION:
Snubber Examination and Testing Program

SYSTEM:
All Systems included in the ISI NDE Program Plan

ASME CODE CLASS:
Class 1, 2, and 3 and MC

ASME SECTION XI REQUIREMENTS:
ASME Section XI 1989, IWF-5300 specifies that snubber examination and testing be performed in accordance with the 1988 Addenda to ASME/ANSI OM-1987, Part 4, using the VT-3 visual examination method described in IWA-2213.

BASIS FOR RELIEF:
Pursuant to 10 CFR 50.55a(a)(3)(i), Detroit Edison is requesting relief from ASME Section XI requirements to perform snubber examination and testing in accordance with 1988 addenda to Part 4 of ASME/ANSI OM-1987 (OM-4). The requirements of OM-4 pre-date Generic Letter 90-09, titled "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions."

Fermi 2 had imposed examination and testing requirements in accordance with Technical Specification Surveillance Requirement 4.7.5 for all safety related snubbers including ASME Class 1, 2, 3 and MC. Functional testing provides a 95 percent confidence level that at least 90 percent of the snubbers operate within the specified acceptance limits. The performance of visual examinations is a separate process that complements the functional testing program and provides additional confidence in snubber operability. Visual examination requirements are based on NRC Generic Letter 90-09, "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions".

With implementation of the Fermi 2 Improved Technical Specifications, the snubber surveillance requirements of are being moved in their entirety to the Fermi Technical Requirements Manual (TRM 5.1 titled "Augmented Inservice Inspection Program for Snubbers").

Implementation of TRM 5.1 requirements (formerly TS 4.7.5) for snubber functional testing and visual examination has maintained a reliable snubber population. The TRM requirements provide an equivalent level of quality and safety. These alternative requirements were previously reviewed and approved by the staff in the Fermi Technical Specifications.

SECOND INTERVAL RELIEF REQUEST
RR-C3
(continued)

ALTERNATIVES:
Detroit Edison proposes to continue to utilize the requirements of the Fermi Technical Specification 4.7.5 (as moved in their entirety to the Technical Requirements Manual) for visual examination and functional testing of all snubbers associated with ASME Class 1, 2, 3, and MC component supports. These alternate requirements provide an acceptable level of quality and safety.

APPLICABLE TIME PERIOD
Relief is requested for the second 10-year inspection interval.

SECOND INTERVAL RELIEF REQUEST
RR-C4

COMPONENT FUNCTION/DESCRIPTION:
All safety related snubbers

SYSTEM:
All systems included in the ISI NDE Program

ASME CODE CLASS:

Class 1, 2, and 3 and MC

ASME SECTION XI REQUIREMENTS: ASME Section XI, 1989 Edition, IWA-7130 requires a documented program for replacement of all items within the scope of this division. Footnote 1 indicates that reasons for replacement may include:

a. Discrepancies detected during inservice inspection
b. Regulatory requirements change
c. Design changes to imporve equipment service
d. Design changes to improve reliability
e. Damage
f. Failure during service
g. Personnel exposure
h. Economics
i. End of service life
j. Discrepancies detected during maintenance

BASIS FOR RELEF:
Pursuant to 10 CFR 50.55a(a)(3)(i) Detroit Edison is requesting relief from ASME Section XI requirements to provide a documented replacement program when snubbers are rotated for testing purposes. Detroit Edison is proposing to implement the alternative of ASME Code Case N-508-1 (copy attached). This Code Case is ASME approved indicating Code Committee consensus that the alternative will provide an acceptable level of quality and safety. Detroit Edison agrees with the Code Committee, since the purpose for the rotation is related to Code requirements to remove snubbers for acceptance testing and not equipment failure or design changes.

SECOND INTERVAL RELIEF REQUEST
RR-C4
(continued)

The Code Case places the following restrictions on equipment rotation:

a. Items being removed and installed shall be of the same design and construction;
b. Items being removed shall have no evidence of failure at the time of removal;
c. Items being rotated shall be removed and installed only by mechanical means;
d. Items being installed shall previously have been in service;
e. Preservice inspections and pressure tests shall be performed as required by IWA-7000;
f. The Owner shall maintain a method of tracking the items to ensure traceability of inservice and testing records;
g. Use of an NIS-2 form is not required except as provided in (i) below.
h. Testing of removed snubbers and pressure relief valves, including required sample expansions, shall be performed in accordance with the Owner's test program.
i. Repair or replacement of removed items, when required, shall be performed in accordance with IWA-4000 or IWA-7000.

ALTERNATIVE EXAMINATION:
Code Case N-508-1 (attached) allows rotation of serviced snubbers in place of the one being removed for testing and subsequent servicing as necessary.

APPLICABLE TIME PERIOD:
Relief is requested for the second 10-year interval.

CASE
N-508-1

CASES OF ASME BOILER AND PRESSURE VESSEL CODE

Approval Date: May 11, 1994

See Numerical Index for expiration and any reaffirmation dates.

Case N-508-1
Rotation of Serviced Snubbers and Pressure Relief Valves for the Purpose of Testing
Section XI, Division 1

Inquiry: What alternative rules to those stated in IWA-4000 (IWA-7000 for Editions and Addenda prior to the 1991 Addenda) may be used when, for the purpose of testing, snubbers and pressure relief valves are rotated from stock and installed on components (including piping systems) within the Section XI boundary?

Reply: It is the opinion of the Committee that, as an alternative to the provisions of IWA-4000 (IWA-7000 for Editions and Addenda prior to the 1991 Addenda) and for the purpose of testing, snubbers and relief valves may be rotated from stock and installed on components (including piping systems) within the Section XI boundary provided the following requirements are met:

(a) Items being removed and installed shall be of the same design and construction;

(b) Items being removed shall have no evidence of failure at the time of removal;

(c) Items being rotated shall be removed and installed only by mechanical means;

(d) Items being installed shall previously have been in service;

(e) Preservice inspections and pressure tests shall be performed as required by IWA-4000 (IWA-7000 for Editions and Addenda prior to the 1991 Addenda);

(f) The Owner shall maintain a method of tracking the items to ensure traceability of inservice inspection and testing records;

(g) Use of an NIS-2 form is not required except as provided in (i) below;

(h) Testing of removed snubbers and pressure relief valves, including required sample expansions, shall be performed in accordance with the Owner's test program;

(i) Repair or replacement of removed items, when required, shall be performed in accordance with IWA-4000 (IWA-4000 or IWA-7000 for Editions and Addenda prior to the 1991 Addenda).

INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SNUBBERS)

5.0 The following tables list the snubbers that are to be examined during each interval. Snubbers are grouped by the system they are associated with. The tables contain the following information:

Component Number: A unique identification number for each snubber component support.

Snubber Type: Mechanical or Hydraulic design.

Quantity / Size: Number of snubbers at one location and the size of each snubber.

Building / Floor: The building and floor level location of the snubber.

Elevation: The elevation of the snubber.

Inaccessible: The accessibility of the snubber during power operation. An X placed in this column indicates the snubber is inaccessible during power operation.

ALARA Concerns: An X placed in this column indicates a snubber is located in a radiation area greater than 60 millirem/hr,

Difficult to Remove: An X placed in this column indicates the snubber is difficult to access or remove for functional testing,

5.1 List of Abbreviations:

For definitions of abbreviations used in the following snubber tables, refer to Part A, Section 6.2 of this document.

INSERVICE INSPECTION NDE PROGRAM

TABLE C

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
B21-2174-G25B	MECH	(2) PSA 1/2	RB1	585	X	X
B21-2187-G81	MECH	(1) PSA 1/4	DW	675	X	X
B21-2297-G08	MECH	(1) PSA 10	DW	587	X	X
B21-2297-G09	MECH	(1) PSA 3	DW	587	X	X
B21-2297-G11	MECH	(1) PSA 10	DW	600	X	X
B21-2586-G06	MECH	(1) PSA 10	DW	603	X	X
B21-2586-G08	MECH	(1) PSA 35	DW	579	X	X
B21-2587-G05	MECH	(1) PSA 35	DW	590	X	X
B21-2588-G06	MECH	(1) PSA 35	DW	576	X	X
B21-2589-G02	MECH	(1) PSA 10	DW	587	X	X
B21-2589-G03	MECH	(1) PSA 35	DW	586	X	X
B21-2589-G04	MECH	(1) PSA 35	DW	590	X	X
B21-2590-G04	MECH	(1) PSA 35	DW	589	X	X
B21-2590-G07	MECH	(1) PSA 10	DW	583	X	X
B21-2592-G02	MECH	(1) PSA 35	DW	590	X	X
B21-2592-G10	MECH	(1) PSA 10	DW	604	X	X
B21-2593-G04	MECH	(1) PSA 35	DW	590	X	X
B21-2593-G07	MECH	(1) PSA 35	DW	601	X	X
B21-2593-G13	MECH	(1) PSA 10	DW	581	X	X
B21-2594-G10	MECH	(1) PSA 35	DW	601	X	X
B21-2595-G07	MECH	(1) PSA 10	DW	583	X	X
B21-2595-G13	MECH	(1) PSA 35	DW	589	X	X
B21-2596-G11	MECH	(1) PSA 35	DW	599	X	X
B21-4093-G06	MECH	(1) PSA 10	DW	578	X	X
B21-4093-G11	MECH	(1) PSA 35	DW	598	X	X
B21-4093-G12	MECH	(1) PSA 10	DW	598	X	X
B21-4093-G13	MECH	(1) PSA 10	DW	608	X	X
B21-4094-G05	MECH	(1) PSA 10	DW	580	X	X
B21-4094-G09	MECH	(1) PSA 35	DW	590	X	X
B21-4095-G05	MECH	(1) PSA 10	DW	595	X	X
B21-4095-G08	MECH	(1) PSA 10	DW	596	X	X
B21-4096-G08	MECH	(1) PSA 10	DW	604	X	X
B21-4096-G11	MECH	(1) PSA 10	DW	610	X	X
B21-E213-SSA1	MECH	(1) PSA 35	DW	613	X	X
B21-E213-SSA3	MECH	(1) PSA 35	DW	609	X	X
B21-E213-SSB1	MECH	(1) PSA 10	DW	614	X	X
B21-E213-SSB2	MECH	(1) PSA 10	DW	615	X	X
B21-E213-SSB3	MECH	(1) PSA 10	DW	609	X	X
B21-E213-SSB5	MECH	(1) PSA 35	DW	609	X	X
B21-E213-SSB6	MECH	(1) PSA 35	DW	609	X	X

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
B21-E213-SSC1	MECH	(1) PSA 10	DW	612	X	X
B21-E213-SSC2	MECH	(1) PSA 10	DW	615	X	X
B21-E213-SSC3	MECH	(1) PSA 10	DW	609	X	X
B21-E213-SSC5	MECH	(1) PSA 35	DW	609	X	X
B21-E213-SSC6	MECH	(1) PSA 35	DW	609	X	X
B21-E213-SSD1	MECH	(1) PSA 35	DW	613	X	X
B21-E213-SSD2	MECH	(1) PSA 35	DW	620	X	X
B21-E213-SSD3	MECH	(1) PSA 35	DW	609	X	X
B31-E215-SSA1	MECH	(1) PSA 35	DW	579	X	X
B31-E215-SSA4	MECH	(1) PSA 35	DW	592	X	X
B31-E215-SSA5	MECH	(1) PSA 35	DW	592	X	X
B31-E215-SSA6	MECH	(1) PSA 35	DW	592	X	X
B31-E215-SSA7	MECH	(1) PSA 35	DW	590	X	X
B31-E215-SSA8	MECH	(1) PSA 35	DW	591	X	X
B31-E215-SSB1	MECH	(1) PSA 35	DW	579	X	X
B31-E215-SSB10	MECH	(1) PSA 35	DW	583	X	X
B31-E215-SSB4	MECH	(1) PSA 35	DW	592	X	X
B31-E215-SSB5	MECH	(1) PSA 35	DW	592	X	X
B31-E215-SSB6	MECH	(1) PSA 35	DW	592	X	X
B31-E215-SSB7	MECH	(1) PSA 35	DW	590	X	X
B31-E215-SSB8	MECH	(1) PSA 35	DW	591	X	X
B31-E215-SSB9	MECH	(1) PSA 35	DW	582	X	X
C41-2340-G08	MECH	(1) PSA 1/2	DW	610	X	X
C41-2340-G11	MECH	(1) PSA 1/2	DW	608	X	X
C41-2340-G12	MECH	(1) PSA 1/2	DW	608	X	X
C41-2340-G15	MECH	(1) PSA 1/2	DW	624	X	X
C41-2340-G16	MECH	(2) PSA 1/2	DW	620	X	X
C41-2340-G17	MECH	(1) PSA 1/2	DW	619	X	X
C41-2979-G01	MECH	(2) PSA 1/4	RB2	632	X	
E11-2299-G19	MECH	(1) PSA 35	DW	602	X	X
E11-2299-G20	MECH	(1) PSA 35	DW	602	X	X
E11-3035-G25	HYD	(1) 1 1/2 X 5	RB	578		X
E11-3146-G08	MECH	(1) PSA 35	RB	575		X
E11-3146-G10	HYD	(1) 5 X 5	RB	575		X
E11-3146-G16	HYD	(1) 5 X 5	RB	575		X
E11-3146-G17	HYD	(2) 5 X 5	RB1	588		X
E11-3146-G21	MECH	(1) PSA 10	RB1	602		
E11-3146-G22	MECH	(1) PSA 10	RB1	598		
E11-3146-G23	MECH	(1) PSA 10	RB2	614		
E11-3146-G25	MECH	(1) PSA 3	RB2	616		

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
E11-3146-G26	MECH	(1) PSA 35	RB2	617		
E11-3146-G29	MECH	(1) PSA 3	RB2	613		
E11-3146-G33	MECH	(1) PSA 35	RB	578		X
E11-3146-G34	MECH	(1) PSA 10	RB2	620		
E11-3146-G35	MECH	(2) PSA 10	RB	567		X
E11-3146-G37	MECH	(2) PSA 10	RB	578		X
E11-3151-G07	HYD	(1) 4 X 5	RB	575		X
E11-3151-G08	HYD	(1) 4 X 5	RB	575		X
E11-3151-G10	MECH	(2) PSA 10	RB1	590		
E11-3151-G13	HYD	(1) 2 1/2 X 5	RB1	601		
E11-3151-G15	HYD	(1) 2 1/2 X 5	RB2	620		
E11-3151-G16	MECH	(1) PSA 10	RB2	620		
E11-3151-G17	MECH	(1) PSA 3	RB2	623		
E11-3151-G18	MECH	(1) PSA 10	RB2	623		
E11-3151-G23	MECH	(2) PSA 35	RB	578		X
E11-3151-G26	HYD	(1) 1 1/2 X 5	RB2	615		
E11-3151-G31	MECH	(1) PSA 10	RB1	606		
E11-3151-G32	HYD	(1) 4 X 10	RB1	606		
E11-3151-G33	MECH	(1) PSA 10	RB	570		X
E11-3151-G35	MECH	(1) PSA 10	RB	579		X
E11-3152-G17	HYD	(2) 2 1/2 X 5	RB	572		X
E11-3152-G18	HYD	(1) 2 X 5	RB	550		X
E11-3152-G19	HYD	(1) 2 X 5	RB	549		X
E11-3152-G20	HYD	(1) 4 X 5	RB	549		X
E11-3152-G21	HYD	(1) 4 X 5	RB	548		X
E11-3152-G22	MECH	(1) PSA 10	RB	547		X
E11-3152-G24	HYD	(1) 2 1/2 X 5	RB	548		X
E11-3152-G25	HYD	(1) 4 X 5	RB	548		X
E11-3152-G29	HYD	(2) 4 X 5	RB	572		X
E11-3152-G30	HYD	(1) 4 X 5	RB	572		X
E11-3152-G31	MECH	(2) PSA 3	RB	572		X
E11-3152-G32	MECH	(1) PSA 10	RB	572		X
E11-3152-G33	MECH	(1) PSA 3	RB	572		X
E11-3152-G34	MECH	(1) PSA 3	RB	572		X
E11-3153-G13	HYD	(1) 2 1/2 X 5	RB	542		X
E11-3153-G15	MECH	(2) PSA 10	RB	541		X
E11-3154-G11	HYD	(1) 4 X 5	RB	541		X
E11-3154-G12	MECH	(1) PSA 10	RB	542		X
E11-3154-G13	MECH	(1) PSA 10	RB	541		X
E11-3154-G14	MECH	(1) PSA 10	RB	543		X

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
E11-3154-G16	HYD	(1) 2 X 5	RB	541		X
E11-3154-G17	MECH	(1) PSA 10	RB	541		X
E11-3154-G19	MECH	(1) PSA 10	RB	541		X
E11-3154-G21	MECH	(2) PSA 3	RB	541		X
E11-3154-G23	MECH	(1) PSA 10	RB	542		X
E11-3157-G08	HYD	(1) 2 1/2 X 5	RB	575		X
E11-3157-G10	HYD	(1) 4 X 5	RB	568		X
E11-3157-G11	HYD	(1) 4 X 5	RB	567		X
E11-3157-G15	HYD	(1) 4 X 5	RB	570		X
E11-3157-G16	MECH	(1) PSA 35	RB	566		
E11-3157-G17	MECH	(1) PSA 35	RB	575		X
E11-3157-G20	HYD	(1) 4 X 5	RB	561		X
E11-3157-G22	HYD	(1) 4 X 5	RB	558		
E11-3158-G07	HYD	(1) 4 X 5	RB2	613		
E11-3158-G08	HYD	(1) 4 X 5	RB2	614		
E11-3158-G10	HYD	(1) 2 1/2 X 5	RB2	622		
E11-3158-G12	HYD	(1) 4 X 5	RB2	631		
E11-3158-G15	HYD	(1) 2 1/2 X 5	RB2	631		
E11-3158-G16	HYD	(1) 4 X 10	RB2	623		
E11-3158-G17	HYD	(1) 4 X 5	RB2	622		
E11-3158-G19	HYD	(1) 4 X 5	RB1	610		
E11-3158-G20	HYD	(1) 4 X 5	RB1	609		
E11-3158-G22	HYD	(1) 2 1/2 X 5	RB1	584		
E11-3158-G24	MECH	(1) PSA 10	RB1	591		
E11-3158-G29	HYD	(1) 4 X 5	RB2	631		
E11-3158-G30	HYD	(1) 2 1/2 X 5	RB2	631		
E11-3158-G31	HYD	(1) 2 X 5	RB2	631		
E11-3158-G34	HYD	(1) 2 1/2 X 5	RB2	631		
E11-3159-G02	HYD	(1) 2 X 5	RB1	594		
E11-3159-G03	HYD	(1) 2 1/2 X 5	RB1	594		
E11-3159-G05	HYD	(1) 1 1/2 X 5	RB1	594		
E11-3159-G07	HYD	(1) 1 1/2 X 5	RB1	594		
E11-3159-G11	HYD	(1) 2 X 5	RB1	594		
E11-3160-G09	MECH	(1) PSA 3	RB	575		X
E11-3160-G10	HYD	(1) 2 1/2 X 5	RB	578		X
E11-3160-G11	HYD	(1) 1 1/2 X 5	RB	573		X
E11-3160-G13	HYD	(1) 2 X 5	RB	578		X
E11-3160-G15	HYD	(1) 2X10 / (1) 2X5	RB	575		X
E11-3160-G16	MECH	(1) PSA 3	RB	573		X
E11-3160-G17	HYD	(1) 4 X 5	RB	573		X

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
E11-3160-G18	HYD	(1) 2 1/2 X 5	RB	578		X
E11-3161-G09	HYD	(1) 1 1/2 X 10	RB	572		X
E11-3161-G10	HYD	(1) 2 X 5	RB	575		X
E11-3161-G12	MECH	(1) PSA 3	RB	578		X
E11-3161-G13	HYD	(1) 2 1/2 X 5	RB	576		X
E11-3161-G14	MECH	(1) PSA 10	RB	579		X
E11-3161-G16	HYD	(1) 2 X 5	RB	572		X
E11-3161-G17	MECH	(1) PSA 3	RB	572		X
E11-3161-G18	MECH	(1) PSA 3	RB	573		X
E11-3164-G14	HYD	(1) 2 X 10	RB2	625		
E11-3164-G18	HYD	(1) 2 X 5	RB1	589		
E11-3164-G19	MECH	(1) PSA 3	RB1	588		
E11-3164-G22	MECH	(1) PSA 10	RB2	631		
E11-3164-G23	HYD	(1) 1 1/2 X 5	RB2	622		
E11-3164-G24	HYD	(1) 2 X 5	RB2	622		
E11-3164-G26	HYD	(1) 2 X 5	RB2	631		
E11-3164-G27	MECH	(1) PSA 3	RB1	595		
E11-3177-G09	HYD	(1) 4 X 5	RB	566		X
E11-3177-G10	HYD	(1) 4 X 5	RB	568		X
E11-3177-G20	HYD	(1) 4 X 5	RB	561		X
E11-3177-G21	HYD	(1) 2 X 5	RB	575		X
E11-3177-G23	HYD	(1) 4 X 5	RB	560		X
E11-3177-G25	HYD	(1) 1 1/2 X 5	RB	552		
E11-3177-G27	HYD	(1) 1 1/2 X 5	RB	575		X
E11-3177-G31	HYD	(1) 4 X 5	RB	561		X
E11-3177-G32	HYD	(1) 2 X 5	RB	558		
E11-3178-G13	MECH	(1) PSA 3	RB	578		X
E11-3179-G05	MECH	(1) PSA 1/2	RB	546		X
E11-3184-G07	HYD	(2) 2 X 5	RB2	617		
E11-3184-G15	HYD	(2) 2 X 5	RB2	617		
E11-3184-G24	MECH	(1) PSA 3	RB	575		
E11-3184-G25	HYD	(1) 4 X 5	RB	575		
E11-3184-G31	HYD	(1) 1 1/2 X 5	RB1	606		
E11-3184-G38	MECH	(1) PSA 35	RB2	615		
E11-3184-G39	MECH	(1) PSA 3	RB2	617		
E11-3184-G41	MECH	(1) PSA 10	RB1	597		
E11-3184-G45	MECH	(1) PSA 3	RB1	602		
E11-3185-G22	HYD	(1) 2 X 5	RB2	617		
E11-3185-G23	HYD	(1) 4 X 5	RB2	617		
E11-3185-G32	MECH	(2) PSA 10	RB	575		

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
E11-3185-G36	MECH	(1) PSA 3	RB1	586		
E11-3185-G37	HYD	(1) 2 X 5	RB	575		
E11-3185-G38	HYD	(1) 1 1/2 X 5	RB1	603		
E11-3185-G41	HYD	(1) 2 X 5	RB2	617		
E11-3185-G48	HYD	(1) 1 1/2 X 5	RB1	606		
E11-3185-G49	HYD	(1) 2 X 5	RB1	606		
E11-3185-G50	HYD	(1) 2 1/2 X 5	RB1	592		
E11-3185-G51	HYD	(1) 2 X 5	RB2	617		
E11-3185-G54	MECH	(1) PSA 10	RB1	612		
E11-3185-G55	HYD	(1) 2 X 5	RB2	613		
E11-3185-G56	HYD	(1) 2 1/2 X 5	RB1	602		
E11-3185-G57	HYD	(1) 2 1/2 X 10	RB1	601		
E11-3519-G14	MECH	(1) PSA 3	DW	651	X	X
E11-4251-G17	MECH	(1) PSA 1/4	RB	578		X
E11-4611-G14	HYD	(1) 2 X 5	RB	577		X
E11-4612-G04	HYD	(2) 1 1/2 X 5	RB1	609		
E11-4612-G07	HYD	(2) 2 X 5	RB1	598		
E21-2199-G04	MECH	(1) PSA 1/2	RB	570		
E21-2199-G05	MECH	(1) PSA 1/2	RB	575		
E21-2199-G10	HYD	(1) 1 1/2 X 5	RB	557		
E21-2199-G11	HYD	(1) 1 1/2 X 5	RB	555		
E21-3052-G08	MECH	(1) PSA 3	DW	625	X	X
E21-3052-G09	MECH	(2) PSA 10	DW	626	X	X
E21-3053-G04	MECH	(1) PSA 10	DW	625	X	X
E21-3053-G10	MECH	(2) PSA 10	DW	626	X	X
E21-3144-G23	HYD	(1) 4 X 5	RB2	624		
E21-3144-G26	HYD	(1) 2 X 10	RB	550		
E21-3144-G30	HYD	(1) 2 X 5	RB	553		
E21-3144-G32	HYD	(1) 1 1/2 X 5	RB	551		
E21-3145-G08	HYD	(1) 2 X 5	RB	578		
E21-3145-G12	HYD	(1) 1 1/2 X 5	RB	578		
E21-3145-G16	HYD	(1) 1 1/2 X 5	RB	573		
E21-3145-G17	HYD	(1) 1 1/2 X 5	RB	555		
E21-3145-G23	HYD	(1) 1 1/2 X 5	RB	553		
E21-3147-G05	HYD	(1) 2 X 5	RB	563		
E21-3147-G06	HYD	(1) 2 X 5	RB	563		
E21-3147-G08	HYD	(1) 2 X 5	RB1	591		
E21-3147-G09	HYD	(1) 2 X 5	RB1	590		
E21-3147-G26	MECH	(1) PSA 10	RB2	624		
E21-3147-G27	HYD	(1) 2 X 5	RB	558		

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
E21-3147-G28	HYD	(1) 1 1/2 X 5	RB	555		
E21-3147-G29	HYD	(1) 2 X 5	RB	553		
E21-3147-G30	HYD	(1) 2 X 5	RB	553		
E21-3147-G34	HYD	(1) 2 X 5	RB	545		
E21-3147-G37	HYD	(1) 1 1/2 X 5	RB	545		
E21-3150-G07	HYD	(1) 2 X 5	RB	581		
E21-3150-G08	HYD	(1) 2 X 5	RB	581		
E21-3150-G09	HYD	(1) 1 1/2 X 5	RB	567		
E41-3162-G17	HYD	(1) 4 X 5	AB	554		
E41-3162-G20	HYD	(1) 2 X 5	RB	559		X
E41-3162-G22	HYD	(1) 2 X 5	RB	555		
E41-3162-G23	HYD	(1) 2 X 5	AB	555		
E41-3162-G24	MECH	(1) PSA 10	AB	555		X
E41-3162-G25	MECH	(1) PSA 10	RB	562		X
E41-3162-G26	MECH	(1) PSA 10	RB	565		X
E41-3163-G17	MECH	(1) PSA 10	RB	542		X
E41-3163-G18	HYD	(1) 2 1/2 X 5	AB	542		
E41-3163-G19	MECH	(1) PSA 3	AB	545		
E41-3165-G18	HYD	(1) 1 1/2 X 5	RB	578		
E41-3165-G26	HYD	(1) 1 1/2 X 5	RB	578		X
E41-3167-G14	MECH	(1) PSA 10	RB	579	X	X
E41-3167-G17	HYD	(1) 2 X 5	AB	553		
E41-3172-G11	HYD	(1) 2 1/2 X 5	AB	550		
E41-3172-G12	HYD	(1) 1 1/2 X 5	AB	550		
E41-3172-G16	HYD	(1) 1 1/2 X 5	AB	550		
E41-3172-G19	MECH	(1) PSA 10	RB	553		X
E41-3172-G20	HYD	(1) 1 1/2 X 5	RB	553		X
E41-3172-G26	MECH	(1) PSA 3	AB	550		
E51-3166-G44	MECH	(1) PSA 1	RB	575		X
E51-3174-G09	MECH	(1) PSA 35	RB	549		X
E51-3174-G09A	MECH	(1) PSA 35	RB	549		X
E51-3174-G09C	MECH	(1) PSA 35	RB	550		X
E51-3174-G17	HYD	(1) 1 1/2 X 5	RB	549		
E51-3174-G21	HYD	(1) 2 X 5	RB	559		X
E51-3174-G25	HYD	(1) 1 1/2 X 5	RB	575		X
E51-3174-G30	MECH	(1) PSA 1	RB	575		X
E51-3174-G32	HYD	(1) 1 1/2 X 5	RB	549		
E51-3174-G33	HYD	(1) 1 1/2 X 5	RB	549		X
E51-3174-G34	HYD	(1) 1 1/2 X 5	RB	549		
E51-3174-G36	HYD	(1) 1 1/2 X 5	RB	546		

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
E51-3174-G39	HYD	(1) 1 1/2 X 5	RB	549		
E51-3174-G40	HYD	(1) 1 1/2 X 5	RB	544		
E51-3175-G01	HYD	(1) 2 X 5	RB	559		
E51-3175-G02	HYD	(1) 2 X 5	RB	558		
E51-3175-G06	HYD	(1) 2 X 5	RB	574		
E51-3175-G07	HYD	(1) 2 X 5	RB	573		
E51-3175-G12	HYD	(1) 1 1/2 X 5	RB	576		X
E51-3175-G13	HYD	(1) 2 X 5	RB	576		X
E51-3175-G21	HYD	(1) 2 X 5	RB	576		X
E51-3175-G22	HYD	(1) 1 1/2 X 5	RB	576		X
E51-3175-G24	HYD	(1) 2 X 5	RB	578		
E51-3175-G25	HYD	(1) 1 1/2 X 5	RB	578		X
E51-3175-G26	HYD	(1) 1 1/2 X 5	RB	578		X
E51-3175-G27	HYD	(1) 1 1/2 X 5	RB	553		
E51-3176-G17	HYD	(1) 2 X 5	RB	542		X
G11-3658-G47	MECH	(1) PSA 1	RB	578		X
G11-3659-G46	MECH	(1) PSA 1	RB	578		X
G33-3096-G27	MECH	(1) PSA 3	RB2	625	X	X
G33-3244-G36	HYD	(2) 1 1/2 X 5	RB2	638	X	X
G33-3244-G37	HYD	(1) 2 1/2 X 5	RB2	638	X	X
G33-3244-G38	HYD	(1) 2 X 5	RB2	638	X	X
G33-3244-G39	MECH	(1) PSA 3	RB2	629	X	X
G33-3245-G30	MECH	(1) PSA 35	RB1	587	X	X
G33-3245-G32	MECH	(1) PSA 35	RB	579		X
G33-3245-G33	MECH	(1) PSA 35	RB	579		X
G33-3245-G37	MECH	(1) PSA 1	RB2	628	X	X
G33-3245-G38	MECH	(2) PSA 1/2	RB2	628	X	X
G33-3245-G45	MECH	(1) PSA 1	RB2	628	X	X
G33-3245-G47	MECH	(1) PSA 35	RB1	587	X	X
G33-3245-G49	MECH	(2) PSA 1	RB2	628	X	X
G33-3245-G67	MECH	(1) PSA 1	RB2	628	X	X
G51-4055-G08	MECH	(1) PSA 3	RB	541		X
G51-4055-G20	MECH	(1) PSA 3	RB	541		X
G51-4055-G23	MECH	(1) PSA 10	RB	541		X
G51-4056-G03	MECH	(1) PSA 1	RB	541		X
G51-4056-G20	MECH	(1) PSA 3	RB	541		X
G51-4056-G21	MECH	(1) PSA 1	RB	541		X
G51-4059-G15	HYD	(1) 1 1/2 X 5	RB	577		X
G51-4059-G17B	MECH	(1) PSA 1	RB	577		X
G51-4059-G20	MECH	(1) PSA 1	RB	577		X

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
G51-4059-G21	MECH	(1) PSA 3	RB	577		X
[illegible]-B21-7195-G01	MECH	(2) PSA 1/4	RB1	600	X	X
N21-3536-G26	MECH	(2) PSA 35	DW	598	X	X
N21-3536-G27	MECH	(1) PSA 35	DW	599	X	X
N21-3536-G28	MECH	(1) PSA 10	DW	609	X	X
N21-3536-G29	MECH	(2) PSA 10	DW	609	X	X
N21-3536-G30	MECH	(1) PSA 35	DW	609	X	X
N21-3536-G31	MECH	(1) PSA 10	DW	621	X	X
N21-3536-G32	MECH	(1) PSA 10	DW	614	X	X
N21-3536-G33	MECH	(1) PSA 35	DW	617	X	X
N21-3536-G34	MECH	(1) PSA 35	DW	617	X	X
N21-3536-G35	MECH	(1) PSA 10	DW	625	X	X
N21-3536-G36	MECH	(1) PSA 10	DW	608	X	X
N21-3536-G37	MECH	(1) PSA 10	DW	611	X	X
N21-3536-G38	MECH	(2) PSA 10	DW	632	X	X
N21-3536-G39	MECH	(1) PSA 35	DW	609	X	X
N21-3536-G40	MECH	(1) PSA 35	RB1	587	X	X
N21-3537-G26	MECH	(2) PSA 35	DW	598	X	X
N21-3537-G27	MECH	(1) PSA 35	DW	599	X	X
N21-3537-G28	MECH	(1) PSA 10	DW	609	X	X
N21-3537-G29	MECH	(2) PSA 10	DW	609	X	X
N21-3537-G30	MECH	(1) PSA 35	DW	609	X	X
N21-3537-G31	MECH	(1) PSA 10	DW	621	X	X
N21-3537-G32	MECH	(1) PSA 10	DW	615	X	X
N21-3537-G33	MECH	(1) PSA 35	DW	617	X	X
N21-3537-G34	MECH	(1) PSA 35	DW	617	X	X
N21-3537-G35	MECH	(1) PSA 10	DW	625	X	X
N21-3537-G36	MECH	(1) PSA 10	DW	611	X	X
N21-3537-G37	MECH	(1) PSA 10	DW	611	X	X
N21-3537-G38	MECH	(2) PSA 10	DW	632	X	X
N21-3537-G39	MECH	(1) PSA 35	DW	609	X	X
N30-2186-G03	MECH	(1) PSA 1/4	RB1	584	X	X
N30-2186-G04	MECH	(1) PSA 1/4	RB	580	X	X
N30-2186-G05	MECH	(1) PSA 1/4	RB1	584	X	X
N30-2186-G07	MECH	(1) PSA 1/2	RB	580		X
N30-2186-G09	MECH	(1) PSA 1/2	RB1	584	X	X
N30-2186-G10	MECH	(1) PSA 1/4	RB1	584	X	X
N30-2186-G11	MECH	(1) PSA 1/4	RB1	584	X	X
N30-2186-G13	MECH	(1) PSA 1	RB1	584	X	X
N30-2186-G14	MECH	(1) PSA 1	RB1	584	X	X

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
N30-2186-G15	MECH	(1) PSA 1/2	RB1	584	X	X
N30-2186-G16	MECH	(1) PSA 1/2	RB1	584	X	X
N30-2186-G17	MECH	(1) PSA 1/4	RB1	584	X	X
N30-2186-G18	MECH	(1) PSA 1/2	RB1	584	X	X
N30-3258-G18	MECH	(1) PSA 35	AB2	632	X	X
N30-3258-G19	MECH	(1) PSA 35	AB2	632	X	X
N30-3258-G20	MECH	(1) PSA 35	TB2	632	X	X
N30-3259-G21	MECH	(1) PSA 35	TB2	635	X	X
N30-3259-G22	MECH	(1) PSA 35	TB2	635	X	X
N30-3259-G23	MECH	(1) PSA 35	TB2	635	X	X
N30-3259-G24	MECH	(1) PSA 35	TB2	635	X	X
N30-3259-G26	MECH	(1) PSA 35	TB2	632	X	X
N30-3259-G28	MECH	(1) PSA 35	TB2	632	X	X
N30-3259-G29	MECH	(1) PSA 35	TB2	632	X	X
N30-3259-G30	MECH	(1) PSA 35	TB2	632	X	X
N30-3259-G31	MECH	(1) PSA 35	TB2	632	X	X
N30-3259-G32	MECH	(1) PSA 100	TB2	626	X	X
N30-3259-G33	MECH	(1) PSA 35	TB2	625	X	X
N30-3259-G34	MECH	(1) PSA 35	TB2	625	X	X
N30-3259-G35	MECH	(1) PSA 35	TB2	626	X	X
N30-3259-G36	MECH	(1) PSA 35	TB2	626	X	X
N30-3259-G37	MECH	(1) PSA 35	TB2	625	X	X
N30-3259-G38	MECH	(1) PSA 100	TB2	626	X	X
N30-3259-G39	MECH	(1) PSA 100	TB2	625	X	X
N30-3259-G44	MECH	(1) PSA 35	TB2	637	X	X
N30-3259-G45	MECH	(1) PSA 35	TB2	637	X	X
N30-3259-G46	MECH	(1) PSA 35	TB2	638	X	X
N30-3259-G47	MECH	(1) PSA 35	TB2	637	X	X
N30-3259-G48	MECH	(1) PSA 35	TB2	631	X	X
N30-3259-G49	MECH	(1) PSA 100	TB2	631	X	X
N30-3259-G50	MECH	(1) PSA 35	TB2	631	X	X
N30-3259-G51	MECH	(1) PSA 35	TB2	631	X	X
N30-3259-G52	MECH	(1) PSA 35	TB2	630	X	X
N30-3259-G53	MECH	(1) PSA 35	TB2	630	X	X
N30-3259-G54	MECH	(1) PSA 100	TB2	631	X	X
N30-3259-G55	MECH	(1) PSA 35	TB2	631	X	X
N30-3259-G56	HYD	(1) EP-10	TB2	634	X	X
N30-3259-G57	MECH	(1) PSA 35	TB2	631	X	X
N30-3259-G58	MECH	(1) PSA 35	TB2	634	X	X
N30-3259-G67	MECH	(1) PSA 100	TB2	631	X	X

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
N30-3259-G68	MECH	(1) PSA 100	TB2	631	X	X
N30-3259-G75B	MECH	(1) PSA 100	TB2	631	X	X
N30-3259-G76	MECH	(1) PSA 35	TB2	631	X	X
N30-3259-G77	MECH	(1) PSA 35	TB2	631	X	X
N30-3259-G78	MECH	(1) PSA 35	TB2	631	X	X
N30-3259-G81	MECH	(1) PSA 35	TB2	631	X	X
N30-3259-G83	MECH	(1) PSA 35	TB2	631	X	X
N30-3259-G84	MECH	(1) PSA 35	TB2	631	X	X
N30-3526-G46	MECH	(1) PSA 1/2	DW	588	X	X
N30-3526-G48	MECH	(1) PSA 1/4	DW	586	X	X
N30-3526-G51	MECH	(1) PSA 1/4	DW	588	X	X
N30-3526-G52	MECH	(1) PSA 1/4	DW	588	X	X
N30-3526-G53	MECH	(1) PSA 1/4	DW	588	X	X
N30-3526-G54	MECH	(1) PSA 1/2	DW	587	X	X
N30-3526-G55	MECH	(1) PSA 1/2	DW	587	X	X
N30-3526-G57	MECH	(1) PSA 1/2	DW	588	X	X
N30-3526-G58	MECH	(1) PSA 1/2	DW	588	X	X
P11-2808-G20	HYD	(1) 1 1/2 X 5	RB1	608		
P11-3156-G05	MECH	(1) PSA 1/4	RB1	587		
P11-3566-G08	MECH	(1) PSA 1	DW	598	X	X
P11-3566-G09	HYD	(1) 1 1/2 X 5	RB1	604		
P11-3566-G11	MECH	(1) PSA 1/2	DW	602	X	X
P34-7405-G02	MECH	(1) PSA 1/4	RB3	649		
P34-7405-G05	MECH	(1) PSA 1/4	RB3	649		
P34-7405-G07	MECH	(1) PSA 1/2	RB3	650		
T23-I2837-36-G32	MECH	(1) PSA 1/4	DW	592	X	X
T23-I2837-36-G33	MECH	(1) PSA 1/4	DW	593	X	X
T23-I2837-36-G43	MECH	(1) PSA 1/2	DW	581	X	X
T23-I2837-36-G45	MECH	(1) PSA 1/4	DW	582	X	X
T23-I2837-36-G54	MECH	(1) PSA 1/4	DW	581	X	X
T23-I2837-36-G56	MECH	(1) PSA 1/4	DW	581	X	X
T23-I2837-36-G58	MECH	(1) PSA 1/4	DW	581	X	X
T23-I2837-36-G75	MECH	(1) PSA 1/4	DW	581	X	X
T23-I2837-36-G81	MECH	(1) PSA 1	DW	579	X	X
T23-I2837-36-G96	MECH	(2) PSA 1/4	DW	579	X	X
T23-I2837-40-G02	MECH	(2) PSA 1/4	DW	577	X	X
T23-I2837-40-G04	MECH	(1) PSA 1	DW	581	X	X
T23-I2837-40-G08	MECH	(1) PSA 1	DW	581	X	X
T23-I2837-40-G09	MECH	(1) PSA 1/2 / (1) PSA 1/4	DW	578	X	X
T23-I2837-40-G15	MECH	(1) PSA 1/4	DW	578	X	X

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
T23-I2837-41-G01	MECH	(1) PSA 1	DW	610	X	X
T23-I2837-41-G02	MECH	(2) PSA 1	DW	610	X	X
T23-I2837-41-G05	MECH	(2) PSA 1/2	DW	607	X	X
T23-I2837-41-G07	MECH	(2) PSA 1/2	DW	607	X	X
T23-I2837-41-G10	MECH	(2) PSA 1/2	DW	607	X	X
T23-I2837-41-G17	MECH	(1) PSA 1/2	DW	598	X	X
T23-I2837-41-G25	MECH	(1) PSA 1/2	DW	599	X	X
T23-I2837-42-G01	MECH	(1) PSA 1/4	DW	599	X	X
T23-I2837-42-G03	MECH	(1) PSA 1/4	DW	599	X	X
T23-I2837-42-G12	MECH	(2) PSA 1/2	DW	597	X	X
T23-I2837-42-G14	MECH	(2) PSA 1/4	DW	594	X	X
T23-I2837-42-G17	MECH	(1) PSA 1/2	DW	594	X	X
T23-I2837-42-G20	MECH	(1) PSA 1/4	DW	599	X	X
T23-I2837-42-G21	MECH	(2) PSA 1/4	DW	599	X	X
T23-I2837-42-G22	MECH	(1) PSA 1/4	DW	598	X	X
T23-I2837-42-G23	MECH	(2) PSA 1/4	DW	595	X	X
T23-I2837-42-G24	MECH	(1) PSA 1/2	DW	599	X	X
T23-I2837-42-G26	MECH	(1) PSA 1/2	DW	599	X	X
T23-I2837-42-G27	MECH	(1) PSA 1/2	DW	598	X	X
T23-I2837-42-G28	MECH	(1) PSA 1/2	DW	599	X	X
T23-I2837-42-G30	MECH	(1) PSA 1/2	DW	598	X	X
T23-I2837-42-G36	MECH	(1) PSA 1/4	DW	599	X	X
T23-I2837-42-G41	MECH	(1) PSA 1/4	DW	593	X	X
T23-I2837-42-G50	MECH	(1) PSA 1/2	DW	598	X	X
T23-I2837-42-G53	MECH	(1) PSA 1/4	DW	593	X	X
T23-I2837-42-G54	MECH	(1) PSA 1/4	DW	598	X	X
T23-I2837-42-G62	MECH	(1) PSA 1/4	DW	593	X	X
T23-I2837-43-G45	MECH	(1) PSA 1/2	DW	591	X	X
T23-I2837-43-G49	MECH	(1) PSA 1/4	DW	581	X	X
T23-I2837-45-G02	MECH	(2) PSA 1/2	DW	612	X	X
T23-I2837-45-G03	MECH	(1) PSA 1	DW	610	X	X
T23-I2837-45-G04	MECH	(1) PSA 1	DW	610	X	X
T23-I2837-45-G07	MECH	(1) PSA 1	DW	610	X	X
T23-I2837-45-G11	MECH	(2) PSA 1/2	DW	598	X	X
T23-I2837-45-G12	MECH	(2) PSA 1/2	DW	598	X	X
T23-I2837-45-G19	MECH	(1) PSA 1/2	DW	595	X	X
T23-I2837-46-G100	MECH	(1) PSA 1/2	DW	604	X	X
T23-I2837-46-G101	MECH	(1) PSA 1/4	DW	591	X	X
T23-I2837-46-G102	MECH	(1) PSA 1/4	DW	592	X	X
T23-I2837-46-G17	MECH	(3) PSA 1/4, (1) PSA 1	DW	596	X	X

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
T23-I2837-46-G22	MECH	(1) PSA 1/4	DW	603	X	X
T23-I2837-46-G42	MECH	(1) PSA 1/2	DW	604	X	X
T23-I2837-46-G54	MECH	(1) PSA 1/2	DW	599	X	X
T23-I2837-46-G70	MECH	(1) PSA 1/2	DW	598	X	X
T23-I2837-46-G78	MECH	(1) PSA 1/2	DW	598	X	X
T23-I2837-46-G93	MECH	(1) PSA 1/2	DW	599	X	X
T23-I2837-46-G94	MECH	(6) PSA 1/4	DW	600	X	X
T23-I2837-48-G08	MECH	(2) PSA 1/4	DW	598	X	X
T23-I2837-48-G12	MECH	(1) PSA 1/2	DW	598	X	X
T23-I2837-51-G141	MECH	(1) PSA 1/4	DW	649	X	X
T23-I2837-51-G142	MECH	(1) PSA 1/2	DW	650	X	X
T23-I2837-51-G144	MECH	(1) PSA 1/4	DW	649	X	X
T23-I2837-51-G19	MECH	(1) PSA 1/4	DW	649	X	X
T23-I2837-51-G28	MECH	(1) PSA 1/4	DW	647	X	X
T23-I2837-51-G29	MECH	(1) PSA 1/4	DW	648	X	X
T23-I2837-51-G33	MECH	(1) PSA 1/4	DW	645	X	X
T23-I2837-51-G43	MECH	(1) PSA 1/4	DW	671	X	X
T23-I2837-51-G61	MECH	(1) PSA 1/2	DW	650	X	X
T23-I2837-51-G62	MECH	(1) PSA 1/4	DW	650	X	X
T23-I2837-53-G22	MECH	(1) PSA 1/4	DW	624	X	X
T23-I2837-53-G31	MECH	(1) PSA 1/4	DW	608	X	X
T23-I2837-53-G35	MECH	(1) PSA 1/4	DW	608	X	X
T46-3092-G05	MECH	(1) PSA 10	RBB	572		
T46-3093-G10	HYD	(1) 4 X 5	RB3	651		
T46-3093-G11	HYD	(1) 2 1/2 X 5	RB3	651		
T46-3093-G15	HYD	(2) 2 1/2 X 5	RB4	670		
T46-3093-G18	HYD	(2) 4 X 5	RB2	635		
T48-2366-G25	MECH	(1) PSA 3	RB	578		X
T48-2366-G26	HYD	(2) 1 1/2 X 5	RB	579		X
T48-4061-G06	MECH	(1) PSA 1	RB	578		
T48-4061-G08	MECH	(1) PSA 1	RB	577		
T49-5325-G58	MECH	(1) PSA 1/2	RB2	633		
T49-5325-G59	MECH	(1) PSA 1/2	RB2	633		
T49-5325-G60	MECH	(1) PSA 1/2	RB2	633		
T50-7114-G44	MECH	(1) PSA 1/4	RB2	637		
T50-7114-G45	MECH	(1) PSA 1/4	RB2	637		
T50-7431-G02	MECH	(1) PSA 1/4	RB3	648		
T50-7431-G03	MECH	(2) PSA 1/4	RB3	648		
T71-I2820-35-G40	MECH	(1) PSA 1/2	RB2	630	X	X
T71-I2820-35-G46	MECH	(1) PSA 1/2	RB3	651		

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
T71-I2837-62-G35	MECH	(1) PSA 1/4	RB3	647		X
T71-I2837-62-G37	MECH	(1) PSA 1/4	RB3	642		X
T71-I2837-62-G39	MECH	(1) PSA 1/4	RB3	642		X
T71-I2837-62-G57	MECH	(1) PSA 1/4	RB3	647		
T71-I2837-63-G20	MECH	(1) PSA 1/2	RB2	628		
T71-I2837-63-G22	MECH	(1) PSA 1/4	RB2	630		X
T71-I2837-63-G24	MECH	(1) PSA 1/4	RB2	630		
T71-I2837-63-G25	MECH	(1) PSA 1/4	RB2	630		X
T71-I2837-63-G32	MECH	(1) PSA 1/2	RB2	630		
T71-I2837-63-G34	MECH	(1) PSA 1/4	RB2	630		
T71-I2837-64-G47	MECH	(1) PSA 1/4	RB2	630	X	X
T71-I2837-64-G48	MECH	(1) PSA 1/4	RB2	630	X	X
T71-I2837-64-G49	MECH	(1) PSA 1/4	RB2	629	X	X
T71-I2837-64-G50	MECH	(1) PSA 1/4	RB2	629	X	X
T71-I2837-64-G51	MECH	(1) PSA 1/2	RB2	630	X	X
T71-I2837-64-G52	MECH	(1) PSA 1/4	RB2	629	X	X
W-B31-5064-G24	MECH	(1) PSA 1/2	RB1	596		
W-B31-5065-G39	MECH	(3) PSA 1/4	RB1	597		
W-B31-5065-G40	MECH	(1) PSA 1/4	RB1	597		
W-B31-5065-G41	MECH	(1) PSA 1/4	RB1	595		
W-B31-5239-G02	MECH	(2) PSA 1/4	RB1	596		
W-B31-5239-G06	MECH	(1) PSA 1/2	DW	594	X	X
W-B31-5239-G16	MECH	(1) PSA 1/2	RB1	598		
W-E11-2299-G02	MECH	(1) PSA 1/4	DW	612	X	X
W-E11-2299-G05	MECH	(1) PSA 1/4	DW	597	X	X
W-E11-2299-G07	MECH	(1) PSA 1/4	DW	598	X	X
W-E11-4004-G01S	MECH	(1) PSA 1/4	RB2	624		
W-E11-4004-G02	MECH	(2) PSA 1/4	RB2	624		
W-E11-4004-G22	MECH	(1) PSA 1/4	RB3	646		
W-E11-4011-G04	MECH	(1) PSA 1/4	RB2	626		
W-E11-4011-G09S	MECH	(1) PSA 1/4	RB2	630		
W-E11-5166-G05	MECH	(1) PSA 1/4	RB2	630		
W-E11-5302-G19	MECH	(1) PSA 1/4	RB2	637		
W-E21-5300-G06	MECH	(1) PSA 1/4	RB	572		
W-E41-5256-G02	MECH	(1) PSA 1/4	AB	542		
W-E41-5256-G03	MECH	(1) PSA 1/2	AB	544		
W-E41-5256-G20S	MECH	(2) PSA 1/4 / (1) PSA 1/2	RB	561		X
W-E41-5256-G21	MECH	(1) PSA 1/2	RB	562		X
W-E41-5256-G22S	MECH	(1) PSA 1/2	RB	561		X
W-P42-4357-G22	MECH	(2) PSA 1/4	DW	582	X	X

Component No	Snubber Type	(Quantity) Size	Location	Elevation	Inaccessible	ALARA Concerns
W-P50-2163-G13	MECH	(1) PSA 1/4	RB1	603		
W-P50-2163-G14	MECH	(1) PSA 1/4	RB1	602		
W-P50-2163-G15	MECH	(2) PSA 1/4	RB1	602		
W-P50-2163-G17	MECH	(1) PSA 1/4	RB1	602		
W-P50-2163-G18	MECH	(1) PSA 1/4	DW	602	X	X
W-P50-3308-G35	MECH	(1) PSA 1	AB	561		
W-P50-3579-G25	MECH	(1) PSA 1/4	DW	602	X	X
W-T48-4062-G01	MECH	(1) PSA 1/4	RB	574		
W-T48-4062-G05	MECH	(2) PSA 1/4	RB	577		
W-T48-5225-G06	MECH	(1) PSA 1/4	RB2	622		
W-T48-5225-G09	MECH	(1) PSA 1/4	RB2	622		
W-T48-5314-G02	MECH	(1) PSA 1/4	RB	576		X
W-T48-5314-G03	MECH	(1) PSA 1/2	RB	576		X
W-T48-5314-G04	MECH	(1) PSA 1/2	RB	576		X
W-T48-5314-G05	MECH	(1) PSA 1/4	RB	576		X
W-T48-5314-G06	MECH	(1) PSA 1/4	RB	576		X
W-T48-5314-G07	MECH	(1) PSA 1/4	RB	576		X
W-T48-5314-G10	MECH	(1) PSA 1/4	DW	576	X	X

PART - D
ADOPTED ASME CODE CASES

INSERVICE INSPECTION-NONDESTRUCTIVE EXAMINATION (ISI-NDE) PROGRAM (PLAN)

The Code Cases listed in the table below may be used in conjunction with the ISI NDE Program or Fermi procedures that specify requirements for examination, testing, and repair or replacement of Code Items. The listed relief requests are approved in Regulatroy Guide 1.147, Revision 12. Some of the listed Code Cases have been approved with restrictions and may only be used as noted.

CODE CASE	SUBJECT	RESTRICTIONS
1. N-356	Certification Period for Level III NDE Personnel	None
2. N389-1	Alternative Rules for repairs, Replacements, or Modifications	None
3. N-416-1	Alternative Pressure Test Requirements for Welded Repairs or Installation of Replacement Items by Welding, Class 1, 2, and 3	Additional surface examinations should shall be performed on the root pass layer of butt and socket welds of the pressure retaining boundary of Class 3 components when the surface examination method is used in accordance with Section III
4. N-427	Use of Section XI Code Cases in Inspection Plans	None
5. N-432	Repair Welding Using Automatic or Machine Gas Tungsten-Arc Welding (GTAW) Temperbead Technique	None
6. N-437	Use of Digital Readout and Digital measurement Devices for Performing Pressure Tests	None
7. N-457	Qualification Specimen Notch Location for Ultrasonic Examination of Bolts and Studs	None
8. N-458	Magnetic Particle of Coated Materials	Thickness measurements and weld joint contour of the pipe/component must be known and used by the inspector who conducts the UT exam.
9. N-460	Alternative Examination Coverage for Class 1 and Class 2 Welds	None
10. N-461	Alternative Rules for Piping Calibration Block Thickness	None
11. N-485-1	Eddy Current Examination of Coated Ferritic Surfaces as an Alternative to Surface Examinatin	None
12. N-489	Alternative Rules for Level III NDE Qualification Examinations	None
13. N-490-1	Alternative Vision Test Requirements for Nondestructive Examiners	None
14. N-491-1	Alternative Rules for Examination of Class 1,2,3, and MC Component Supports of Light-Water Cooled Power Plants	None
15. N-498-1	Alternative Rules for 10-Year System Hydrostatic Testing for "Class 1, 2, and 3 systems	

CODE CASE	SUBJECT	RESTRICTIONS
16. N-503	Limited Certification of Nondestructive Examination Personnel	None
17. N-504-1	Alternative Rules for Repair of Class 1, 2, and 3 Austenitic Stainless Steel Piping	None
18. N-509	Alternative Rules for the Selection and Examination of Class 1, 2, and 3 Integrally Welded Attachments	A minimum 10% sample of integrally welded attachments for each item in each code class per interval shall be examined.
19. N-517	Quality Assurance Program Requirements for Owners	None
20. N-522	Pressure Testing of Containment Penetration Piping	The test shall be conducted at the peak calculated containment pressure and the test procedure should permit the detection and location of through-wall leakage in containment isolation valves (CIVs) and pipe segments between the CIVs.
21. N-524	Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping	