



Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70057-3093  
Tel 504-739-6715  
Fax 504-739-6698  
rmurill@entergy.com

Robert J. Murillo  
Licensing Manager  
Waterford 3

W3F1-2010-0014

February 8, 2010

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

SUBJECT: Response to NRC Request for Additional Information dated January 6, 2010 Re: Waterford 3 Steam Electric Station, Unit 3 - Requests for Relief from ASME Section XI Volumetric Examination Requirements – Second 10-Year Inservice Inspection Interval  
Waterford Steam Electric Station, Unit 3  
Docket No. 50-382  
License No. NPF-38

- REFERENCES:
- 1 Entergy letter dated June 1, 2009 "Requests for Relief from ASME Section XI Volumetric Examination Requirements – Second 10-Year Interval" (W3F1-2009-0026) (ADAMS Accession No. ML091540088)
  - 2 NRC letter dated July 23, 2009 "Waterford 3 Steam Electric Station, Unit 3 - Requests for Relief from ASME Section XI Volumetric Examination Requirements – Second 10-Year Inservice Inspection Interval" (TAC Nos. ME1426, ME1427, ME1428, ME1429, ME1430, ME1431, ME1432, and ME1433) (ILN09-0069)
  - 3 Electronic communication dated January 6, 2010, "Waterford 3 Relief Requests WF3-ISI-07, 008, 009, 010, 011, 012, 013, and 014" (ADAMS Accession No. ML100060172)

Dear Sir or Madam:

On January 6, 2010, Entergy received communication (Reference 3) from members of the NRC Staff requesting additional information associated with Entergy's relief requests from ASME Section XI Volumetric Examination Requirements – Second 10-Year Inservice Inspection Interval" (Reference 1).

Attachment 1 contains Entergy's response to the NRC request. Attachment 2 contains information describing Waterford 3's ISI program extracted from the full program description and may be useful in understanding the response.

A047  
WRR

Additionally, Waterford 3 hereby withdraws relief request WF3-ISI-014 because it has been determined that it is not needed.

There are no new commitments contained in this letter.

If you have any questions or require additional information, please contact me at 504-739-6715.

Sincerely,

A handwritten signature in black ink, appearing to be "RJM/RJP/ssf", written in a cursive style. The signature is positioned above the typed name "RJM/RJP/ssf".

RJM/RJP/ssf

Attachments:

1. Entergy's response to NRC information request
2. Extracted text from Waterford 3's ISI program

cc: Mr. Elmo E. Collins, Jr.  
Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region IV  
612 E. Lamar Blvd., Suite 400  
Arlington, TX 76011-4125

NRC Senior Resident Inspector  
Waterford Steam Electric Station Unit 3  
P.O. Box 822  
Killona, LA 70066-0751

U. S. Nuclear Regulatory Commission  
Attn: Mr. N. Kalyanam  
Mail Stop O-07D1  
Washington, DC 20555-0001

Wise, Carter, Child & Caraway  
ATTN: J. Smith  
P.O. Box 651  
Jackson, MS 39205

Winston & Strawn  
ATTN: N.S. Reynolds  
1700 K Street, NW  
Washington, DC 20006-3817

Morgan, Lewis & Bockius LLP  
ATTN: T.C. Poindexter  
1111 Pennsylvania Avenue, NW  
Washington, DC 20004

Louisiana Department of Environmental Quality  
Office of Environmental Compliance  
Surveillance Division  
P. O. Box 4312  
Baton Rouge, LA 70821-4312

American Nuclear Insurers  
Attn: Library  
95 Glastonbury Blvd.  
Suite 300  
Glastonbury, CT 06033-4443

**Attachment 1  
To  
W3F1-2010-0014**

**Response to NRC Request for Additional Information dated January 6, 2010 Re:  
Waterford 3 Steam Electric Station, Unit 3  
Requests for Relief from ASME Section XI Volumetric Examination  
Requirements – Second 10-Year Inservice Inspection Interval**

**Entergy's Response to NRC Information Request**

**Response to Request for Additional Information**

**1.1 Requests for Relief WF3-ISI-007 through WF3-ISI-014, Examination Categories B-A, B-D, B-F, B-J, C-A, C-B, C-F-1, and R-A**

1.1.1 Based on the licensee's submittal, it is unclear which Edition and Addenda of ASME Code, Section XI, is applicable to the specific components listed in the individual relief requests. For example, in RR WF3-ISI-007, the licensee lists the 1980 Edition through the 1981 Addenda, 1992 Edition through the 1993 Addenda, and the 1995 Edition through the 1996 Addenda as having applicable ISI requirements for the subject components. The licensee states that the 1995 Edition through the 1996 Addenda of ASME Code was mandated for implementation of ASME Code, Section XI, Appendix VIII examinations during the interval, however, this does not clear up the multiple ASME Code applicability issues. Please confirm the ASME Code of record for the second interval inservice inspection program at Waterford 3, how the licensee arrived at this edition/addenda of the ASME Code, and the specific requirements for each of the subject components listed in each request for relief.

**Response:**

The current Code of record is the 1992 Edition with portions of later Addenda as described in Section 2 of the Site's ISI Program Procedure (CEP-ISI-001 rev. 307) (see attachment 2). The NRC authorized Waterford 3 (Reference GNRI 96-00244) to perform ultrasonic examinations in accordance with the 1980 Edition with the Winter of 1981 Addenda as specified in the ISI plan for the first interval. The use of the 1980 Edition with the Winter of 1981 Addenda was limited until such time when changes to 10 CFR 50.55a required the use of ASME Section XI, Appendix VIII. Section 2 of CEP-ISI-001 provides a detail listing of the applicable editions and addenda of Section XI as it applies to ultrasonic examinations based on current 10 CFR 50.55a requirements. See the table below for specific requirements for the subject components.

<b>Limited B-A Examinations</b>				
<b>Item Number</b>	<b>Comp. ID</b>	<b>Item Description</b>	<b>% Coverage</b>	<b>Date examined/Code Year</b>
B1.40	02-001	RPV Head to Flange Weld	64%	10/29/2000- Code ASME Section XI Year 1980/W81 A
B1.22	02-002	RPV Head Peel Segment to Peel Segment at 90°	18%	10/28/2000- Code ASME Section XI Year 1980/W81 A
B1.22	02-003	RPV Head Peel Segment to Peel Segment at 0°	18%	10/28/2000- Code ASME Section XI Year 1980/W81 A

<b>Limited B-D Examinations</b>				
<b>Item Number</b>	<b>Comp. ID</b>	<b>Item Description</b>	<b>% Coverage</b>	<b>Date examined/Code Year</b>
B3.130	03-010	42" Hot Leg Nozzle to SG#1	86.5%	3/30/2002- Code ASME Section XI Year 1980/W81 A
B3.130	03-011	30" Cold leg to SG#1 @45°	66%	5/17/2008- Code ASME Section XI Year 1995/W96 A
B3.130	03-012	30" Cold leg to SG#1 @315°	66%	5/17/2008- Code ASME Section XI Year 1995/W96 A
B3.110	05-009	Pressurizer Surge Nozzle to Head Weld	64%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.110	05-010	Pressurizer Spray Nozzle to Head Weld	74.8%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.110	05-011	Pressurizer Safety Nozzle to Head Weld	65.9%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.110	05-012	Pressurizer Safety Nozzle to Head Weld	65.9%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.110	05-013	Pressurizer Safety Nozzle to Head Weld	65.9%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.120	05-014	Pressurizer Surge Nozzle Inner Radius	29.4%	2/26/1999- Code ASME Section XI Year 1980/W81 A
B3.120	05-015	Pressurizer Spray Nozzle Inner Radius	60.4%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.120	05-016	Pressurizer Safety Nozzle Inner Radius	72%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.120	05-017	Pressurizer Safety Nozzle Inner Radius	72%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.120	05-018	Pressurizer Safety Nozzle Inner Radius	72%	2/25/1999- Code ASME Section XI Year 1980/W81 A

<b>Limited B-F Examinations</b>				
<b>Item Number</b>	<b>Comp. ID</b>	<b>Item Description</b>	<b>% Coverage</b>	<b>Date examined/Code Year</b>
B5.40	26-006	PZR Nozzle to 8" x 6" Reducing Safe end Weld	63%	11/5/2000- Code ASME Section XI Year 1980/W81 A
B5.40	26-001	Pressurizer Safety Nozzle to 8" x 6" Reducing Safe end Weld	70%	11/6/2000- Code ASME Section XI Year 1980/W81 A

<b>Limited B-J Examinations</b>				
<b>Item Number</b>	<b>Comp. ID</b>	<b>Item Description</b>	<b>% Coverage</b>	<b>Date examined/Code Year</b>
B9.11	06-006	14" Shutdown Cooling Nozzle to Safe end Weld	86.5%	10/27/2000- Code ASME Section XI Year 1995/W96 A
B9.11	07-013	RCS 30" Elbow to 45° Elbow Weld	82.2%	11/01/2003- Code ASME Section XI Year 1995/W96 A
B9.11	08-014	30" Pipe to Safe end Weld	71%	10/10/1995- Code ASME Section XI Year 1980/W81 A
B9.11	09-002	SG Nozzle Ext. Piece to 30" Elbow Ext. Piece Weld	87%	11/3/2003- Code ASME Section XI Year 1995/W96 A
B9.11	09-005	45° Elbow to 30" Elbow Weld	85%	11/3/2003- Code ASME Section XI Year 1995/W96 A
B9.11	09-016	30" Elbow to Safe end Weld (RCP 1B Inlet)	52.5%	11/02/2000- Code ASME Section XI Year 1995/W96 A
B9.11	09-017	30" Safe end to RCP 1B Weld	17.5%	11/02/2000- Code ASME Section XI Year 1995/W96 A
B9.11	10-001	RCP 1B to 30" Safe end Weld	18%	11/03/2000- Code ASME Section XI Year 1995/W96 A
B9.11	10-002	Safe end to 30" Pipe Weld (RCP 1B Outlet)	44.2%	11/03/2000- Code ASME Section XI Year 1995/W96 A
B9.11	13-001	SG#2 30" Nozzle to Nozzle Extension Weld	62.5%	11/06/2000- Code ASME Section XI Year 1995/W96 A

<b>Limited B-J Examinations</b>				
<b>Item Number</b>	<b>Comp. ID</b>	<b>Item Description</b>	<b>% Coverage</b>	<b>Date examined/Code Year</b>
B9.11	17-033	12" Pipe to Reducer Weld	57%	4/22/1997- Code ASME Section XI Year 1980/W81 A
B9.11	19-006	12" Pipe to Valve Weld	50%	10/12/1989- Code ASME Section XI Year 1980/W81 A
B9.11	19-008	Valve end to 12" Pipe Weld	50%	11/6/2003- Code ASME Section XI Year 1995/W96 A
B9.11	21-066	14" Pipe to Valve Weld	50%	10/31/2000- Code ASME Section XI Year 1995/W96 A
B9.11	22-023	Elbow to 14" Pipe Weld	88%	10/26/2000- Code ASME Section XI Year 1995/W96 A
B9.11	25-009	4" Pipe to 4" x 4" x 3" Tee Weld	75%	10/22/2000- Code ASME Section XI Year 1995/W96 A
B9.11	25-015	4" x 4" x 3" Tee to 4" Pipe Weld	75%	11/02/2000- Code ASME Section XI Year 1995/W96 A
B9.11	25-016	4" Pipe to Valve end Weld	50%	10/22/2000- Code ASME Section XI Year 1995/W96 A
B9.11	25-018	Valve end to 4" Pipe Weld	50%	10/22/2000- Code ASME Section XI Year 1995/W96 A
B9.11	25-019	4" Pipe to Elbow weld	75%	10/22/2000- Code ASME Section XI Year 1995/W96 A
B9.11	25-020	Elbow to 4" Pipe Weld	75%	10/22/2000- Code ASME Section XI Year 1995/W96 A
B9.11	25-022	Tee to 4" Branch Connection Weld	62%	10/22/2000- Code ASME Section XI Year 1995/W96 A
B9.11	26-002	8" x 6" Reducing Safe-end to 6" Elbow Weld	50%	10/20/2000- Code ASME Section XI Year 1995/W96 A
B9.11	26-007	8" x 6" Reducing Safe-end to 6" Elbow Weld	52%	10/20/2000- Code ASME Section XI Year 1995/W96 A
B9.21	15-006	2" Drain Nozzle to Safe end Weld	85.5%	11/01/2000- Code ASME Section XI Year 1995/W96 A
B9.21	27-002	2" Pipe to Elbow Weld	75%	10/22/2000- Code ASME Section XI Year 1995/W96 A
B9.21	27-004	2" Pipe to Elbow Weld	75%	10/22/2000- Code ASME Section XI Year 1995/W96 A
B9.21	27-005	Elbow to 2" Pipe Weld	75%	10/22/2000- Code ASME Section XI Year 1995/W96 A
B9.21	27-006	2" Pipe to Elbow Weld	75%	10/22/2000- Code ASME Section XI Year 1995/W96 A



<b>Limited B-J Examinations</b>				
<b>Item Number</b>	<b>Comp. ID</b>	<b>Item Description</b>	<b>% Coverage</b>	<b>Date examined/Code Year</b>
B9.21	27-007	Elbow to 2" Pipe Weld	75%	10/22/2000- Code ASME Section XI Year 1995/W96 A
B9.21	27-008	2" Pipe to Elbow Weld	75%	10/22/2000- Code ASME Section XI Year 1995/W96 Add
B9.21	27-009	Elbow to 2" Pipe Weld	75%	10/22/2000- Code ASME Section XI Year 1995/W96 A
B9.21	27-010	2" Pipe to Elbow Weld	75%	10/26/2000- Code ASME Section XI Year 1995/W96 A
B9.21	27-011	Elbow to 2" Pipe Weld	75%	10/26/2000- Code ASME Section XI Year 1995/W96 A
B9.21	27-037	Tee to 2" Pipe Weld	62%	10/26/2000- Code ASME Section XI Year 1995/W96 A
B9.21	27-038	Elbow to 2" Pipe Weld	75%	10/26/2000- Code ASME Section XI Year 1995/W96 A
B9.21	27-054	2" Pipe to Elbow Weld	75%	10/28/2000- Code ASME Section XI Year 1995/W96 A
B9.21	27-055	Elbow to 2" Pipe Weld	75%	10/28/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-001	2" Pipe to Elbow Weld	75%	10/19/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-002	Elbow to 2" Pipe Weld	75%	10/19/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-008	2" Pipe to Elbow Weld	75%	10/19/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-009	Elbow to 2" Pipe Weld	75%	10/19/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-012	2" pipe to 2" x 2" Tee Weld	70%	10/20/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-013	2" x 2" x 2" Tee to 2" Pipe Weld	75%	10/19/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-016	2" x 2" x 2" Tee to 2" Branch Connection Weld	51%	10/20/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-074	2" pipe to 2" x 2" Tee Weld	75%	10/19/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-075	2" x 2" x 2" Tee to 2" Pipe Weld	75%	10/19/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-076	Tee to 2" Pipe Weld	62%	10/19/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-077	2" Pipe to Elbow Weld	75%	10/19/2000- Code ASME Section XI Year 1995/W96 A
B9.21	28-078	Elbow to 2" Pipe Weld	75%	10/19/2000- Code ASME Section XI Year 1995/W96 A

<b>Limited B-J Examinations</b>				
<u>Item Number</u>	<u>Comp. ID</u>	<u>Item Description</u>	<u>% Coverage</u>	<u>Date examined/Code Year</u>
B9.31	08-008	12" Safety Injection Nozzle to 30" Pipe Weld	50%	4/02/2002- Code ASME Section XI Year 1995/W96 A

<b>Limited C-A Examinations</b>				
<u>Item Number</u>	<u>Comp. ID</u>	<u>Item Description</u>	<u>% Coverage</u>	<u>Date examined/Code Year</u>
C1.10	04-026	SG#2 Intermediate Shell to Conical Shell Weld	56%	3/3/1999- Code ASME Section XI Year 1980/W81A
C1.20	04-029	SG#2 Top Head Torus to Top Head Dome Weld	89%	4/29/2005- Code ASME Section XI Year 1980/W81 A
C1.20	54-074	Shut Down Heat Exchanger Shell to Flange Weld	88%	9/04/2007- Code ASME Section XI Year 1992/93 A
C1.20	54-075	Shut Down Heat Exchanger Shell to Flange Weld	85%	9/04/2007- Code ASME Section XI Year 1992/93 A

<b>Limited C-B Examinations</b>				
<u>Item Number</u>	<u>Comp. ID</u>	<u>Item Description</u>	<u>% Coverage</u>	<u>Date examined/Code Year</u>
C2.21	04-030	SG#2 MS Nozzle to Top Head Dome Weld	86%	4/30/2005- Code ASME Section XI Year 1980/W81 A

<b>Limited C-F-1 Examinations</b>				
<u>Item Number</u>	<u>Comp. ID</u>	<u>Item Description</u>	<u>% Coverage</u>	<u>Date examined/Code Year</u>
C5.11	55-051	8" Pipe to Valve Weld	45.5%	3/2/1999- Code ASME Section XI Year 1980/W81 A

<b>Limited C-F-1 Examinations</b>				
<b><u>Item Number</u></b>	<b><u>Comp. ID</u></b>	<b><u>Item Description</u></b>	<b><u>% Coverage</u></b>	<b><u>Date examined/Code Year</u></b>
C5.11	64-001	Valve to 10" Pipe Weld	50%	7/12/2000-Code ASME Section XI Year 1995/96 A
C5.11	56-001	LPSI Valve to 10" Pipe Weld	50%	1/28/2003- Code ASME Section XI Year 1995/96 A
C5.11	56-002	LPSI 10" Pipe to Tee Weld	50%	1/28/2003- Code ASME Section XI Year 1995/96 A
C5.11	56-003	LPSI Tee to 10" Pipe Weld	50%	1/28/2003- Code ASME Section XI Year 1995/96 A
C5.11	61-071	14" x 8" Reducing Elbow to Flange Weld	50%	6/27/2006- Code ASME Section XI Year 1995/96 A
C5.11	55-001	10" valve to stainless pipe weld	50%	8/28/2008- Code ASME Section XI Year 1995/96 A
C5.11	56-005	Tee to 10" Pipe Weld	50%	1/28/2003- Code ASME Section XI Year 1995/96 A
C5.11	56-043	10" Pipe to 10" x 6" Reducer Weld	50%	8/11/2003- Code ASME Section XI Year 1995/96 A
C5.11	56-077	8" Pipe to Cont. Penetration Weld	50%	8/11/2003- Code ASME Section XI Year 1995/96 A
C5.11	52-004	14" Elbow to Tee Weld	50%	5/4/2005- Code ASME Section XI Year 1995/96 A
C5.21	60-131	4" Pipe to Tee	79%	2/4/2003- Code ASME Section XI Year 1995/96 A
C5.21	60-468	3" Elbow to Pipe Weld	50%	10/25/2000- Code ASME Section XI Year 1995/96 A
C5.21	60-469	Pipe to Penetration Weld	50%	10/25/2000- Code ASME Section XI Year 1995/96 A

- 1.1.2 Provide the start and end dates for the Waterford 3 second 10-year interval inservice inspection program.

**Response:**

The second 120-month interval began on July 1, 1997 and ended May 31, 2008.

**1.2 Request for Relief WF3-ISI-007, Examination Category B-A, Items B1.12, B 1.22, B1.30 and B1.40, Pressure Retaining Welds in Reactor Vessel**

- 1.2.1 In the front portion of the licensee's submittal, ASME Code, Item Numbers B1.12, B1.22, B1.30, and B1.40 are listed for RR WF3-ISI-007. However, Table 1 only lists two item numbers (B1.22 and B1.40) with limited examination descriptions. Clarify whether there are only two ASME Code Item Numbers included within this request, or provide additional limited examination descriptions for Item Numbers B1.12 and B1.30 in Table 1.

**Response:**

There are only 2 Code Items with limited code required examination volume coverage, B1.40 and B1.22. Items B1.12 and B1.30 were listed in error.

**1.3 Request for Relief WF3-ISI-008, Examination Category B-D, Items B3.10, B3.20 , and B3.30 , Full Penetration Welded Nozzles in Vessels**

- 1.3.1 The licensee states that during the second 10-year inservice inspection interval, 10 CFR 50.55a(g)(6)(ii)(C) mandated an implementation schedule for licensees to begin using Supplements to the 1995 Edition through the 1996 Addenda of the ASME Code, Section XI, Appendix VIII. However, the licensee further states that all examinations listed for Examination Category B-A were performed prior to this implementation schedule, and these reactor pressure vessel shell weld examinations used ASME Code, Section V, Article 4 of the 1980 Edition through Winter 1981 Addenda.

Specify which ASME Code section was used (Section V, Article 4 or Section XI, Appendix VIII) to determine code coverage for each of the subject welds and the date when each weld examination was performed.

**Response:**

Waterford 3's Second Ten Year Interval is using Inspection Program "B" and not Inspection Program "A". Note that request numbered 1.3 above was for items B3.10, B3.20, and B3.30 as originally submitted by Waterford 3; the correct title for this request is associated with Items B3.110, B3.120 and B3.130. Waterford 3 Condition Report CR-WF3-2010-0729 documents Waterford 3's administrative errors associated with this submittal. WF3-ISI-008 Attachment 2 page 2 and 3 had the correct Code item numbers for the limited examinations. Also reflected in the request above was that Waterford 3 had stated that all examinations listed for Examination Category B-A were performed prior to this implementation schedule...; in actuality, Waterford 3 had stated

that the examinations were for Category B-D. Based on recognition of the NRC's intent for the request, Waterford 3 has provided the response for Examination Category B-D. See the table below for specific ASME Codes used to determine code coverage and dates of each examination.

<b>Limited B-D Examinations</b>				
<b>Item Number</b>	<b>Comp. ID</b>	<b>Item Description</b>	<b>% Coverage</b>	<b>Date examined/Code Year</b>
B3.130	03-010	42" Hot Leg Nozzle to SG#1	86.5%	3/30/2002- Code ASME Section XI Year 1980/W81 A
B3.130	03-011	30"Cold leg to SG#1 @45°	66%	5/17/2008- Code ASME Section XI Year 1995/W96 A
B3.130	03-012	30"Cold leg to SG#1 @315°	66%	5/17/2008- Code ASME Section XI Year 1995/W96 A
B3.110	05-009	Pressurizer Surge Nozzle to Head Weld	64%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.110	05-010	Pressurizer Spray Nozzle to Head Weld	74.8%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.110	05-011	Pressurizer Safety Nozzle to Head Weld	65.9%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.110	05-012	Pressurizer Safety Nozzle to Head Weld	65.9%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.110	05-013	Pressurizer Safety Nozzle to Head Weld	65.9%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.120	05-014	Pressurizer Surge Nozzle Inner Radius	29.4%	2/26/1999- Code ASME Section XI Year 1980/W81 A
B3.120	05-015	Pressurizer Spray Nozzle Inner Radius	60.4%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.120	05-016	Pressurizer Safety Nozzle Inner Radius	72%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.120	05-017	Pressurizer Safety Nozzle Inner Radius	72%	2/25/1999- Code ASME Section XI Year 1980/W81 A
B3.120	05-018	Pressurizer Safety Nozzle Inner Radius	72%	2/25/1999- Code ASME Section XI Year 1980/W81 A

**1.4 Request for Relief WF3-ISI-009, Examination Category B-F, Item B5.40, Pressure Retaining Dissimilar Metal Welds in Vessel Nozzles**

- 1.4.1 In the response to the request for additional information, the licensee states that no surface examinations were performed for the subject pressure retaining dissimilar metal welds in vessel nozzles. However, the 1992 Edition through the 1999 Addenda of the ASME Code, Section XI, requires both volumetric and surface examinations for Item Number B5.40. Please confirm whether or not the required surface examinations were performed for the subject welds. If the required surface examinations were not performed, please provide the reference for the NRC document indicating approval for such exemptions.

**Response:**

Waterford 3 was granted approval by the NRC (CNRI2003-00010, 8/26/03) to utilize Code Case N-663; therefore, the surface examinations were not required to be performed on the subject welds.

**1.5 Request for Relief WF3-ISI-010, Examination Category B-J, Items B9.11, B9.21, and B9.31, Pressure Retaining Welds in Piping**

- 1.5.1 Confirm that examination procedures, personnel and equipment were qualified in accordance with the ASME Code, Section XI, Appendix VIII for these piping welds.

**Response:**

All examinations of B-J welds after the required implementation date of 10CRF50.55a were in compliance with Appendix VIII. See response to 1.1.1

- 1.5.2 In the response to the request for additional information, the licensee does not show that both surface and volumetric examinations were applied for all of the subject welds. The 1992 Edition through 1993 Addenda of the ASME Code, Section XI requires both volumetric and surface examinations for the subject components. Please confirm whether or not the required surface examinations were performed for the subject welds. If the required surface examinations were not performed, please provide the reference for the NRC document indicating approval for such exemptions.

**Response:**

Waterford 3 was granted approval by the NRC (CNRI2003-00010, 8/26/03) to utilize Code Case N-663; therefore, the surface examinations were not required to be performed on the subject welds.

**1.6 Request for Relief WF3-ISI-0011, Examination Category C-A, Items C1.10, and C1.20, Pressure Retaining Welds in Pressure Vessels**

- 1.6.1 For steam generator Intermediate Shell-to-Conical Shell Weld 04-026, and Top Head Torus-to-Top Head Dome Weld 04-029, Table 1 lists the ultrasonic examination as being obstructed by a 4-inch wide insulation support ring and 14 insulation lugs, respectively. Provide further information to discuss whether the limited volumetric coverage could be increased by removal of the subject insulation and supporting appurtenances.

**Response:**

Shell-to-Conical Shell Weld 04-026 was limited by the 4" wide insulation support ring. Removal of this ring to increase coverage would present a hardship in increased dose to personnel removing the insulation below the ring to the bottom of the Steam Generator without a compensating increase in the level of quality and safety. Removal of the insulation would only increase the volumetric exam by approximately 2%. Examination Volume Weld 04-029 was limited by 14 insulation lugs that are welded in place and cannot be removed. For informational purposes only, the Steam Generators are scheduled to be replaced in our next refueling outage, RF17.

**1.7 Request for Relief WF3-ISI-012, Examination Category C-B, Item C2.21, Pressure Retaining Nozzle Welds in Vessels**

- 1.7.1 The licensee's submittal states that limited ultrasonic examination is caused by eight insulation lugs located 5.25-inch from the weld centerline of the Nozzle-to-Top Head Dome Weld 04-030. Provide further information to discuss whether the limited volumetric coverage could be increased by removal of the subject insulation and supporting appurtenances.

**Response:**

Weld 04-030 was not limited by insulation and insulation removal would not increase volumetric coverage. The insulation lugs affecting the volumetric coverage on Weld 04-030 are themselves welded in place and cannot be removed. For informational purposes only, the Steam Generators are scheduled to be replaced in our next refueling outage, RF17.

- 1.7.2 In the response to the request for additional information, the licensee states that no surface examinations were performed for the subject pressure retaining nozzle welds. However, the 1992 Edition through the 1993 Addenda of the ASME Code, Section XI requires both volumetric and surface examinations for Item Number C2.21 nozzle welds. Please confirm whether or not the required surface examinations were performed for the subject welds. If the required surface examinations were not performed, please provide the reference for the NRC document indicating approval for such exemptions.

**Response:**

A review of the ISI/NDE records indicated that the surface examination was not performed as required by the ASME Section XI Code of Record. This issue was documented in Waterford 3's corrective action process (CR-WF3-2010-0352). The last surface examination was completed on 10/13/92 with no indications found.

**1.8 Request for Relief WF3-ISI-013, Examination Category C-F-1, Items C5.11, and C5.21, Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping**

- 1.8.1 In the response to the request for additional information, the licensee does not show that both surface and volumetric examinations were applied to all of the subject welds. The 1992 Edition through the 1993 Addenda of the ASME Code, Section XI requires both volumetric and surface examinations for both Item Number C5.11 and C5.21 piping welds. Please confirm whether or not the required surface examinations were performed for the subject welds. If the required surface examinations were not performed, please provide the reference for the NRC document indicating approval for such exemptions.

**Response:**

Waterford 3 was granted approval by the NRC (CNRI2003-00010, 8/26/03) to utilize Code Case N-663; therefore, the surface examinations were not required to be performed on the subject welds.

**1.9 Request for Relief WF3-ISI-014, Examination Category R-A, Item R1.20, Risk-Informed Piping Examinations**

- 1.9.1 The licensee states ASME Code, Section XI, Code Case N-716, *Alternative Piping Classification and Examination Requirements, Section XI, Division 1*, requirements were implemented for the subject weld volumetric examinations. However, the licensee's submittal does not discuss NRC approval for use of this Code Case. Please provide the reference for the NRC Safety Evaluation, indicating approval, for performing the subject weld examinations under the requirements of ASME Code, Section XI, Code Case N-716. State whether any conditions were imposed by NRC for the use of the Code Case, and how these conditions were satisfied.

**Response:**

A review of Category R-A Item R1.20 determined that there were no limited ultrasonic examinations during the 2<sup>nd</sup> inspection interval. This Request for Relief, WF3-ISI-014, Examination Category R-A, Item R1.20, Risk-Informed Piping Examinations is hereby withdrawn as noted in the cover letter to this response.



**Attachment 2  
To  
W3F1-2010-0014**

**Response to NRC Request for Additional Information dated January 6, 2010 Re:  
Waterford 3 Steam Electric Station, Unit 3  
Requests for Relief from ASME Section XI Volumetric Examination  
Requirements – Second 10-Year Inservice Inspection Interval**

**Extracted Text from Waterford 3's ISI Program**

SECTION 1:  
INTRODUCTION

Program Section No: CEP-ISI-001  
Revision No.: 10  
Page No.: 8 of 17

**TABLE OF CONTENTS**

<u>VOLUME I (Inservice Inspection Requirements)</u>		<u>EFFECTIVE</u>
		<u>REVISION</u>
SECTION 1 -	INTRODUCTION	10
SECTION 2 -	LATER EDITIONS AND ADDENDA	10
SECTION 3 -	CODE CASES	10
SECTION 4 -	RELIEF REQUESTS	10
SECTION 5 -	PRESSURE TESTING	10
SECTION 6 -	CALIBRATION STANDARDS	10
SECTION 7 -	CLASS 1 PUMPS AND VALVES	10
SECTION 8 -	EXAMINATION SELECTION SUMMARY (Information moved to Scheduleworks®)	10
SECTION 9 -	SUCCESSIVE EXAMINATIONS	10
SECTION 10 -	RISK-INFORMED SELECTIONS	10
SECTION 11 -	AUGMENTED EXAMINATIONS	10
SECTION 12 -	PROGRAM CHANGE NOTICE	10
 <u>APPENDICES</u>		
A	ISI Line List	10
B	Period 1 Exams (Information moved to Scheduleworks®)	10
C	Period 2 Exams (Information moved to Scheduleworks®)	10
D	Period 3 Exams (Information moved to Scheduleworks®)	10
E	Drawing Index	10
F	Class 1 ISI Drawings	10
G	Class 2 ISI Drawings	10
H-Z	Reserved	10

SECTION 1:  
INTRODUCTION

Program Section No: CEP-ISI-001  
Revision No.: 10  
Page No.: 9 of 17

1.0 GENERAL PLANT DESCRIPTION AND PROGRAM REQUIREMENTS

This Program Section contains the details for the second 120-month Inservice Inspection (ISI) Program interval for the inspection of Class 1, 2, and 3 pressure retaining components and their supports at the Waterford 3 Steam Electric Station, which is a Combustion Engineering two loop PWR design.

The initial 120-month ISI Program commenced with commercial operation on September 24, 1985. However, by authorization from the Director of the Office of Nuclear Regulation (Reference GNRI 96-00244) the first 120-month interval was extended until June 30, 1997. The second 120-month interval began on July 1, 1997 and will continue through May 31, 2008. All ENS sites including Waterford will align the start of their third interval on May 31, 2008. The coordination of refuel outages and periods within the second interval is shown in Figure 1.1.

Changes to the contents of this Program Section shall be requested in accordance with Section 12, Program Change Notice.

2.0 CODE OF RECORD FOR THE SECOND INTERVAL

The current Code of record is the 1992 Edition with portions of later Addenda as described in Section 2 of this Program Section. Due to the unknown implementation schedule for Section XI-Appendix VIII, the NRC authorized W3 (Reference GNRI 96-00244) to perform ultrasonic examinations in accordance with the 1980 Edition with the Winter of 1981 Addenda as specified in the ISI plan for the first interval. The use of the 1980 Edition with the Winter of 1981 Addenda is limited until such time when changes to 10 CFR 50.55a require the use of ASME Section XI, Appendix VIII. Section 2 provides a detail listing of the applicable editions and addenda of Section XI as it applies to ultrasonic examinations based on current 10 CFR 50.55a requirements.

Section 3 of this Program Section, Code Cases, lists the adopted Code Cases for Waterford 3. Section 4 of this Program Section, list the Relief Request used in this program.

3.0 SCOPE

The ISI program includes this program section along with the Scheduleworks® module of the IDDEAL® database. This Program Section along with Scheduleworks® identifies items, such as welds, equipment, and supports that are subject to examination during the second ten-year interval in accordance with ASME Section XI and items requiring "augmented" examinations. These augmented examinations are the result of regulatory input (Generic Letters, IE Bulletins, Licensing Commitments, etc.) and/or service history (NSSS vendor correspondence, condition reports, etc.) and are performed in conjunction with or in addition to Code examinations.

The ISI Program includes the following:

- Piping weld examination
- Pipe and equipment support examination
- Reactor pressure vessel and other equipment examination
- Pump and valve body internal examination
- Bolting examination
- Pressure tests

For each component, this Program Section also provides information regarding examination method and the inspection period during which the component is scheduled to be examined. ISI piping isometric drawings and equipment sketches depicting the location of the components are included.

The Pump and Valve Inservice Test (IST) Program is a separate independent Program Section. The requirements for IST are not included in the scope of this Program Section.

Snubbers are selected and functionally tested in accordance with W-3 Technical Specification 3/4.7.8, "Snubbers", as opposed to ASME Section XI Code requirements. All component supports associated with snubbers are visually examined (VT-3) in accordance with the ASME Code Section XI, 1992 Edition, in conjunction with the Snubber test program. The Snubber Test Program is not included in the scope of this Program Section.

The Inservice Inspection (ISI) Program for Containment is a separate independent Program Section. The requirements for ISI of the containment are not included in the scope of this Program Section.

#### 4.0 REGULATORY GUIDANCE

The ISI program incorporates the augmented examination requirements of the following Regulatory Guides, IE Bulletins, NUREGS, Standard Review Plans and Generic Letters:

Reg. Guide 1.14	Reactor Coolant Pump Flywheel Integrity.
Reg. Guide 1.150	Ultrasonic Testing of Reactor Vessel Welds during Preservice and Inservice Examination
SRP 3.6.1	Plant Design For Protection Against Postulated Piping Failures In Fluid Systems Outside Containment" (NUREG-0800)
SRP 3.9.3	ASME Code Class 1, 2 and 3 Components, Component Supports, and Core Support Structures" (NUREG-0800)

SECTION 1:  
INTRODUCTION

Program Section No: CEP-ISI-001

Revision No.: 9

Page No.: 11 of 17

SRP 5.2.4 Reactor Coolant Pressure Boundary Inservice Inspection and Testing (NUREG-0800)

SRP 5.4.1.1 Pump Flywheel Integrity (NUREG-0800)

SRP 6.6 Inservice Inspection of Class 2 and 3 components (NUREG-0800)

IE Bulletin 88-08 Thermal Stresses in Piping Connected to Reactor Coolant Systems.

## 5.0 EXAMINATIONS

### 5.1 Examination Criteria

The selection of items for inservice inspection is based on application of ASME Section XI examination criteria in paragraphs IWB-1200, IWC-1200, IWD-1200 and IWF-1200 and on augmented inspection requirements identified in Section 11, Augmented Examinations, of this Program Section. The piping exempted per IWB-1220, IWC-1220 and IWD-1220 is listed in Appendix A, Line List, of this Program Section. Class 2 components were exempted from volumetric and surface examination using the criteria contained in IWC-1220, except as follows, stainless steel piping with nominal wall thickness less than 3/8-inch and nominal pipe size > 4-inch, has been included as Examination Category C-F-1, Item Number C5.10. This piping had received volumetric examinations during the First Interval under a "supplemental" program. Per IWF-1230, the supports on exempt piping and associated equipment and components are also exempt.

The performance of Inservice Inspection and NDE activities including the qualification of inspection and NDE personnel shall be in accordance with ASME Section XI as defined in Section 2.0.

Items that cannot be examined per ASME Section XI requirements are identified in Relief Requests contained in Section 4 of this Program Section.

### 5.2 Pump/Valve Examination

Internal surfaces of Class 1 valve bodies exceeding 4 inch nominal size are subject to visual examination per Exam Category B-M-2. The grouping of Class 1 valve bodies is discussed in Section 7 of this Program Section.

SECTION 1:  
INTRODUCTION

Program Section No: CEP-ISI-001  
Revision No.: 106  
Page No.: 12 of 17



5.3 Pressure Testing

Class 1, 2, and 3 pressure retaining boundaries are defined on the Flow Diagrams. These boundaries shall be subject to pressure test as specified in Section 5 of this Program Section.

5.4 Integral Attachments

Integral attachments are examined in accordance with Code Case N-509. As required by the NRC's approval, a minimum of 10% of all nonexempt integral attachments are required to be examined. Additionally, when evidence of component support deformation (e.g., broken, bent, or pulled out parts) is identified during operation, refueling, maintenance, examination, inservice inspection, or testing, the associated integral attachments shall be examined in accordance with the requirements of the Code Case. If conditions are detected that do not meet the acceptance criteria of the Code Case, additional and successive examinations shall be performed in accordance with IWB, IWC or IWD 2420 and 2430. Integral attachments examined because of support deformation cannot be credited towards the examination requirements for the period or interval.

5.5 Incomplete or Missed Examinations

Resolution and tracking of incomplete or missed examinations shall be in accordance with the PCN/CR process as described below:

5.5.1 The implementer should submit a PCN to CEP in a timely manner. The PCN should contain the following:

5.5.1.1 The affected component.

5.5.1.2 The examination requirement that has not been, or will not be, met.

5.5.1.3 Reason for incomplete or missed examination.

5.5.1.4 Alternate examinations performed or recommended, (i.e. best effort vs. VT-1, etc.) to include reasons why this is acceptable.

5.5.1.5 For partial examinations, the extent of coverage the component received or will receive using approved methods.

5.5.2 CEP should disposition the PCN as necessary.

5.5.3 If a relief request is required:

5.5.3.1 CEP should develop and submit the necessary documentation to the NRC.



SECTION 1:  
INTRODUCTION

Program Section No: CEP-ISI-001

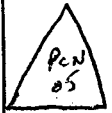
Revision No.: 10

Page No.: 12 of 17

5.5.3.2 If the relief request is approved, CEP should incorporate the PCN into the program plan.

5.5.3.3 If the relief request is disapproved, CEP should initiate a CR.

5.5.4 If it is discovered that a required examination has been missed and cannot be examined before the end of the inspection period in accordance with the Program Plan, a CR should be initiated



6.0 REPORTS

6.1 ISI Summary Report

6.1.1 Waterford 3 has adopted Code Case N-532-1 "Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000 and IWA-6000."

6.1.2 Code Case N-532-1 requires completion of Form OAR-1 "Owners Activity Report" after each refueling outage.

6.1.2.1 It is to include ASME Activities performed during the outage and the previous operating cycle.

6.1.2.2 It shall be completed and submitted to the NRC within 90 days of completion of the refueling outage.

CEP-ISI-001-PEN-10

SECTION 1:  
INTRODUCTION

Program Section No: CEP-ISI-001

Revision No.: 10

Page No.: 13 of 17

- 6.1.3 Waterford had adopted Code Case N-532 through a request for alternative which committed to submit all OAR reports generated at the end of the period. This request was authorized until such time as the Code Case was adopted in Regulatory (Reg) Guide 1.147. Code Case N-532 has not been adopted in the Reg Guide. However, Revision 13 to Reg Guide 1.147 did approve Code Case N-532-1. Entergy has elected to voluntarily update to Rev 1 of the Code Case. Waterford 3 will submit the OAR as required Code Case N-532-1 commencing at the end of RF-12.
- 6.1.4 Each OAR-1 is to contain the following information formatted in accordance with Code Case N-532-1.
- 6.1.4.1 Table 1 "Abstract of Examinations and Tests" shall contain the following information for each examination category:
- 6.1.4.1.1 The examination category,
  - 6.1.4.1.2 Total examinations required for the interval,
  - 6.1.4.1.3 Total examinations credited for the period,
  - 6.1.4.1.4 Total examinations credited (%) for the period,
  - 6.1.4.1.5 Percentage of total examinations credited for the interval,
  - 6.1.4.1.6 Applicable remarks.
- 6.1.4.2 Table 2 "Items with flaws or relevant conditions that required evaluation for continued service" shall contain the following information for all items with flaws or other relevant conditions requiring evaluation for continued service:
- 6.1.4.2.1 The examination category,
  - 6.1.4.2.2 Item number,
  - 6.1.4.2.3 Item description,
  - 6.1.4.2.4 Flaw characterization,
  - 6.1.4.2.5 Whether the flaw or condition was found in a scheduled Section XI examination or test.
  - 6.1.4.2.6 Table 3 "Abstract of repairs, replacements, or corrective measures required for continued service" shall be in accordance with CEP-R&R-001, ASME Section XI, Division 1, Repairs and Replacements.

CEP-ISI-001-PEN-10



SECTION 1:  
INTRODUCTION

CEP-ISI-001-PEN-16  
Program Section No: CEP-ISI-001  
Revision No.: 10  
Page No.: 14 of 17

7.0 PROGRAM ARRANGEMENT

7.1. This ISI Program Section is divided into the following items:

7.1.1. Table of Contents

7.1.2. Section 1 – Introduction

7.1.3. Section 2 – Addenda Paragraphs

7.1.4. Section 3 – Code Cases

7.1.5. Section 4 – Relief Requests

7.1.6. Section 5 – Pressure Testing

7.1.7. Section 6 – Calibration Standards

7.1.8. Section 7 – Class 1 Pumps and Valves

7.1.9. Section 8 – Examination Selection Summary  
(Information moved to Scheduleworks®)

7.1.10. Section 9 – Successive Examinations

7.1.11. Section 10 – Risk-Informed Selections

7.1.12. Section 11 – Augmented Examinations

7.1.13. Section 12 – Program Change Notice

7.1.14. Inservice Inspection Examination Appendices B through D have been removed from the program. Scheduling and component information is controlled by the Scheduleworks® module of the IDDEAL® database in files Sched\_W3\_ISI.mdb. The IDDEAL® database is controlled in accordance with CEP-COS-100.

7.2. Appendices E through H contain the isometric drawings for the ISI Program. The isometric drawings identify locations of Class 1 and 2 piping and components that are subject to inspection. Exempted piping may be shown when clarity or continuity is appropriate.

7.3. Schedule of Inspection

The ten year interval as it is divided into periods is depicted, included its coordination with refuel outages, in Figure 1.1. Inspection period 1 consists of the first thirty-six (36) calendar months of the interval. Inspection period 2 consists of forty-eight (48) calendar months following the first period and inspection period 3 consists of the last thirty-six (36) months, making a total of 120 months, or 10 years. Examinations are scheduled to meet the requirements of Tables IWB, C, D-2412-1 and IWF-2410-2 as applicable.

SECTION 1:  
INTRODUCTION

CEP-ISI-001-PEN-16

Program Section No: CEP-ISI-001

Revision No.: 10

Page No.: 15 of 17

7.4. Symbols and Abbreviations

7.4.1. The following abbreviations are used in Scheduleworks® for examination items. In some instances, these abbreviations may be combined with the use of a hyphen "-" to describe two different items joined by a weld:

<u>Abbreviation</u>	<u>Description</u>
AC	Chilled Water
BD	Steam Generator Blowdown
BM	Boron Management
CA	Containment Air
CC	Component Cooling Water
CD	Condensate
CH	Chemical And Volume Control
CS	Containment Spray
DW	Demineralized Water
EA	Emergency Diesel Generator Air Supply
EF	Emergency Feedwater
EG	Emergency Diesel
FP	Plant Fire Protection
FS	Fuel Pool
FW	Main (and Emergency) Feedwater
HPSI	High Pressure Safety Injection
HV	Heating, Ventilation, Air Conditioning
HX	Heat Exchanger
IA	Instrument Air
LPSI	Low Pressure Safety Injection
LO	Lube Oil
MS	Main Steam
NG	Nitrogen Gas
PZR	Pressurizer
RC	Reactor Coolant
SA	Station Air
SI	Safety Injection
SL	Sampling System
WM	Waste Management

7.5. Weld Examination Coverage - Examination coverage includes essentially 100% of the weld length except as permitted below:

7.5.1. Examination coverage may be reduced when allowed by Code or when specific relief from the Code required coverage has been granted by the

SECTION 1:  
INTRODUCTION

Program Section No: CEP-ISI-001  
Revision No.: 10  
Page No.: 16 of 17

NRC. Where relief is granted, it is documented in Section 4 of this Program Section.

- 7.5.2. When essentially 100% of the examination volume or area cannot be examined due to component interference or part geometry, a reduction in examination coverage on any Class 1 or 2 weld is acceptable provided the reduction in coverage for that weld is less than 10%. Applicable examination records identify both the cause and % of reduced examination coverage. (As permitted by Code Case N-460)

SECTION 1:  
INTRODUCTION

Program Section No: CEP-ISI-001  
Revision No.: 10  
Page No.: 17 of 17

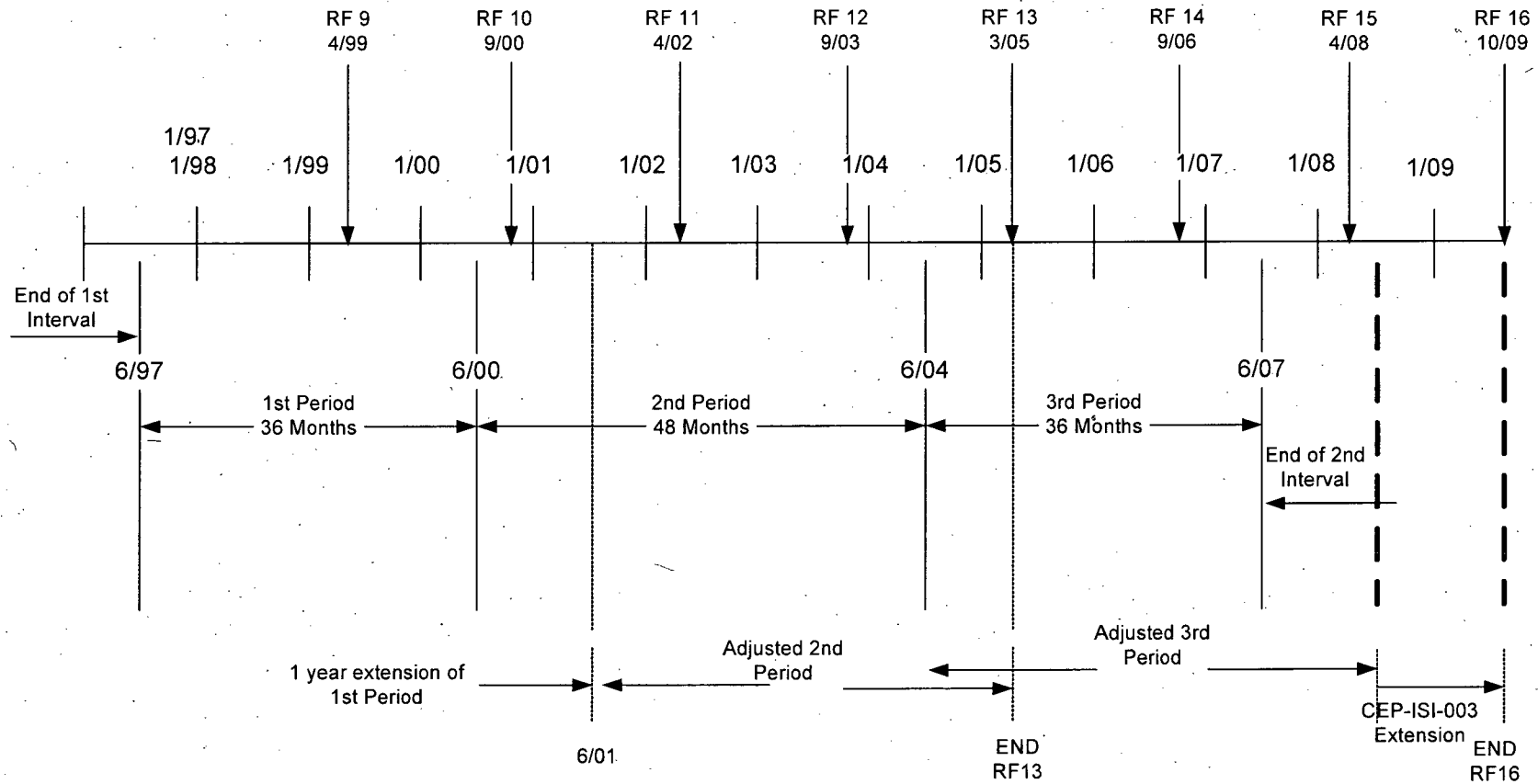


FIGURE 1.1

SECTION 2  
LATER EDITIONS  
AND ADDENDA

CEP-ISI-001-PEN-18  
Program Section No: CEP-ISI-001  
Revision No.: 10  
Page No.: 1 of 8

**SECTION 2**  
**LATER EDITIONS AND ADDENDA**

---

REVISION STATUS SHEET

<u>PAGE NO.</u>	<u>REVISION</u>
1	10
2	10
3	9
4	9
5	10
6	10
7	10
8	10

1.0 Later Edition and Addenda

- 1.1 Within the provisions of ASME Section XI and 10 CFR 50.55a(g)(4)(iv), the use of later Editions and/or Addenda of ASME Section XI is permitted with specific NRC approval. This provision has been further clarified by the NRC (Reference Ltr # 0CNA109510 from the NRC Region IV Office), to mean that their prior approval for use of later Edition/Addenda listed in 10 CFR 50.55a(b)(2) is not required and that only notification within a reasonable time frame is necessary. Additionally 10 CFR 50.55a(g)(4)(iv) requires that all related requirements of the edition or addenda are met.
- 1.2 Additionally, as the NRC determines appropriate through changes to 10 CFR 50.55a, they sometimes mandate the use of later portions of ASME Section XI. Section 2 of this program section identifies those later Editions and/or Addenda that have been included into the W3 ISI program based on NRC approval or requirements.

2.0 1993 Addenda

- 2.1 Prior to the NRC approval of the 1992 Edition of ASME Section XI, by incorporation into 10 CFR 50.55a(b), the NRC authorized the use of the 92 Edition with select portions of the 1993 Addenda at W3 (Reference GNRI 96-00244). Table 2.1 identifies the portions of the 1993 Addenda that have been adopted by Entergy and approved by the NRC for use with the W3 ISI program.

**TABLE 2.1**  
**1993 ADDENDA**

<u>Code Paragraph</u>	<u>Code Change Description</u>
1. Table IWA-5210-1	Table IWA-5210-1 is revised to reflect a change in referenced paragraphs for Test Temperature requirements from IWB/IWC-5230 to IWB/IWC-5240 to be consistent with changes in paragraph numbers in IWB and IWC. This change has no impact on examination and test requirements.
2. Paragraphs IWA-5250(a)(2)	Paragraph IWA-5250(a)(2) is revised to delete the requirement for removal and examination of bolting in leaking bolted connections in gaseous systems.
3. IWA-5265(b):	Paragraph IWA-5265(b) is revised to clarify that even if the test pressure at the highest elevations is

**TABLE 2.1**  
**1993 ADDENDA**

<u>Code Paragraph</u>	<u>Code Change Description</u>
	not achieved, the maximum test pressure that any component is allowed to see is 106% of the specified test pressure.
4. Table IWB-2500-1, Examination Categories B-P	Table IWB-2500-1, Examination Category B-P is revised to delete the requirement for the Class 1 hydrostatic test once per interval.
5. Table IWB-2500-1, Examination Categories B-E	Table IWB-2500-1, Examination Category B-E is deleted. The requirements of this category involved duplicate examinations that were already addressed in Category B-P. This change has no affect on examinations and is considered to be a clarification.
6. Article IWB-5000 in its entirety	Article IWB-5000 is rewritten for clarity. Also the boundary requirements have been revised to change the end of the interval test boundary requirements for the hydrostatic test to the end of the interval requirements for the system leakage test. This is consistent with deletion of the periodic hydrostatic test requirement from Category B-P.
7. Table IWC-2500-1, Examination Category C-H	Table IWC-2500-1, Examination Category C-H is revised to delete the requirement for the Class 2 hydrostatic test once per interval.
8. Article IWC-5000 in its entirety	Article IWC-5000 is rewritten for clarity. Also, the boundary requirements have been revised to exempt open-ended discharge piping from the system leakage test.
9. Article IWD-5000 in its entirety	Article IWD-5210(b) has been rewritten for clarity. Paragraph IWD-5222(g) which required pressure tests of open-ended piping discharging to the suppression pool is deleted and IWD-5222(f) is rewritten to exempt all open-ended piping (including open-ended suppression pool piping). The boundary requirements have been revised to exempt open-ended discharge piping from the system leakage test.

SECTION 2  
LATER EDITIONS  
AND ADDENDA

CEP-ISI-001-PW-18  
Program Section No: CEP-ISI-001  
Revision No.: 10  
Page No.: 4 of 8

3.0 1995 Edition through and Including the 1995 Addenda

- 3.1 As discussed in Paragraph 1.1, the NRC has approved the use of the 1995 Edition through the 1995 Addenda in 10 CFR 50.55a(b). Table 2.2 identifies the portions of the 1995 Addenda that have been adopted by Entergy for use with the W3 ISI program

**TABLE 2.2  
1995 ADDENDA**

Code Paragraph	Code Change Description	Related Requirements
1. IWA-5213	IWA-5213 is revised to reflect a change in the required hold time after pressurization to test conditions prior to performing the visual examinations during the conduct of a system leakage test. This change eliminates the hold time after attaining the test pressure and temperature for periodic pressure testing. Repair/Replacement pressure testing hold times remain unchanged.	None

4.0 1995 Edition Through and Including the 1996 Addenda

- 4.1 On September 22, 1999 10 CFR 50.55a was revised mandating the implementation of the 1995 Edition, through and including the 1996 Addenda of ASME Section XI, Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems". Appendix VIII is comprised of multiple supplements for varying scopes of ultrasonic application. The NRC has mandated each supplement's use in accordance with a specific schedule for implementation. Additionally, by implementing Appendix VIII for each of the specific supplements, it also requires the use of Appendix VII from the 1995 Edition through the 1996 Addenda within the same schedule.
- 4.2 For those items pertaining to paragraph 4.1 above, the Examination Category Item Numbers listed in Table 2.3 shall be ultrasonically examined in accordance with ASME Section XI, 1980 Edition through and including the 1981 Winter Addenda until the specified date. Beginning with the specified date, the ultrasonic examinations (preservice and inservice) shall be in accordance with ASME Section XI, Appendix VIII, 1995 Edition through and including the 1996 Addenda and the additional requirements of 10 CFR 50.55a.



- 4.3 Personnel performing ultrasonic examination of the Examination Category Item Numbers listed in Table 2.3 shall be qualified in accordance with ASME Section XI, Appendix VII, 1992 Edition until the specified date. Beginning with the specified date, personnel performing these examinations (preservice and inservice) shall be qualified in accordance with ASME Section XI, Appendix VII, 1995 Edition through and including the 1996 Addenda and the additional requirements of 10 CFR 50.55a. When updating to the requirements of Appendix VII, 1995 Edition, 1996 Addenda, IWA-2300 accepts existing qualifications using SNT-TC-1A until the re-qualification is required. Re-qualification shall be in full compliance with the 1995 Edition through the 1996 Addenda including the use of CP-189.
- 4.4 On January 5, 2006 the NRC granted permission for all ENS Sites to use the 1995 Edition, 1996 Addenda for ultrasonic examinations performed on items not covered under Appendix VIII. See Section 4 for reference to approved request.

<b>TABLE 2.3</b>				
<b>1995 EDITION, 1996 ADDENDA IMPLEMENTATION SCHEDULE</b>				
<b>Item Number</b>	<b>Specified Date to Begin New Requirements</b>	<b>New Appendix VIII Examinations Requirements</b>	<b>New Certification Requirements</b>	<b>Notes</b>
<b>Examination Category: B-A</b>				
B1.11	11/20/00	Supps. 1, 4 & 6	App. VII, 95E, 96A	
B1.12	11/20/00	Supps. 1, 4 & 6	App. VII, 95E, 96A	
B1.21 Clad	11/20/00	Supps. 1, 4 & 6	App. VII, 95E, 96A	
B1.22 Clad	11/20/00	Supps. 1, 4 & 6	App. VII, 95E, 96A	
B1.30	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B1.40	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B1.51	11/20/00	Supps. 1, 4 & 6	App. VII, 95E, 96A	
<b>Examination Category: B-B</b>				
B2.11	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B2.12	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B2.21	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B2.22	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B2.31	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B2.32	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	

**TABLE 2.3**  
**1995 EDITION, 1996 ADDENDA IMPLEMENTATION**  
**SCHEDULE**

Item Number	Specified Date to Begin New Requirements	New Appendix VIII Examinations Requirements	New Certification Requirements	Notes
B2.40	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B2.51	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B2.52	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B2.60	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B2.70	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B2.80	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
<b>Examination Category: B-D</b>				
B3.90	11/22/02	Supps. 1 & 7	App. VII, 95E, 96A	
B3.100	11/22/02	Supps. 1 & 5	App. VII, 95E, 96A	
B3.110	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B3.120	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B3.130	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B3.140	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B3.150	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B3.160	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
<b>Examination Category: B-F</b>				
B5.10	11/22/02	Supps. 1 & 10	App. VII, 95E, 96A	
B5.40	11/22/02	Supps. 1 & 10	App. VII, 95E, 96A	
B5.50	11/22/02	Supps. 1 & 10	App. VII, 95E, 96A	
<b>Examination Category: B-G-1</b>				
B6.20	5/22/00	Supps. 1 & 8	App. VII, 95E, 96A	
B6.30	5/22/00	Supps. 1 & 8	App. VII, 95E, 96A	
B6.40	5/22/00	Supps. 1 & 8	App. VII, 95E, 96A	
B6.150	5/22/00	Supps. 1 & 8	App. VII, 95E, 96A	
B6.180	5/22/00	Supps. 1 & 8	App. VII, 95E, 96A	
B6.210	5/22/00	Supps. 1 & 8	App. VII, 95E, 96A	
<b>Examination Category: B-J</b>				
B9.11 Stainless	5/22/00	Supps. 1 & 2	App. VII, 95E, 96A	

**TABLE 2.3**  
**1995 EDITION, 1996 ADDENDA IMPLEMENTATION**  
**SCHEDULE**

Item Number	Specified Date to Begin New Requirements	New Appendix VIII Examinations Requirements	New Certification Requirements	Notes
B9.12 Stainless	5/22/00	Supps. 1 & 2	App. VII, 95E, 96A	
B9.31 Stainless	5/22/00	Supps. 1 & 2	App. VII, 95E, 96A	
B9.11 Ferritic	5/22/00	Supps. 1 & 3	App. VII, 95E, 96A	
B9.12 Ferritic	5/22/00	Supps. 1 & 3	App. VII, 95E, 96A	
B9.31 Ferritic	5/22/00	Supps. 1 & 3	App. VII, 95E, 96A	
B9.11 Dissimilar	11/22/02	Supps. 1 & 10	App. VII, 95E, 96A	
B9.12 Dissimilar	11/22/02	Supps. 1 & 10	App. VII, 95E, 96A	
B9.31 Dissimilar	11/22/02	Supps. 1 & 10	App. VII, 95E, 96A	
<b>Examination Category: B-L-1 AND B-M-1</b>				
B12.10	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
B12.40	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
<b>Examination Category: B-0</b>				
B14.10	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
<b>Examination Category: C-A</b>				
C1.10	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
C1.20	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
C1.30	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
<b>Examination Category: C-B</b>				
C2.21	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
C2.22	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
C2.32	1/5/2006	Appendix VIII does not apply	App. VII, 95E, 96A	
<b>Examination Category: C-D</b>				
C4.10	5/22/00	Supps. 1 & 8	App. VII, 95E, 96A	
C4.20	5/22/00	Supps. 1 & 8	App. VII, 95E, 96A	
C4.30	5/22/00	Supps. 1 & 8	App. VII, 95E, 96A	
C4.40	5/22/00	Supps. 1 & 8	App. VII, 95E, 96A	
<b>Examination Category: C-F-1</b>				
C5.11 SS or HA	5/22/00	Supps. 1 & 2	App. VII, 95E, 96A	
C5.12 SS or HA	5/22/00	Supps. 1 & 2	App. VII, 95E, 96A	
C5.21 SS or HA	5/22/00	Supps. 1 & 2	App. VII, 95E, 96A	
C5.22 SS or HA	5/22/00	Supps. 1 & 2	App. VII, 95E, 96A	

**TABLE 2.3**  
**1995 EDITION, 1996 ADDENDA IMPLEMENTATION**  
**SCHEDULE**

Item Number	Specified Date to Begin New Requirements	New Appendix VIII Examinations Requirements	New Certification Requirements	Notes
C5.11 Dissimilar	11/22/02	Supps. 1 & 10	App. VII, 95E, 96A	
C5.12 Dissimilar	11/22/02	Supps. 1 & 10	App. VII, 95E, 96A	
C5.21 Dissimilar	11/22/02	Supps. 1 & 10	App. VII, 95E, 96A	
C5.22 Dissimilar	11/22/02	Supps. 1 & 10	App. VII, 95E, 96A	
<b>Examination Category: C-F-2</b>				
C5.51	5/22/00	Supps. 1 & 3	App. VII, 95E, 96A	
C5.52	5/22/00	Supps. 1 & 3	App. VII, 95E, 96A	
C5.61	5/22/00	Supps. 1 & 3	App. VII, 95E, 96A	
C5.62	5/22/00	Supps. 1 & 3	App. VII, 95E, 96A	

## SECTION 3 CODE CASES

### REVISION STATUS SHEET

<u>PAGE NO.</u>	<u>REVISION</u>
1	10
2	9
3	10
4	10
5	10
6	9
7	10

CEP-ISI-001-PCN-10

1.0 Adoption of Code Cases

This Section addresses the adoption of Code Cases during the Second Inservice Inspection Interval. All Code Cases adopted for ASME Section XI activities for use during the Second Interval are listed in Tables 3.1, 3.2, and 3.3. The use of Code Cases is in accordance with ASME Section XI, IWA-2440, 10 CFR 50.55a, and Regulatory Guide 1.147. As permitted by ASME Section XI with the additional provisions of Regulatory Guide 1.147, ASME Section XI Code Cases may be adopted and used as described below.

1.1 Adoption of Code Cases Listed for Generic Use in Regulatory Guide 1.147

Code Cases that are listed for generic use in the latest revision of Regulatory Guide 1.147 may be included into the ISI program provided any additional provisions specified in the Regulatory Guide are also incorporated.

1.2 Adoption of Code Cases Not Listed in Regulatory Guide 1.147

Adoption of Code Cases that have been approved by the Board of Nuclear Codes and Standards, but that have not been listed for generic use in Regulatory Guide 1.147, may be requested in the form of a "Request for Alternative" in accordance with 10 CFR 50.55a(a)(3). Once approved, these Requests for Alternatives will be available for use until such time that the Code Cases are adopted into Regulatory Guide 1.147, at which time compliance with the provisions contained in the regulatory Guide is required.

Table 3.2 identifies those Code Cases approved through Requests for Alternatives. For convenience to the user of this ISI Plan, the appropriate internal correspondence number is provided to assist in retrieval from Entergy Document Control Centers. All other Requests for Alternatives and Relief Requests (those not associated with NRC approval of Code Cases) are addressed in Section 4 of this ISI Plan.

1.3 Use of Annulled Code Cases

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

1.4 Code Case Revisions

As permitted by Regulatory Guide 1.147, activities performed to a specific revision of an approved Code Case need not be changed because a subsequent revision of the Code Case is listed as the approved version in the Regulatory Guide. An exception to this provision would be the inclusion of a limitation or condition on the use of the Code Case which is necessary to enhance safety.

1.5 Adoption of Code Cases Issued Subsequent to Filing the Inservice Inspection Plan

Code Cases issued by ASME Section XI subsequent to filing the Inservice Inspection Plan with the NRC may be incorporated within the provisions of paragraphs 1.1 or 1.2 by either a revision or a PCN to this ISI Plan.

SECTION 3  
CODE CASES

CEP-ISI-001-Rev-18  
Program Section No: CEP-ISI-001  
Revision No.: 10  
Page No.: 3 of 6

**TABLE 3.1**  
**CODE CASES ADOPTED from REGULATORY GUIDE 1.147**

Code Case Number	Title	Reg. Guide 1.147 Revision	NRC Limitations
N-335-1	Rules for Ultrasonic Examination of Similar and Dissimilar Metal Piping Welds	12	None
N-416-2	Alternative Pressure Test Requirements for Welded Repairs or Installation of Replacement Items by Welding, Class 1, 2, and 3	13	1. Hold times contained in IWA-5213 of the 1989 Edition are to be used
N-435-1	Alternative Examination Requirements for Vessels with Wall Thickness 2 in. or Less	14	None
N-460	Alternative Examination Coverage for Class 1 and 2 Welds	14	None
N-461	Alternative Rules for Piping Calibration Block Thickness	12	Thickness measurements and weld joint contour/component must be known and used by the inspector who conducts the UT examination
N-481	Alternative Examination Requirements for Cast Austenitic Pump Casings	14	None
N-496-1	Helical Coil Threaded Inserts, Section XI Division 1	12	None
N-498-4	Alternative Rules for 10-Year Hydrostatic Pressure Testing for Class 1, 2, and 3 Systems	13	Hold times contained in IWA-5213 of the 1989 Edition are to be used
N-508-1	Rotation of Serviced Snubbers and Pressure Relief Valves for the Purposes of Testing	13	None
N-509	Alternative Rules for the Selection and Examination of Class 1, 2, and 3 Integrally Welded Attachments	12	A minimum 10% sample of integrally welded attachment for each item in each Code Class per interval should be examined.

SECTION 3  
CODE CASES

CEP-ISI-001-PEN-18  
Program Section No: CEP-ISI-001  
Revision No.: 10  
Page No.: 4 of 6

Code Case Number	Title	Reg. Guide 1.147 Revision	NRC Limitations
N-513	Evaluation Criteria for Temporary Acceptance of Flaws in Class 3 Piping	13	1. Specific safety factors in paragraph 4.0 must be satisfied. 2. May not be applied to: (a) components other than pipe and tube, (b) Leakage through a gasket, (c) Threaded connections employing nonstructural seal welds for leakage prevention, (d) Degraded socket welds.
N-521	Alternative Rules for Deferral of Inspections of Nozzle-to-Vessel Welds, Inside Radius Sections, and Nozzle-to-Safe End Welds of a Pressurized Water Reactor (PWR) Vessel	12	None
N-522	Pressure Testing of Containment Penetration Piping	14	None
N-523-2	Mechanical Clamping Devices for Class 2 and 3 Piping	14	None
N-524	Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping	12	None
N-532-1	Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000 and IWA-6000	14	The OAR Report must be submitted to the NRC within 90 days of the completion of each refueling outage.
N-546	Alternative Requirements for Qualification of VT-2 Examination Personnel	14	1. This Code case is applicable for inspection purpose only.
N-588	Attenuation to Reference Flaw Orientation of Appendix G for Circumferential Welds in Reactor Vessels	14	None
N-598	Alternative Requirements to Required Percentages of Examinations	14	None
N-616	Alternative Requirements for VT-2 Visual Examination of Classes 1, 2, 3 insulated Pressure Retaining Bolted Connections	14	1. Insulation must be removed for VT-2 examination during the system pressure test for any 17-4 Precipitation Hardening stainless steel stud or bolt aged at a temperature below 1100°F, or 410 stainless steel stud or bolt aged at a



SECTION 3  
CODE CASES

CEP-ISI-001-Pen-18  
 Program Section No: CEP-ISI-001  
 Revision No.: 10  
 Page No.: 5 of 6

Code Case Number	Title	Reg. Guide 1.147 Revision	NRC Limitations
			temperature below 1100°F or with hardness above Rc 30. 2. For A-286 stainless steel studs or bolts, the preload must be verified to be below 100 Ksi or the thermal insulation must be removed and the joint visually examined. 3. Prior to conducting the VT-2 examination of Class 2 and Class 3 components not required to operate during normal plant operation, a 10 minute holding time is required after attaining test pressure. Prior to conducting the VT-2 examination of Class 2 and Class 3 components required to operate during normal plant operation, no holding time is required, provided the system has been in operation for at least 4 hours for insulated components or 10 minutes for non-insulated components.
N-623	Deferral of Inspections of Shell-to-Flange and Head-to-Flange Welds of a Reactor Vessel	14	None
N-624	Successive Inspections	14	None
N-640	Alternative Reference Fracture Toughness for Development of P-T Limit Curves	14	None
N-641	Alternative Pressure-Temperature Relationship and Low Temperature Overpressure Protection System Requirements	14	None
N-663	Alternate Requirements for Classes 1 and 2 Surface Examinations	14	

SECTION 3  
CODE CASES

CEP-SSI-001-PeN-18  
Program Section No: CEP-ISI-001  
Revision No.: 10  
Page No.: 6 of 6

TABLE 3.2

CODE CASES APPROVED THROUGH REQUESTS FOR ALTERNATIVES

Code Case Number	Title	Submittal Letter Number	Approval Letter Number

Table 3.2 Notes:

TABLE 3.3  
CODE CASES ADOPTED from 10 CFR 50.55a

Code Case Number	Title	Notes
	NONE	

Table 3.3 Notes: