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DTE Energy



10CFR50.55a

February 25, 2005
NRC-05-0010

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington D C 20555-0001

Reference: Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43

Subject: Inservice Inspection Summary Report

Enclosed is the Summary Report of the 2004 Inservice Inspection (ISI) activities performed at Detroit Edison Company's Fermi 2 Nuclear Power Plant. This report represents a summary of the ISI activities for the Second Ten-Year Inspection Interval beginning February 17, 2000 through the Tenth Refueling Outage, which was completed on December 3, 2004.

This report is being submitted in accordance with ASME Section XI, 1989 Edition, paragraph IWA-6230, for IWB, IWC, IWD, and IWF inspections, and the 1992 Edition, including the 1992 Addenda, for IWE inspections.

Should you have any questions or require additional information, please contact Mr. Norman K. Peterson, Manager - Nuclear Licensing, at (734) 586-4258.

Sincerely,

William T. O'Connor, Jr.

Enclosure

cc: E. R. Duncan
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Michigan Department of Labor & Economic Growth
Bureau of Construction Codes and Fire Safety - Boiler Division

A047

FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

As required by the Provisions of the ASME Code Rules

1. Owner Detroit Edison Co., 2000 2nd Ave., Detroit, MI 48226
(Name and Address of Owner)
2. Plant Fermi-2 Nuclear Power Plant, 6400 N. Dixie Hwy., Newport MI 48166
(Name and Address of Plant)
3. Plant Unit 2 4. Owner Certificate of Authorization (if required) N/A
5. Commercial Service Date 01-23-88 6. National Board Number for Unit N/A
7. Components Inspected See Program Table in Section 7.0 and 8.0 of attached Summary Report

Component Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
RPV	Combustion Engineering	CE-67211	M345962M	21085
Class 1, 2, & 3 Components (1)	Wisner & Becker Townsend & Bottom	Various	M345962M	N/A
Associated Supports	Chicago Bridge & Iron	Various	M345962M	N/A
	Reactor Controls Inc.	Various	M345962M	N/A
	Walbridge Aldinger Co.	Various	M345962M	N/A
Containment Vessel	Chicago Bridge and Iron	C-4512	N/A	N/A

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this data report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(1) Certificate of Accreditation No. OWN-159 for N-3 Data Report.

ISI SUMMARY REPORT OF THE 2004 INSERVICE INSPECTION

at

Fermi 2 Nuclear Power Plant
6400 N. Dixie Highway
Newport, MI 48166

Detroit Edison Company
2000 2nd Avenue
Detroit, MI 48226

Commercial Service Date: January 23, 1988
NB No. 21085 (RPV)

Michigan Boiler Serial Number
M345962M

To:

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

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TABLE OF CONTENTS

Section	Description	Page(s)
1	INTRODUCTION	1 - 7
2	SUMMARY OF ASME CLASS 1 & 2 AND AUGMENTED EXAMINATIONS	8 - 40
3	SUMMARY OF REACTOR INTERNAL EXAMINATIONS	41 - 49
4	SUMMARY OF COMPONENT SUPPORT EXAMINATIONS	50 - 52
5	ABSTRACT OF CONDITIONS NOTED AND CORRECTIVE ACTIONS TAKEN	53 - 68
	5.1 REFUEL-10	
	5.2 REFUEL-09	
	5.3 REFUEL-08	
	5.4 REFUEL-07	
	5.5 REFUEL-06	
	5.6 REFUEL-05	
	5.7 REFUEL-04	
	5.8 REFUEL-03	
	5.9 REFUEL-02	
	5.10 REFUEL-01	
6	PROGRAM STATUS, ASME SECTION XI CREDIT - IWB, IWC, & IWF	69 - 97
7	UPDATED PROGRAM TABLES	98 - 110
	ENCLOSED PROGRAM TABLES	
	TABLE A – (32 pages)	
	TABLE B – (9 pages)	
8	SUMMARY OF CONTAINMENT INSPECTIONS (IWE)	111 - 121
	ABSTRACT OF CONDITIONS NOTED AND CORRECTIVE ACTIONS TAKEN	
	ENCLOSED PROGRAM TABLES (23 pages)	
9	SECTION XI REPAIR/REPLACEMENT NIS-2 FORMS INDEX	122 - 124
	(Forms Attached – Note NIS-2 forms are double sided)	

SECTION 1
INTRODUCTION

1.0 INTRODUCTION

- 1.1 This report represents a summary of the Inservice Inspection (ISI) activities performed at Detroit Edison Company's Fermi 2 Nuclear Power Plant for the Second Ten-year Inspection Interval beginning February 17, 2000.

Fermi 2 - Program B (ASME Section XI, IWA-2420):

First Inspection Interval (1980-W'81 addenda) (01/23/88 – 02/16/00)*

- | | |
|-----------------------------|------------------------|
| 1. First Inspection Period | (01/23/88 - 06/10/91) |
| a. First Refueling Outage | (09/03/89 - 12/16/89) |
| b. Second Refueling Outage | (03/30/91 - 06/10/91) |
| 2. Second Inspection Period | (06/11/91 - 01/03/95) |
| a. Third Refueling Outage | (09/12/92 - 11/07/92) |
| b. Fourth Refueling Outage | (04/12/94 - 01/03/95)* |
| 3. Third Inspection Period | (01/03/95 - 12/31/98)* |
| a. Fifth Refueling Outage | (09/27/96 - 01/03/97) |
| b. Sixth Refueling Outage | (09/07/98 - 10/29/98) |

Second Inspection Interval (1989 Edition) (02/17/00 – 02/17/10)*

- | | |
|-----------------------------|-----------------------|
| 1. First Inspection Period | (02/17/00 – 03/27/03) |
| a. Seventh Refueling Outage | (04/01/00 – 05/23/00) |
| b. Eighth Refueling Outage | (10/22/01 – 11/30/01) |
| 2. Second Inspection Period | (03/28/03 – 10/17/05) |
| a. Ninth Refueling Outage | (03/28/03 - 05/10/03) |
| b. Tenth Refueling Outage | (11/06/04 - 12/03/04) |

- * Fermi 2 was in an extended outage that began on 12/25/93 following a Turbine/Generator failure and ended with the closing of the output breaker on 01/18/95. Because of the extended shutdown, the first inspection interval for Fermi 2 was extended by one additional year to 2/16/2000 as provided for in IWA-2430. The second inspection interval may be shortened by one year to maintain the interval pattern as required in IWA-2430(d).

- 1.2 Examinations were performed to satisfy the requirements (or portions thereof) of the following, as applicable:
- American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Division 1, "Rules for Inservice Inspection of Nuclear Power Plant Components," Inspection Program B as listed in the following Table A and Section 6 of this report.
 - NUREG-0313, Revision 2, Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping.
 - BWRVIP-75, Technical Basis for Revision of NRC Generic Letter 88-01 Inspection Schedules.
 - Fermi 2 Technical Requirements Manual TR 5.1.1, Augmented Inservice Inspection Program for Snubbers.
 - Augmented Inspection of selected components in accordance with the requirements as listed in the following Table A and Section 6 of this report.
 - BWROG NUREG-0619 Alternate Feedwater Nozzle Inspection Requirements, GE-NE-523-22-0292.

TABLE A

REQUIREMENT	DESCRIPTION	EXAM METHOD
<u>VESSELS</u>		
Sect. XI, 1989 Edition Appendix VIII, 1995 Edition, 1996 Addenda for UT as applicable	Pressure Vessel (B-A, B-D, B-H, C-A, C-B)	Surface and/or Automated Volumetric or Manual Volumetric
	Reactor Vessel Interior and welded attachments or core support structures (B-N-1, B-N-2)	Visual Examination
	Integral attachments for vessels (B-H, C-C)	Surface and/or Volumetric
	Pressure retaining bolting >2" diameter (B-G-1, C-D)	Surface and/or Volumetric
	Pressure retaining welds in CRD housing (B-O)	Surface and/or Volumetric
Sect. XI, 1992 Edition, 92 Addenda	Containment Inspection (IWE)	Visual
<u>PIPING</u>		
Sect. XI, 1989 Edition Appendix VIII, 1995 Edition, 1996 Addenda for UT as applicable	Pressure retaining Piping Welds (B-F, B-J, C-F)	Surface and/or Manual Volumetric or Automated Volumetric
	Integral attachment for piping pumps and valves (B-K-1, C-C, Code Case N-509)	Surface and/or Volumetric
<u>OTHER</u>		
1989 Edition	Pressure retaining partial penetration welds (B-E)	Visual Examination
	Pressure retaining bolting <2" diameter (B-G-2)	Visual Examination
	Pressure retaining bolting >2" diameter (B-G-1)	Visual Examination and /or Volumetric
	Pressure boundary component supports (F-A, Code Case N491-1)	Visual Examination
	Pump and Valve Internal Surfaces (B-L-2, B-M-2)	Visual Examination

TABLE A (continued)

REQUIREMENT	DESCRIPTION	EXAM METHOD
<u>PRESSURE TEST</u>		
1989 Edition	Interval 2 Pressure Testing (B-P, C-H, and D-B, Code Case N-416-1, Code Case N-498-1)	Visual Examination
<u>AUGMENTED</u>		
NUREG-0313, Rev. 2 and BWRVIP-75	Pressure retaining piping welds (B-F, B-J)	Manual Volumetric and/or Automated Volumetric
	Pressure retaining piping welds (Nonclassified)	Manual Volumetric
BWROG NUREG-0619 Alternative Feedwater Nozzle Inspections	Feedwater Nozzle Inner Blend Radii (GE-NE-523-A71-594)	Manual or Automated Volumetric - from outside surface
Fermi 2 Technical Requirements Manual TR 5.1.1	Safety Related Snubbers	Visual Examination
	Sampling of Safety Related Snubbers	Functional Testing
IE Notice 93-079	Core Shroud	Visual Examination
Generic Letter 94-03	Core Shroud Welds	Visual Examination
IEB 80-13	Core Spray and Spargers	Visual Examination
Vendor Recommendations		
SIL No. 459	Byron Jackson Recirculation Pump Shaft Cracking	Visual Examination
SIL No. 409	Incore Dry Tube Cracks	Remote Visual Examination
RICSIL No. 073	Incore Dry Tube Cracks	Remote Visual Examination
SIL No. 420	Jet Pump Sensing Lines and Support Brackets	Remote Visual Examination
SIL No. 433	Shroud Head Bolts	Remote Visual Examination

TABLE A (continued)

REQUIREMENT	DESCRIPTION	EXAM METHOD
<u>AUGMENTED (continued)</u>		
SIL No. 462	Access Hole Cover Cracking	Remote Visual Examination
SIL No. 465	Jet Pump Inlet Mixer	Remote Visual Examination
SIL No. 474	Steam Dryer Channel Cracking	Remote Visual Examination
SIL No. 551	Jet Pump Riser Bracket	Remote Visual Examination
SIL No. 554	Top Guide Beams	Remote Visual Examination
SIL No. 559	Top Guide Inspections	Remote Visual Examination
SIL No. 574	Jet Pump Adjusting Screw Tack Welds	Remote Visual Examination
SIL No. 588, Rev. 1	Top Guide and Core Plate Cracking	Remote Visual Examination
SIL No. 629	Inlet Mixer Wedge Damage in BWR Jet Pump Assemblies	Remote Visual Examination
SIL No. 644, Rev. 0, Supplement 1 and SIL No. 644, Rev.1	BWR Steam Dryer Integrity	Remote Visual Inspection
BWRVIP-01/76 BWR Core Shroud Inspection and Flaw Evaluation Guidelines	Core Shroud	Remote Methods as in BWRVIP-03
BWRVIP-03 Reactor Vessel and Internal Examination Guidelines	Reactor Vessel Internals Components	Remote Visual Examination, Ultrasonic and Eddy Current
BWRVIP-07 Guidelines for Reinspection of BWR Core Shrouds	Core Shrouds	Remote Visual and Ultrasonic
BWRVIP-18 Core Spray Inspection and Evaluation (I&E) Guidelines	Core Spray Internals Piping and Spargers	Remote Visual Examination

TABLE A (continued)

REQUIREMENT	DESCRIPTION	EXAM METHOD
<u>AUGMENTED (continued)</u>		
BWRVIP-25 Core Plate I&E Guidelines	Core Plate Components	Remote Visual Examination
BWRVIP-26 Top Guide I&E Guidelines	Top Guide Components	Remote Visual Examination
BWRVIP-27A BWR Standby Liquid Control System / Core Plate Differential Pressure I & E Guidelines	Core Differential Pressure and SLC Line Dissimilar Metal Nozzle Welds	Direct Visual Bare Metal VT-2
BWRVIP-38 Shroud Support I&E Guidelines	Shroud Support Components	Remote Visual Examination
BWRVIP-41 Jet Pump Assembly I&E Guidelines	Jet Pump Components	Remote Visual Examination
BWRVIP-47 BWR Lower Plenum I&E Guidelines	Incore Guide/Dry Tubes	Remote Visual Examination
BWVRIP-48 Vessel ID Attachment Weld I&E Guidelines	Vessel Internal Attachments	Remote Visual Examination
BWRVIP-49 Instrument Penetration I&E Guidelines	Instrument Penetrations	Remote Visual Examination

SECTION 2

SUMMARY OF ASME CLASS 1 & 2 AND AUGMENTED EXAMINATIONS

2.1 Interval 2, Period 2, RF10 Examinations

RF10 EXAM DATA BASE												
SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SIIT	DATA SIIT	Report	Loc/Az/EI
B-A Reactor Vessel												
15-308A	RPV Shell Welds Shell Longitudinal Weld	5360-5	UT	7	2667-62	11/21/04	11/26/04	11/27/04	VES.62.IN	15-308a.1 15 15-308a.1 thru 14 15-308a.r.1 thru 13	RF-10-09	DW,84,620'
15-308B	Ind. 124 Successive Exam	5360-5	UT	7	2667-62	11/12/04	11/19/04	11/20/04	VES.60.IN	15-308b.1.9	RF-10-10	DW,172,620'
2-307B	Shell Longitudinal Weld	5360-5	UT	7	2667-60	11/20/04	11/27/04	11/27/04	VES.62.IN	2-307b.l.1 thru 11 2-307b.r.1 thru 12	RF-10-12	DW,104,610'
2-308A	Shell Longitudinal Weld	5360-5	UT	7	2667-60	11/20/04	11/27/04	11/27/04	VES.62.IN	2-308a.l.1 thru 7 2-308a.r.1 thru 5	RF-10-13	DW,60,646'
1-319E	Closure Head Meridional	5360-5	UT	6	2667-58	11/8/04	11/24/04	11/24/04	N/A	UT-021, 22, 23, 24, 26, 27, 28, 90	RF-10-04	Refuel Floor
1-319F	Closure Head Meridional	5360-5	UT	6	2667-58	11/10/04	11/24/04	11/24/04	N/A	UT-016, 17, 18, 19	RF-10-05	Refuel Floor
1-306B	Bottom Head Meridional	5360-5	UT	6	2667-59	11/17/04	11/22/04	11/27/04	N/A	UT-069, 70	RF-10-02	DWUV,40,604'
1-306C	Bottom Head Meridional	5360-5	UT	6	2667-59	11/16/04	11/24/04	11/27/04	N/A	UT-073, 74	RF-10-03	DWUV,77,604'
3-319	Head-to-Flange Weld	5360-5	UT	6	2667-58	11/14/04	11/26/04	11/27/04	N/A	UT-043, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57	RF-10-16	Refuel Floor
3-319	Head-to-Flange Weld	5360-5	MT	2	N/A	11/17/04	11/26/04	11/27/04	N/A	MT-011, 031	RF-10-16	Refuel Floor
6-306	Circumferential Bottom Head	5360-5	UT	6	2667-59	11/17/04	11/24/04	11/27/04	N/A	UT-061, 62, 63, 64	RF-10-17	DWUV,604'
B-D Reactor Vessel												
13-314C	Nozzle to Vessel Welds Recirc Inlet Nozzle	5361-5	UT	8	2667-60	11/22/04	11/25/04	11/27/04	NOZ.60.IN	13-314c.tl.1 thru 5, 13- 314c.pl.1 thru 3, 13- 314c.p2.1 thru 3, 13- 314c.70rl.1 & 2	RF-10-07	DW,90,615'
19-314A	Jet Pump Inst. Nozzle	5361-5	UT	6 & 21	2667-60	11/20/04	11/24/04	11/27/04	N/A	UT-086, 87, 88	RF-10-11	DW,97,615'
14-316 A	C.S. Nozzle	5361-5	UT	8	2667-62	11/24/04	11/25/04	11/27/04	NOZ.60.IN	14-316a.tl.1 & 2, 14- 316apl.1 & 2, 14-316ap2.1 & 2, 14-316a70rl.1, 2, 3	RF-10-08	DW,120,641'
2-318	Head Vent Nozzle	5361-5	UT	6 & 21	2667-58	11/15/04	11/24/04	11/27/04	N/A	UT-058, 59, 60 UT-091, 92	RF-10-14	Refuel Floor
B-D Reactor Vessel												
13-314C IRS	Nozzle Inner Bore Region Recirc Inlet Nozzle	5361-5	VT	15	1-mil wire	*Completed In vessel VT's Under Job 1109040328					IVVI	Inness,90,
19-314A IRS	Jet Pump Inst. Nozzle	5361-5	VT	15-Jan	1-mil wire	*	*	*	*	*	IVVI	Inness,97

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
2-318 IRS	Head Vent Nozzle	5361-5	VT-1	15	VT-1 Compar ator	*	*	*	*	*	IVVI	Refuel Floor
B-F Class 1-Piping	RIISI Welds											
N-5A	CS Noz to SE (IGSCC,CC)	3053-5	UT	10 & 22	CS44/IN 45	11/12/04	11/21/04	11/23/04	APC-001, 2, 3, 4, 5, 6	APD-003, UT-089	RF-10-55	DW,120,641'
SW-E21-3053-4W0X	CS Safe-End to Ext. (IGSCC)3053-5	3053-5	UT	10 & 22	CS44/IN 45	11/11/04	11/22/04	11/27/04	APC-026, 27, 28, 29, 30	APD-002	RF-10-61	DW,120,641'
101-304-E	RRI Noz to SE (IGSCC)	5358-5	UT	10 & 22	SS- 56/CSC L-54	11/14/04	11/19	11/24/04	APC-007, 8, 9, 10, 11, 12	APD-004	RF-10-01	DW,150,615'
B-J Class 1-Piping	RIISI Welds											
FW-PS-2-C3	Main Steam- Loop C 26" Pipe to Elbow	5354-5	UT	3	CS-5	11/12/04	11/14/04	11/16/04	N/A	UT-011	RF-10-50	DW,260,212'
SW-PS-2-C3-A	Main Steam- Loop C 26" Elbow to Pipe	5354-5	UT	3	CS-5	11/11/04	11/14/04	11/18/04	N/A	UT-012	RF-10-78	DW,260,608'
SW-PS-2-C3-C	Main Steam- Loop C 8" Sweepolet to Pipe	5354-5	UT	3	CS-20	11/10/04	11/19/04	11/21/04	N/A	UT-010	RF-10-79	DW,282,609'
SW-PS-2-C3-D	Main Steam- Loop C 8" Pipe to Flange	5354-5	UT	3	CS-20	11/9/04	11/13/04	11/20/04	N/A	UT-009	RF-10-80	DW,282,610'
FW-G33-3096-8W9	RWCU 6" Pipe to Tee	5351-5	UT	3	CS-22	11/8/04	11/13/04	11/27/04	N/A	UT-007	RF-10-44	DW,240,572'
FW-G33-3096-8W11	RWCU 6" Pipe to Tee	5351-5	UT	3	CS-22	11/8/04	11/13/04	11/16/04	N/A	UT-006	RF-10-43	DW,250,572'
FW-G33-3096-9WF1	RWCU 6" Elbow to Pipe	5351-5	UT	3	CS-22	11/9/04	11/14/04	11/27/04	N/A	UT-008	RF-10-45	DW,140,572'
SW-N21-2336-13WC	Feedwater 20" Elbow to Tee	3537-5	UT	3	CS-11	11/12/04	11/13/04	11/27/04	N/A	UT-020	RF-10-70	DW,25,608
FW-N21-2336-13W14	Feedwater 12" Tee to Elbow	3537-5	UT	3	CS-15	11/12/04	11/14/04	11/27/04	N/A	UT-014	RF-10-48	DW,30,611'
FW-N21-2336-14WF1	Feedwater 12" Pipe to Elbow	3537-5	UT	3	CS-15	11/11/04	11/17/04	11/18/04	N/A	UT-013	RF-10-49	DW,30,614
SW-N21-2336-13WE	Feedwater 20" Tee to Pipe	3537-5	UT	3	CS-11	11/16/04	11/20/04	11/21/04	N/A	UT-040	RF-10-71	DW,35,608

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHIT	DATA SHIT	Report	Loc/Az/EI
FW-RD-2-B19	Reactor Recirc - 12" Pipe to Safe-end (IGSCC, CRC)	5358-5	UT	11 & 22	SS-17	11/11/04	11/23/04	11/24/04	APC-013, 014, 015, 016, 017	APD-001	RF-10-51	DW,150,615
B-G-1 Bolting	Greater Than 2"											
326-01 (Closure Studs)	1/3 of locations (1-22)	5362-5	UT	5	RPV Stud Cal	11/7/04	11/13/04	11/16	N/A	UT-004, 5	RF-10-15	Refuel Floor
Base Scope												
B-G-2 Bolting	2" and Less											
RRC Pump A Seal Bolts	Main RR Pump Seal Bolting	5365-5	VT-1	16	N/A	11/10/04	11/13/04	11/27/04	N/A	VT-012	RF-10-60	DW,315,580'
B21-F028A-VBB	MS Valve Bonnet Bolting	5352-5	VT-1	16	N/A	11/10/04	11/13/04	11/27/04	N/A	VT-010	RF-10-23	Stm,5,589'
FBC-B21-5353-01F	SRV Flange Bolting	5353-5	VT-1	16	N/A	11/9/04	11/13/04	11/27/04	N/A	VT-008	RF-10-31	DW,78,612'
B21-F013F-VBB	SRV Body to Bonnet Bolting	5353-5	VT-1	16	N/A	11/9/04	11/13/04	11/27/04	N/A	VT-007	RF-10-21	DW,78,612'
FBC-B21-5353-01C	SRV Flange Bolting	5353-5	VT-1	16	N/A	11/9/04	11/13/04	11/27/04	N/A	VT-009	RF-10-30	DW,46,612'
B21-F013C-VBB	SRV Body to Bonnet Bolting	5353-5	VT-1	16	N/A	11/9/04	11/13/04	11/27/04	N/A	VT-006	RF-10-19	DW,46,612'
FBC-B21-5354-01E	SRV Flange Bolting	5354-5	VT-1	16	N/A	11/11/04	11/13/04	11/24/04	N/A	VT-014	RF-10-32	DW,290,612
B21-F013E-VBB	SRV Body to Bonnet Bolting	5353-5	VT-1	16	N/A	11/11/04	11/13/04	11/27/04	N/A	VT-013	RF-10-20	DW,290,612
B21-F022C-VBB	MS Valve Bonnet Bolting	5354-5	VT-1	16	N/A	11/12/04	11/17/04	11/24/04	N/A	VT-015	RF-10-22	DW,343,590'
E11-F060B-VBB	RHR Valve Bonnet Bolting	2327-5	VT-1	16	N/A	11/13/04	11/17/04	11/24/04	N/A	VT-016	RF-10-28	DW,90,600'
E41-F006-VBB	HPCI Valve Bonnet Bolting	3537-5	VT-1	16	N/A	11/10/04	11/13/04	11/24/04	N/A	VT-011	RF-10-29	STM,G12,587'
G33-F100-VBB	RWCU Valve Bonnet Bolting	5351-5	VT-1	16	N/A	11/14/04	11/17/04	11/27/04	N/A	VT-017	RF-10-53	DW,320,572'
G33-F220-VBB	RWCU Valve Bonnet Bolting	3536-5	VT-1	16	N/A	11/15/04	11/17/04	11/27/04	N/A	VT-018	RF-10-54	STM,F12,586
B-G-2 Emergent	2" and Less											
CRD Flange Bolts	When Disassembled	N/A	VT-1	16	N/A	11/18/04	11/25/04	11/27/04	N/A	N/A	RF-10-25	DW,UV
CRD Bolting	New Bolting	N/A	VT-1	16	N/A	11/4/04	11/5/04	11/24/04	N/A	VT-005	RF-10-24	As requested
B-II Integral Attachments	RPV Attachment Welds											
8-319-C	Top Head Lifting Lug	5360-5	MT	2	N/A	11/8/04	11/13/04	11/27/04	N/A	MT-010	RF-10-18	Refuel Floor
B-K Integral Attachments Piping Attachment Welds	RPV Attachment Welds											
SW-N21-2336-20WB	Feedwater Loop B	3537-5	MT	2	N/A	11/13/04	11/17/04	11/27/04	N/A	MT-017	RF-10-72	DW,150,613'
SW-N21-2336-20WC	Feedwater Loop B	3537-5	MT	2	N/A	11/13/04	11/17/04	11/27/04	N/A	MT-018	RF-10-73	DW,150,613'

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
SW-N21-2336-20WD	Feedwater Loop B	3537-5	MT	2	N/A	11/13/04	11/17/04	11/27/04	N/A	MT-019	RF-10-74	DW,150,613'
SW-N21-2336-20WE	Feedwater Loop B	3537-5	MT	2	N/A	11/13/04	11/17/04	11/27/04	N/A	MT-020	RF-10-75	DW,150,613'
B-N-1 Vessel Interior Sample Holders	RPV Attachment Welds Vessel Interior			VT-3	15	N/A	*Completed In vessel VT's Under Job 1109040328				IVVI	
B-N-2 Vessel Interior Surveillance Specimen Bracket	Interior Attachment Weld			VT-1	15	N/A	*Completed In vessel VT's Under Job 1109040328				IVVI	
B-O Peripheral CRD	Housing Welds											
CRDH-X02-Y31-W1	CRD Housing Tube to Flange	5363-5	PT	1	N/A	11/13/04	11/17/04	11/27/04	N/A	PT-004	RF-10-26	DW, UV
CRDH-X02-Y31-W2	CRD Housing Tube to Tube	5363-5	PT	1	N/A	11/12/04	11/19/04	11/23/04	N/A	PT-003	RF-10-27	

RII01EXAM DATA BASE

Class 2

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
C-C Integral Attachment	Lug Attachment Welds											
PSFW-E41-3167-1WE	HPCI 14" Pipe Lug	3167-5	MT	2	N/A	11/5/04	11/14/04	11/17/04	N/A	MT-005	RF-10-56	HPCI, G10,546'
PSFW-E41-3167-1WF	HPCI 14" Pipe Lug	3167-5	MT	2	N/A	11/5/04	11/14/04	11/17/04	N/A	MT-006	RF-10-57	
PSFW-E41-3167-1WG	HPCI 14" Pipe Lug	3167-5	MT	2	N/A	11/5/04	11/14/04	11/17/04	N/A	MT-007	RF-10-58	
PSFW-E41-3167-1WH	HPCI 14" Pipe Lug	3167-5	MT	2	N/A	11/5/04	11/14/04	11/17/04	N/A	MT-008	RF-10-59	
C-F-1 Augmented	NRC Commitment											
FW-C41-2979-L	SLC 2" Pipe to Elbow	2979-5	PT	1	N/A	11/2/04	11/19/04	11/27/04	N/A	PT-001	RF-10-34	RB2,D11,635'
FW-C41-2979-11S12	SLC 2" Pipe to Elbow	2979-5	PT	1	N/A	11/2/04	11/19/04	11/27/04	N/A	PT-002	RF-10-33	RB2, C11,630'
C-R-2 Piping	Circumferential Weld											
SW-E11-3146-6WE	RHR 24" Pipe to Tee	3146-5	MT	2	N/A	11/14/04	11/21/04	11/22/04	N/A	MT-023	RF-10-63	Tor,B12,575'
SW-E11-3146-6WE		3146-5	UT	3	CS-42	11/14/04	11/21/04	11/22/04	N/A	UT-032	RF-10-63	
FW-E11-3151-7W11	RHR 20" Tee to Pipe	3151-5	MT	2	N/A	11/11/04	11/19/04	11/27/04	N/A	MT-012	RF-10-35	Tor,B12,575'
FW-E11-3151-7W11		3151-5	UT	3	CS-42	11/12/04	11/19/04	11/27/04	N/A	UT-015	RF-10-35	
SW-E11-3161-4WB	RHR 18" Elbow to Pipe	3161-5	VT-1	17	N/A	11/2/04	11/13/04	11/17/04	N/A	VT-001	RF-10-64	Tor,B11,575'
SW-G41-3669-3WB	RHR-FPC 8" Elbow to Pipe	3669-5	MT	2	N/A	11/3/04	11/14/04	11/17/04	N/A	MT-002	RF-10-67	RB1,B11,585'
FW-E11-4612-4W5	RHR 6" Pipe to Elbow	4612-5	VT-1	17	N/A	11/1/04	11/13/04	11/27/04	N/A	VT-002	RF-10-36	RB1,B17,585'
FW-E11-4612-7W8	RHR 6" Elbow to Pipe	4612-5	VT-1	17	N/A	11/1/04	11/13/04	11/27/04	N/A	VT-003	RF-10-37	Tor,B15,574'
FW-E11-4612-8WF3	RHR 6" Elbow to Pipe	4612-5	VT-1	17	N/A	11/1/04	11/13/04	11/18/04	N/A	VT-004	RF-10-38	Tor,B15,574'
FW-E21-3144-0W4	CS 12" Pipe to Valve	3144-5	MT	2	N/A	11/14/04	11/21/04	11/23/04	N/A	MT-022	RF-10-39	RBSB,F16,540'
FW-E21-3144-0W4		3144-5	UT	3	PDI-Alt-CS-1	11/14/04	11/21/04	11/23/04	N/A	UT-029, 30, 31	RF-10-39	
FW-E21-3145-11WO	CS 10" Pipe to Weldolet	3145-5	MT	2	N/A	11/3/04	11/19/04	11/21/04	N/A	MT-001	RF-10-40	NE Quad,578'
SW-E21-3147-15WG	CS 14" Elbow to Pipe	3147-5	MT	2	N/A	11/4/04	11/13/04	11/20/04	N/A	MT-004	RF-10-65	RB1,D11,601'
SW-E21-3147-15WG		3147-5	UT	3	PDI-Alt-CS-1	11/5/04	11/13/04	11/20/04	N/A	UT-001,2,3	RF-10-65	
SW-E41-3162-1WU	HPCI 20" Pipe to Elbow	3162-5	MT	2	N/A	11/15/04	11/23/04	11/27/04	N/A	MT-026	RF-10-66	HPCI, G10,548'
SW-E41-3162-1WU		3162-5	UT	3	PDI-Alt-CS-1	11/15/04	11/23/04	11/27/04	N/A	UT-036, 37, 38	RF-10-66	
FW-E41-3162-1W2	HPCI 20" Elbow to Pipe	3162-5	MT	2	N/A	11/15/04	11/19/04	11/21/04	N/A	MT-025	RF-10-41	HPCI,G10,550'

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SIIT	DATA SIIT	Report	Loc/Az/EI
FW-E41-3162-1W2		3162-5	UT	3	PDI-Alt- CS-1	11/15/04	11/19/04	11/21/04	N/A	UT-033, 34, 35	RF-10-41	HPCI Rm
SW-E41-3162-2WC	HPCI 20" Elbow to Pipe	3162-5	MT	2	N/A	11/23/04	11/23/04	11/24/04	N/A	MT-042, 048	RF-10-96	HPCI Rm
SW-E41-3162-2WC		3162-5	UT	3	PDI-Alt- CS-1	11/23/04	11/23/04	11/24/04	N/A	UT-093, 94	RF-10-96	
FW-E41-3172-0W1	HPCI 10" Valve to Pipe	3172-5	MT	2	N/A	11/17/04	11/20/04	11/21/04	N/A	MT-029	RF-10-42	Stn,E12,586'
FW-E41-3172-0W1		3172-5	UT	3	CS-18	11/17/04	11/20/04	11/21/04	N/A	UT-042	RF-10-42	
SW-N30-3258-1WJ	MS 26" Pipe to 24" Reducer	3258-5	MT	2	N/A	11/17/04	11/21/04	11/27/04	N/A	MT-030	RF-10-76	Stn,F11,589'
SW-N30-3258-1WJ		3258-5	UT	3	CS-5	11/17/04	11/21/04	11/27/04	N/A	UT-041	RF-10-76	
FW-T48-04-2095-7W8	CGC 6" Elbow to Pipe	2095-5	MT	2	N/A	11/3/04	11/14/04	11/17/04	N/A	MT-003	RF-10-52	RB2,A12, 625'
SW-T48-04-2097-18WC	CGC 8" Expander to Pipe	2097-5	MT	2	N/A	11/5/04	11/14/04	11/17/04	N/A	MT-009	RF-10-81	RB1,C13,587'
SW-N30-3258-1WJLU	Intersecting Long Seam Weld	3258-5	MT/UT	2, 3		11/17/04	11/21/04	11/27/04	N/A	MT-030, UT-041	RF-10-77	Stn,F11,589'
C-R-2 Piping	Branch Connections											
SW-E11-3146-SWM	RHR 24" Pipe to 12" Weldolet	3146-5	MT	2	N/A	11/18/04	11/21/04	11/22/04	N/A	MT-032	RF-10-62	Tor, B13 ,575'

RIIIO EXAM DATA BASE
Augmented Exams

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
ANSI B31.1	GL 88-01 Category D		Vol.									
FW-N20-3107-0W1	FWII 5N Upper Safe-end to El 3107-1		UT	4	SSCL-88	11/19/04	11/22/04	11/23/04	N/A	UT-080, 81, 82	RF-10-47	TB2,R12,624'
SW-N20-03-B013-BWSE	FWII 5N Upper Nozz to Safe-end 3107-1		UT	4	SSCL-88	11/19/04	11/22/04	11/22/04	N/A	UT-077, 78, 79	RF-10-69	TB2,R12,624'
FW-N20-3105-24W0	FWII 5N Lower Safe-end to El 3105-1		UT	4	SSCL-88	11/19/04	11/22/04	11/22/04	N/A	UT-083, 84, 85	RF-10-46	TB2,R12,615'
SW-N20-03-B013-AWSE	FWII 5N Lower Nozz to Safe-end 3105-1		UT	4	SSCL-88	11/19/04	11/22/04	11/22/04	N/A	UT-074, 75, 76	RF-10-68	TB2,R12,615'

Procedure	Reference Code	Method
39.NDE.001	1	PT
39.NDE.002	2	MT
PDI-UT-1	3	PDI CS
PDI-UT-2	4	PDI SS
PDI-UT-5	5	PDI Bolting
GE-UT-300	6	PDI Manual RPV
GE-UT-704	7	GERIS
GE-UT-705	8	GERIS
GE-UT-308	9	Flange Threads
GE-UT-209	10	Auto N-SE
GE-UT-245	11	Auto CRC UT
GE-UT-504	12	JPB
PDI-UT-10	13	Manual DM
43.000.03/04	14	VT-3 Snubbers & Supports
43.000.017	15	IVVI
43.000.014	16	VT-1 Bolting
43.000.019	17	Primary Cont
43.000.013	18	Snubbers
39.NDE.015	19	Longseams
GE-UT-309	20	Inner Radius Sizing
GE-UT-311	21	Manual Inner Radius
ISI Prog. Part E. Att. I	22	RIISI Coverage

2.2 Interval 2, Period 2, RF09 Examinations

RF09 EXAM DATA BASE												
SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD.	COMP	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
B-A Reactor Vessel			Shell & Head Welds			Vol.						
1-306J	Bottom Head Meridional	5360-5	UT	6	2667-59	4/6	4/8	4/16	UT-042 thru 045	UT-042 thru 045	RF-09-01	Bio, 300,604'
1-319D	Closure Head Meridional	5360-5	UT	6	2667-58	3/31	4/2	4/11	UT-016 thru 018	UT-016 thru 018	RF-09-02	Refuel Floor
15-308B	Shell Longitudinal Weld	5360-5	UT	7	2667-62	4/4	4/10	4/15	VES.60.IN	186 Pages	RF-09-05	DW,172,620'
2-307C	Shell Longitudinal Weld	5360-5	UT	7	2667-60	4/4	4/7	4/14	VES.60.IN	76 Pages	RF-09-08	DW,218,610'
2-308B	Shell Longitudinal Weld	5360-5	UT	7	2667-60	4/5	4/9	4/14	VES.60.IN	27 Pages	RF-09-09	DW,180,646'
4-319	Closure Head Circ Weld	5360-5	UT	6	2667-58	4/9	4/10	4/16	UT-048 thru 050, UT-063 thru 069	UT-048 thru 050, UT-063 thru 069	RF-09-13	Refuel Floor
2-307A	Shell Longitudinal Weld	5360-5	UT	7	2667-60	4/8	4/12	4/14	VES.60.IN	137 Pages	RF-09-106	DW,340,610'
B-D Reactor Vessel			Nozzle to Vessel Welds			Vol.						
13-314E	Recirc Inlet Nozzle	5361-5	UT	8	2667-60	4/6	4/11	4/14	NOZ.60.IN	34 Pages	RF-09-03	DW,150,615'
13-314F	Recirc Inlet Nozzle	5361-5	UT	8	2667-60	4/7	4/10	4/14	NOZ.60.IN	50 Pages	RF-09-04	DW,210,615' Auto UT
15-315	CRD Return Nozzle	5361-5	UT	6 & 20	2667-60	4/8	4/9	4/14	UT-051 thru 055	UT-051 thru 055	RF-09-06	DW,145,638'
4-316C	Feedwater Nozzle	5361-5	UT	8	2667-60	4/7	4/11	4/14	NOZ.60.IN	33 Pages	RF-09-12	DW,150,642'
B-D Reactor Vessel			Nozzle Inner Bore Region			Vol.						
13-314D IRS	Recirc Inlet Nozzle	5361-5	VT	15	1-mil wire	*4/16	*4/27	*5/13	N/A	N/A	N/A	Invers,120,
13-314E IRS	Recirc Inlet Nozzle	5361-5	VT	15	1-mil wire	*4/18	*4/27	*5/13	N/A	N/A	N/A	Invers,150

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHIT	DATA SHIT	Report	Loc/Az/EI
13-314F IRS	Recirc Inlet Nozzle	5361-5	VT	15	1-mil wire	*4/18	*4/27	*5/13	N/A	N/A	N/A	Inve,210
13-314G IRS	Recirc Inlet Nozzle	5361-5	VT	15	1-mil wire	*4/16	*4/27	*5/13	N/A	N/A	N/A	Inve,240
13-314K IRS	Recirc Inlet Nozzle	5361-5	VT	15	1-mil wire	*4/16	*4/27	5/13*	N/A	N/A	N/A	Inve,330
B-I ² Class 1-Piping	RIISI Welds		Vol.									
N-9	CRD Return Cap (IGSCC)	5361-5	UT	13	CS-48, INC-49	4/8	4/14	4/16	UT-059 thru 062	UT-059 thru 062	RF-09-47	DW,145,638'
2-303G	RR1 Noz to SE (IGSCC)	5356-5	UT	10	SS-56/CSCL-54	4/2	4/5	4/11	APC-001 thru 006	APD-001	RF-09-07	DW,240,615'
B-J Class 1-Piping	RIISI Welds		Vol.									
FW-RD-2-A16	B31 12" SE-P (IGSCC,CRC)	5356-5	UT	10	SS-17	4/3	4/5	4/14	APC-008 thru 011	APD-002	RF-09-44	DW,240,615
SW-RS-2-A2-W1	B31 28" Pipe-El (IGSCC)	5357-5	UT	4	SS-3	4/4	4/4	4/13	UT-036,UT-037	UT-036,UT-037	RF-09-69	DW,0,578'
FW-E11-2299-2WF3	RIIR 20" Tee-Pipe	2299-5	UT	3	CS-12	4/5	4/5	4/13	UT-040	UT-040	RF-09-29	DW,175,597
SW-E21-3053-3WN	Core Spray 12" El-Pipe	3053-5	UT	3	CS-15	4/8	4/10	4/15	UT-071	UT-071	RF-09-57	DW,120,637'
SW-E21-3053-3WP	Core Spray 12" Pipe-El	3053-5	UT	3	CS-15	4/8	4/10	4/15	UT-070	UT-070	RF-09-58	DW,120,636'
FW-E51-2192-1W2	RCIC 6" El-Pipe	2192-5	UT	3	CS-22	4/8	4/10	4/16	UT-056 thru 058	UT-056 thru 058	RF-09-40	DW,42,598'
FW-E51-2192-2W3	RCIC 6" Pipe-E.	2192-5	UT	3	CS-22	4/11	4/12	4/15	UT-073 thru 075	UT-073 thru 075	RF-09-60	DW,355,598'
SW-N21-2336-1WD	RCIC 20" Sweep-Pipe	3536-5	UT	3	CS-12	4/2	4/3	4/16	UT-029,UT-030	UT-029,UT-030	RF-09-63	Stn,10,586'
SW-N21-2336-1WU	RCIC 20" Pipe-Tee	3536-5	UT	3	CS-12	4/2	4/3	4/6	UT-031	UT-031	RF-09-65	Stn,10,590'
SW-N21-2336-1WL	FW (TASCS) 20" Tee-Pipe	3536-5	UT	3	CS-12	4/3	4/3	4/12	UT-025	UT-025	RF-09-64	Stn,10,594'
SW-N21-2336-3WC	RCIC 20" El-Tee	3536-5	UT	3	CS-12	4/5	4/6	4/13	UT-038	UT-038	RF-09-66	DW,330,608'
FW-N21-2336-3W4	RCIC 12" Tee-El	3536-5	UT	3	CS-15	4/5	4/6	4/14	UT-039	UT-039	RF-09-43	DW,330,608'

Detroit Edison Co., 2000 2nd Ave., Detroit, MI 48226
Fermi 2 Nuclear Power Plant, 6400 N. Dixie Hwy., Newport, MI 48166
Commercial Service Date: 1-23-88 NB No. 21085 (RPV)

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
B-G-1 Bolting	Greater Than 2"											
326-02 (Closure Nuts)	1/3 of locations (1-22)	5362-5	MT	2	N/A	4/5	4/5	4/13	N/A	MT-013,VT-029	RF-09-10	Refuel Floor
Threads in Flange	1/3 of locations (1-22)	5362-5	UT	9	RPV & CSCL-52	3/31	4/2	4/4	UT-015	UT-015	RF-09-70	RPV Cavity
326-03 (Closure Washers)	1/3 of locations (1-22)	5362-5	VT-1	16	N/A	4/5	4/5	4/14	N/A	VT-028	RF-09-11	Refuel Floor
Base Scope												
B-G-2 Bolting	2" and Less											
FBC-E41-2297-01		2297-5	VT-1	16	N/A	4/5	4/10	4/17	N/A	VT-032	RF-09-25	DW,51,595'
B31-F023A-VBB		5357-5	VT-1	16	N/A	4/3	4/4	4/17	N/A	VT-027	RF-09-17	DW,342,574'
B31-F031A-VBB		5357-5	VT-1	16	N/A	4/3	4/4	4/17	N/A	VT-026	RF-09-18	DW,290,578
E11-F067-VBB		2299-5	VT-1	16	N/A	4/5	4/10	4/17	N/A	VT-031	RF-09-21	DW,163,595'
E11-F009-VBB		2299-5	VT-1	16	N/A	4/5	4/10	4/17	N/A	VT-030	RF-09-20	DW,163,600'
E21-F005A-VBB		3052-5	VT-1	16	N/A	3/29	3/29	4/17	N/A	VT-025	RF-09-22	RB2,C13,633
E21-F005B-VBB		3053-5	VT-1	16	N/A	3/29	3/29	4/17	N/A	VT-024	RF-09-23	RB2,C11,632
E51-F007-VBB		2192-5	VT-1	16	N/A	4/9	4/10	4/17	N/A	VT-048	RF-09-24	DW,360,583'
G33-F004-VBB		3096-5	VT-1	16	N/A	4/10	4/11	4/17	N/A	VT-049	RF-09-46	RB2,C13,624
B21-F032A-VBB		3537-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	N/A	RF-09-16	Stm,350,594'

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
B21-F010B-VBB		3536-5	VT-1	16	N/A	4/14	4/16	4/17	N/A	N/A	RF-09-14	DW,10,603'
B21-F011B-VBB		3536-5	VT-1	16	N/A	4/9	4/10	4/17	N/A	VT-047	RF-09-15	DW,10,594
Initial Sample Expansion												
B-G-2 Bolting	2" and Less											
E11-F015B-VBB		2327-5	VT-1	16	N/A	4/9	4/10	4/17	N/A	VT-046	RF-09-89	
E21-F006A-VBB		3052-5	VT-1	16	N/A	4/9	4/10	4/17	N/A	VT-045	RF-09-95	
E21-F006B-VBB		3053-5	VT-1	16	N/A	4/9	4/10	4/17	N/A	VT-044	RF-09-96	
E21-F007A-VBB		3052-5	VT-1	16	N/A	4/9	4/10	4/17	N/A	VT-043	RF-09-97	
E21-F007B-VBB		3053-5	VT-1	16	N/A	4/9	4/10	4/17	N/A	VT-042	RF-09-98	
E41-F002-VBB		2297-5	VT-1	16	N/A	4/8	4/10	4/17	N/A	VT-039	RF-09-79	
E41-F003-VBB		2297-5	VT-1	16	N/A	4/8	4/10	4/17	N/A	VT-038	RF-09-78	
E41-F006-VBB		3537-5	VT-1	16	N/A	4/8	4/10	4/17	N/A	VT-037	RF-09-77	
E51-F008-VBB		2192-5	VT-1	16	N/A	4/8	4/10	4/17	N/A	VT-035	RF-09-75	
E51-F013-VBB		3536-5	VT-1	16	N/A	4/8	4/10	4/17	N/A	VT-036	RF-09-76	
G33-F001-VBB		3096-5	VT-1	16	N/A	4/9	4/10	4/17	N/A	VT-041	RF-09-99	
G33-F101-VBB		3096-5	VT-1	16	N/A	4/9	4/10	4/17	N/A	VT-040	RF-09-101	
G33-F121-VBB		3536-5	VT-1	16	N/A	4/8	4/10	4/17	N/A	VT-034	RF-09-74	
G33-F220-VBB		3536-5	VT-1	16	N/A	4/8	4/10	4/17	N/A	VT-033	RF-09-73	

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SIIT	DATA SHIT	Report	Loc/Az/EI
Second Sample Expansion B-G-2 Bolting	2" and Less											
B21-F010A-VBB		3537-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-051	RF-09-80	
B21-F010B-VBB		3536-5	VT-1	16	N/A	4/14	4/15	4/17	N/A	VT-069	RF-09-81	
B21-F011A-VBB		3537-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-052	RF-09-82	
B21-F032A-VBB		3537-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-053	RF-09-83	
B21-F032B-VBB		3536-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-054	RF-09-84	
B21-F076A-VBB		3537-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-055	RF-09-85	
B21-F076B-VBB		3536-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-056	RF-09-86	
E11-F008-VBB		2299-5	VT-1	16	N/A	4/14	4/15	4/17	N/A	VT-068	RF-09-87	
E11-F015A-VBB		2298-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-057	RF-09-88	
E11-F050A-VBB		2298-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-058	RF-09-90	
E11-F050B-VBB		2327-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-059	RF-09-91	
E11-F060A-VBB		2298-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-060	RF-09-92	
E11-F060B-VBB		2327-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-061	RF-09-93	
E11-F608-VBB		2299-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-062	RF-09-94	
G33-F100-VBB		5351-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-063	RF-09-100	
G33-F102-VBB		5351-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-064	RF-09-102	
G33-F106-VBB		5351-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-065	RF-09-103	
G33-F120-VBB		3536-5	VT-1	16	N/A	4/11	4/12	4/17	N/A	VT-066	RF-09-104	

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHIT	DATA SHIT	Report	Loc/Az/EI
B-G-2 Bolting	2" and Less											
CRD Flange Bolts	4219 (1) 3431 (2)	5363-5	VT-1	16	N/A	4/9	4/12	4/17	N/A	VT-050	RF-09-105	Drywell, Undervessel
CRD Bolting	New CRD Bolting 1-184	N/A	VT-1	16	N/A	3/27	3/28	4/16	N/A	VT-001 thru VT-023	RF-09-72	
B-P	Pressure Retaining Boundary	M-4536	VT-2	43.000.005	N/A	4/30	4/30	4/30	N/A	0975030430	03-022	Various

RT09 EXAM DATA BASE
Class 2

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHIT	DATA SHIT	Report	Loc/Az/EI
C-C Vessel	Intregal Attachment		Vol.									
SW-E11-D2-HXS-13	RHR HX B	5370-5	MT	2	N/A	4/12	4/14	4/15	N/A	MT-018	RF-09-53	RB2,B9,625'
SW-E11-D2-HXS-14	RHR HX B	5370-5	MT	2	N/A	4/12	4/14	4/15	N/A	MT-017	RF-09-54	
SW-E11-D2-HXS-15	RHR HX B	5370-5	MT	2	N/A	4/12	4/14	4/16	N/A	MT-016	RF-09-55	
SW-E11-D2-HXS-16	RHR HX B	5370-5	MT	2	N/A	4/12	4/14	4/16	N/A	MT-019	RF-09-56	
C-F-1 Augmented	NRC Commitment		Vol.									
FW-C41-2979-63S64	SLC weld 2" El-Pipe	2979-5	PT	1	N/A	3/24	3/26	4/4	N/A	PT-001	RF-09-26	RB3, 652,E11
FW-C41-2979-64S65	SLC weld 2" Pipe-El	2979-5	PT	1	N/A	3/24	3/26	4/4	N/A	PT-002	RF-09-27	RB3, 652,E11
FW-C41-5058-54S55	SLC weld 2"Pipe-Reducer	5374-5	PT	1	N/A	3/24	3/26	4/4	N/A	PT-003	RF-09-28	RB3,F10,661
C-F-2	Circumferential Weld		Vol.									
SW-C11-2113-172-A	CRD SDV ' Pipe-Tee	5375-5	MT	2	N/A	3/29	4/1	4/6	N/A	MT-006	RF-09-48	RB1,C10,597'
SW-C11-2113-172-A		5375-5	UT	3	CS-20	3/29	4/1	4/6	UT-007,UT-008	UT-007,UT-008	RF-09-48	
SW-E11-3035-7WB	RHR 6" El-Pipe	3035-5	MT	2	N/A	3/29	3/30	4/4	N/A	MT-005	RF-09-49	Tor,180,578
FW-E11-3151-3WF2	RHR 24" Tee-El	3151-5	MT	2	N/A	4/12	4/14	4/16	N/A	MT-020	RF-09-30	HxRm,C10,605'
FW-E11-3151-3WF2		3151-5	UT	3	CS-43	4/12	4/14	4/16	UT-080,UT-081	UT-080,UT-081	RF-09-30	
SW-E11-3154-4WC	RHR 24" El-Tee	3154-5	MT	2	N/A	3/30	3/30	4/6	N/A	MT-007	RF-09-50	Tor,C17,543'
SW-E11-3154-4WC		3154-5	UT	3	PDI-Alt-CS1	3/30	4/2	4/6	UT-009 thru 012	UT-009 thru 012	RF-09-50	
FW-E11-3154-13WO	RHR 24" Pipe-Pump	3154-5	MT	2	N/A	3/31	4/2	4/13	N/A	MT-011	RF-09-31	RBSB,A15,541'
FW-E11-3154-13WO		3154-5	UT	3	PDI-Alt-CS1	4/1	4/2	4/13	UT-019,UT-021, UT-022	UT-019,UT-021, UT-022	RF-09-31	
FW-E11-3158-1W2	RHR 24" Pipe-El	3158-5	MT	2	N/A	3/30	3/30	4/6	N/A	MT-008	RF-09-32	HxRm,C17,593'
FW-E11-3158-1W2		3158-5	UT	3	CS-43	3/31	3/31	4/6	UT-014	UT-014	RF-09-32	
FW-E11-3158-9WF2	RHR 20" Pipe-El	3158-5	MT	2	N/A	3/30	4/1	4/14	N/A	MT-009	RF-09-33	HxRm,B17,635'
FW-E11-3158-9WF2		3158-5	UT	3	CS-42	3/31	4/1	4/14	UT-013	UT-013	RF-09-33	
SW-E11-3177-9WE	RHR 20"El-Pipe	3177-5	MT	2	N/A	4/3	4/4	4/6	N/A	MT-012	RF-09-52	Tor,B10,570'
SW-E11-3177-9WE		3177-5	UT	3	CS-42	4/3	4/4	4/6	UT-035	UT-035	RF-09-52	
FW-E21-3148-7W0	Core Spray 12" Red-Pump	3148-5	MT	2	N/A	3/31	4/2	4/14	N/A	MT-010	RF-09-34	RBSB,G17,541'
FW-E21-3148-7W0		3148-5	UT	3	PDI-Alt-CS1	4/1	4/2	4/14	UT-020	UT-020	RF-09-34	
FW-E41-3162-11WF1	HPCI 16" Pipe-Tee	3162-5	VT-1	17	N/A	3/25	3/28	4/4	N/A	N/A	RF-09-35	Tor,G11,564'
FW-E41-3162-11WF4	HPCI 16" Tee-Reducer	3162-5	VT-1	17	N/A	3/25	3/28	4/4	N/A	N/A	RF-09-36	Tor,G11,564'

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
FW-E41-3162-11WF5	HPCI 10" Reducer-Reducer	3162-5	VT-1	17	N/A	3/25	3/28	4/4	N/A	N/A	RF-09-37	Tor,G11,564'
FW-E41-3167-OW1	HPCI 10" Pump-Pipe	3167-5	MT	2	N/A	3/26	3/28	4/11	N/A	MT-001	RF-09-38	HPCI Skid, 546'
FW-E41-3167-OW1		3167-5	UT	3	CS-50	3/26	3/28	4/11	UT-002	UT-002	RF-09-38	
FW-E41-3169-2W0	HPCI 10" Pipe-Valve	3169-5	MT	2	N/A	3/26	3/29	4/14	N/A	MT-002	RF-09-39	CRD,G11,569'
FW-E41-3169-2W0		3169-5	UT	3	CS-36	3/27	3/29	4/14	UT-003,UT-004	UT-003,UT-004	RF-09-39	
SW-E41-5373-GW3	HPCI 12"El-Pipe	5373-5	MT	2	N/A	3/27	3/30	4/12	N/A	MT-003	RF-09-59	HPCI Skid, 546'
SW-E41-5373-GW3		5373-5	UT	3	PDI-Alt-CS1	3/27	3/30	4/12	UT-005,UT-006	UT-005,UT-006	RF-09-59	
SW-N30-3258-7WK	Main Steam 26" Pipe-RedEl	3258-5	MT	2	N/A	4/6	4/10	4/13	N/A	MT-014	RF-09-67	Stm,F12,589'
SW-N30-3258-7WK		3258-5	UT	3	CS-5	4/6	4/10	4/13	UT-046,UT-072	UT-046,UT-072	RF-09-67	
SW-N30-3258-7WKLU	Main Steam 26" Long Scam	3258-5	MT	2	N/A	4/6	4/10	4/15	N/A	MT-015	RF-09-68	Stm,F12,589'
SW-N30-3258-7WKLU		3258-5	UT	3	CS-5	4/6	4/10	4/15	UT-047	UT-047	RF-09-68	
C-F-2	Branch Connections		Vol.									
SW-E11-3160-1WD	RHR 18" Weldolet	3160-5	MT	2	N/A	3/29	3/30	4/4	N/A	MT-004,PT-005	RF-09-51	Tor,B15,578'

RPV EXAM DATA BASE
Augmented

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SIIT	DATA SIIT	Report	Loc/Az/EI
ANSI B31.1	GL 88-01 Category D		Vol.			UT						
FW-N20-3105-0W23	20" El-SE Htr 4N, Upper Nozz	3105-1	PT/UT	1 / 13	SSCL-88	4/16	4/18	N/A	UT-082 thru 084	UT-082 thru 084, PT-008	RF-09-41	TB2,P12,624'
SW-N20-03-B011-BWSE	20" Nozz-SE 4N, Upper Nozz	3105-1	PT/UT	1 / 13	SSCL-88	4/16	4/18	N/A	UT-085 thru 087	UT-085 thru 088, PT-006	RF-09-62	TB2,P12,624'
FW-N20-3105-22WO	20" El-SE Htr 4N, Lower Nozz	3105-1	PT/UT	1 / 13	SSCL-88	4/15	4/18	N/A	UT-091 thru 093	UT-091 thru 094	RF-09-42	TB2,P12,615'
SW-N20-03-B011-AWSE	20" Nozz-SE 4N, Lower Nozz	3105-1	PT/UT	1 / 13	SSCL-88	4/15	4/18	N/A	UT-088 thru 090	UT-088 thru 091	RF-09-61	TB2,P12,615'

Procedure	Reference Code
39.NDE.001	1
39.NDE.002	2
PDI-UT-1	3
PDI-UT-2	4
PDI-UT-5	5
GE-UT-300	6
GE-UT-704	7
GE-UT-705	8
GE-UT-308	9
GE-UT-209	10
GE-UT-236	11
GE-UT-504	12
PDI-UT-10	13
43.000.03/04	14
43.000.017	15
43.000.014	16
43.000.019	17
43.000.013	18
GE-UT-309	19
GE-UT-311	20

2.3 Interval 2, Period 1, RF08 Examinations

RF08 EXAM DATA BASE												
SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SIIT	DATA SIIT	Report	Loc/Az/EI
B-A Reactor Vessel	Shell Welds											
1-308A		5360-5	UT	8	2667-62-1	15-Nov	17-Nov	19-Nov	PDI-254-C01 PDI-6-C25, C26	PDI-254-C01 UT23, UT24, UT25, UT26, 27	R8-96	DW,52,552
1-308B		5360-5	UT	8	2667-62-1	15-Nov	17-Nov	19-Nov	PDI-254-C01 PDI-6-C27, C28	PDI-254-C01 UT28, UT29, UT30, UT31	R8-97	DW,142,552
15-308C		5360-5	UT	8	2667-62-1	14-Nov	17-Nov	19-Nov	PDI-254-C01	PDI-254-C01	R8-98	DW,262,244
2-307A		5360-5	UT	8	2667-60-1	12-Nov	17-Jan	19-Nov	PDI-254-C02	PDI-254-C02	R8-99	DW,339,122
B-A Reactor Vessel	Circ Head Welds											
4-319	2-319C to 2-319E 40%	5360-5	UT	6	2667-58-1	1-Nov	5-Nov	17-Nov	PDI-6-C11, C12	UT09, UT10	R8-47	Refuel Floor
6-306	180 deg. to 360 deg.	5360-5	UT	6	2667-59-1	5-Nov	7-Nov	15-Nov	PDI-6-C13, C14	UT11, UT12	R8-57	Refuel Floor

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
B-A Reactor Vessel	Meridional Head Welds		Vol.									
2-319A	Top Head	5360-5	UT	6	2667-58-1	31-Oct	6-Nov	17-Nov	PDI-6-C05, C06	UT05, UT06	R8-44	Refuel Floor
2-319B	Top Head	5360-5	UT	6	2667-58-1	31-Oct	6-Nov	17-Nov	PDI-6-C07, C08	UT07	R8-45	Refuel Floor
2-319C	Top Head	5360-5	UT	6	2667-58-1	2-Nov	6-Nov	17-Nov	PDI-6-C09, C10	UT08	R8-46	Refuel Floor
1-319B	Top Head	5360-5	UT	6	2667-58-1	30-Oct	5-Nov	17-Nov	PDI-6-C01, C02	UT01, UT02	R8-42	Refuel Floor
1-319H	Top Head	5360-5	UT	6	2667-58-1	30-Oct	5-Nov	17-Nov	PDI-6-C03, C04	UT03, UT04	R8-43	Refuel Floor
1-306A	Bottom Head	5360-5	UT	6	2667-59-1	6-Nov	7-Nov	17-Nov	PDI-6-C15, C16	UT13, UT14	R8-60	Bio, 0deg
1-306D	Bottom Head	5360-5	UT	6	2667-59-1	6-Nov	7-Nov	18-Nov	PDI-6-C17, C18	UT15, UT16	R8-61	Bio, 120deg
1-306E	Bottom Head	5360-5	UT	6	2667-59-1	6-Nov	7-Nov	18-Nov	PDI-6-C19, C20	UT17, UT18	R8-62	Bio, 144 deg
1-306G	Bottom Head	5360-5	UT	6	2667-59-1	6-Nov	7-Nov	18-Nov	PDI-6-C21, C22	UT19, UT20	R8-63	Bio, 225deg
1-306K	Bottom Head	5360-5	UT	6	2667-59-1	6-Nov	7-Nov	18-Nov	PDI-6-C23, C24	UT21, UT22	R8-64	Bio, 335deg
B-A Reactor Vessel	Shell to Flange Welds		Vol.									
13-308	Partial from shell side	5360-5	UT	7	2667-62-1	13-Nov	16-Nov	16-Nov	ISI-210-C46, C47, C48	UT25, UT26	R8-95	DW, 723*
13-308	Partial from flange	5360-5	UT	9	CSCI-52-FER	28-Oct	30-Oct	17-Nov	ISI-54-C01	UT01	R8-12	Vessel Cav.
B-A Reactor Vessel	Head to Flange		Vol. / Surf.									
3-319	1/3 of weld length	5360-5	UT	7	2667-58-1	1-Nov	6-Nov	17-Nov	ISI-210-C01, C02, C03	UT01, UT02, UT03, UT04, UT05, UT11	R8-41	Refuel Floor
3-319	1/3 of weld length	5360-5	MT	2	N/A	30-Oct	6-Nov	17-Nov	N/A	MT-023	R8-41	Refuel Floor

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
B-D Reactor Vessel	Nozzle to Vessel Welds		Vol.									
8-316A	Main Steam Nozzle	5361-5	UT	7	2667-62-1	8-Nov	9-Nov	19-Nov	ISI-210-C31, C32, C33	UT19	R8-76	DW,71,655
8-316-B	Main Steam Nozzle	5361-5	UT	7	2667-62-1	8-Nov	9-Nov	19-Nov	ISI-210-C34, C35, C36	UT20	R8-77	DW,109,655
4-316A	Feedwater Nozzle	5361-5	UT	7	2667-62-1	8-Nov	9-Nov	19-Nov	ISI-210-C28, C29, C30	UT17, UT18	R8-75	DW,30,642
4-316B	Feedwater Nozzle	5361-5	UT	7	2667-62-1	7-Nov	8-Nov	18-Nov	ISI-210-C22, C23, C24	UT15	R8-65	DW,90,642
4-316D	Feedwater Nozzle	5361-5	UT	7	2667-62-1	8-Nov	10-Nov	18-Nov	ISI-210-C37, C38, C39	UT21, UT22	R8-78	DW,210,642
14-316B	Core Spray Nozzle	5361-5	UT	7	2667-62-1	7-Nov	8-Nov	18-Nov	ISI-210-C25, C26, C27	UT16	R8-66	DW,240,641
13-314A	Recirc Inlet Nozzle	5361-5	UT	7	2667-60-1	5-Nov	7-Nov	17-Nov	ISI-210-C10, C11, C12	UT09	R8-53	DW,30,615
13-314B	Recirc Inlet Nozzle	5361-5	UT	7	2667-60-1	5-Nov	7-Nov	17-Nov	ISI-210-C19, C20, C21	UT14	R8-59	DW,60,615
13-314D	Recirc Inlet Nozzle	5361-5	UT	7	2667-60-1	6-Nov	7-Nov	17-Nov	ISI-210-C16, C17, C18	UT13	R8-58	DW,120,615
13-314G	Recirc Inlet Nozzle	5361-5	UT	7	2667-60-1	4-Nov	7-Nov	17-Nov	ISI-210-C04, C05, C06	UT06, UT07, UT08	R8-51	DW,240,615
13-314K	Recirc Inlet Nozzle	5361-5	UT	7	2667-60-1	5-Nov	7-Nov	17-Nov	ISI-210-C13, C14, C15	UT10	R8-54	DW, 330,615
5-314A	Recirc Suction Nozzle	5361-5	UT	7	2667-60-1	12-Nov	14-Nov	15-Nov	ISI-210-C43, C44, C45	UT24	R8-93	DW, 0,614
19-314B	JPI Nozzle	5361-5	UT	7	2667-60-1	9-Nov	10-Nov	17-Nov	ISI-210-C40, C41, C42	UT23	R8-82	DW,280,612
B-D Reactor Vessel	Nozzle Inside Radius		Vol.									Same as Nozzle to vessel above
8-316A		5361-5	UT/VT	13 or 15	N/A	IVVI	18-Nov	30-Nov	N/A	Completed under Surv. 43.000.017	01-034	DW,71,655
8-316-B		5361-5	UT/VT	13 or 15	N/A	IVVI	18-Nov	30-Nov	N/A	Completed under Surv. 43.000.017	01-034	DW,109,655

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
B-D Reactor Vessel	Nozzle Inside Radius		Vol. / VT									
4-316A		5361-5	UT	11	N/A	8-Nov	13-Nov	17-Nov	ISI-246-C01	ISI-246-C01	R8-86	DW,30,642
4-316B		5361-5	UT	11	N/A	8-Nov	13-Nov	17-Nov	ISI-246-C01	ISI-246-C01	R8-87	DW,90,642
4-316D		5361-5	UT	11	N/A	7-Nov	13-Nov	17-Nov	ISI-246-C01	ISI-246-C01	R8-88	DW,210,642
14-316B		5361-5	UT / VT	13 or 15	N/A	1-Nov	13-Nov	30-Nov	N/A	Completed under 01-034 Surv. 43.000.017	01-034	DW,240,641
15-315		5361-5	UT / VT	13 or 15	N/A	1-Nov	13-Nov	30-Nov	N/A	Completed under 01-034 Surv. 43.000.017	01-034	DW,150,638
13-314A		5361-5	UT / VT	13 or 15	N/A	1-Nov	18-Nov	30-Nov	N/A	Completed under 01-034 Surv. 43.000.017	01-034	DW,30,615
13-314B		5361-5	UT / VT	13 or 15	N/A	1-Nov	18-Nov	30-Nov	N/A	Completed under 01-034 Surv. 43.000.017	01-034	DW,60,615
13-314D		5361-5	UT / VT	13 or 15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DW,120,615
13-314G		5361-5	UT / VT	13 or 15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DW,240,615
13-314K		5361-5	UT / VT	13 or 15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DW, 330,615
5-314A		5361-5	UT / VT	13 or 15	N/A	1-Nov	18-Nov	30-Nov	N/A	Completed under 01-034 Surv. 43.000.017	01-034	DW, 0,614
19-314B		5361-5	UT / VT	13 or 15	N/A	1-Nov	18-Nov	30-Nov	N/A	Completed under 01-034 Surv. 43.000.017	01-034	DW,280,612
B-D Reactor Vessel	Nozzle Inner Bore Region		Vol.									
4-316A IBR	FW Nzz Inner Bore Region	5361-5	UT	11	70287	8-Nov	13-Nov	17-Nov	ISI-246-C01	ISI-246-C01	R8-86	DW,30,642
4-316B IBR	FW Nzz Inner Bore Region	5361-5	UT	11	70287	8-Nov	13-Nov	17-Nov	ISI-246-C01	ISI-246-C01	R8-87	DW,90,642
4-316D IBR	FW Nzz Inner Bore Region	5361-5	UT	11	70287	7-Nov	13-Nov	17-Nov	ISI-246-C01	ISI-246-C01	R8-88	DW,210,642

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANH	CAL SHT	DATA SHT	Report	Loc/Az/EI
B-P & B-J Class 1 Piping N5B	RIISI Welds 12" CS SE to Nzz (DM)	3052-5	UT	12	CS-44/IN-45	6-Nov	16-Nov	19-Nov	PDI-2-C14 UNIXD-C03, C04	UT13, UT14 UNIXD-C03, C04	R8-79	DW,240,641
SW-E21-3052-4W0X	10" CS Pipe to SE (DM)	3052-5	UT	12	CS-18/IN-45	7-Nov	16-Nov	19-Nov	PDI-2-C13 UNIXD-C01, C02	UNIXD-C01, C02	R8-71	DW,240,641
FW-RD-2-A9	28" Tee to Cross	5357-5	UT	4	SS-30	3-Nov	5-Nov		PDI-2-C06	UT07	R8-49	DW,270,613
FW-E11-2298-6W0	24" Pipe to Tee	2298-5	UT	4	SS-8	2-Nov	2-Nov	17-Nov	PDI-2-C02	UT04	R8-39	DW,270,600
SW-E11-2298-6WC	24" Pipe to Pipe (DM)	2298-5	UT	¾	CS-7/SS-8	2-Nov	2-Nov	16-Nov	PDI-1-C18 PDI-2-C04	UT03	R8-38	DW,270,600
FW-G33-3096-10WF3 7-316A	4' Sweepolet to Tee Main Steam Nzz to SE	5351-5	UT	4	SS-23	2-Nov	8-Nov	17-Nov	PDI-2-C05	UT05, UT06	R8-40	DW,140,573
SW-PS-2-A1-A	26" Pipe to Elbow	5352-5	UT	3	CS-5	8-Nov	8-Nov	19-Nov	PDI-1-C34, C35	UT18	R8-74	DW,72,655
SW-PS-2-A1-B	26" Elbow to Pipe	5352-5	UT	3	CS-5	8-Nov	8-Nov	17-Nov	PDI-1-C30, C31	UT16	R8-72	DW,72,655
SW-PS-2-A1-B	26" Elbow to Pipe	5352-5	UT	3	CS-5	8-Nov	8-Nov	17-Nov	PDI-1-C32, C33	UT17	R8-73	DW,72,653
SW-PS-2-C3-J	8" Sweepolet to Pipe	5354-5	UT	3	CS-20	12-Nov	13-Nov	17-Nov	PDI-1-C40	UT23, UT24	R8-91	DW,314,609
SW-PS-2-C3-K	8" Pipe to Flange	5354-5	UT	3	CS-20	12-Nov	13-Nov	17-Nov	PDI-1-C41	UT25, UT26	R8-92	DW,314,609
SW-RD-2-B8-W1	12" Pipe to Elbow	5358-5	UT	4	SS-17	1-Nov	2-Nov	16-Nov	PDI-2-C03	UT-02	R8-35	DW,90,613
SW-RD-2-B8-W2	12" Elbow to Pipe	5358-1	UT	4	SS-17	30-Oct	2-Nov	16-Nov	PDI-2-C01	UT-01, MT-011	R8-15	DW,90,615
FW-E11-2327-0W1	24" Valve to Pipe	2327-5	UT	3	CS-9	3-Nov	4-Nov	17-Nov	PDI-1-C19	UT11	R8-48	RB1,B12,594
FW-E41-2297-2W3	10" Pipe to Elbow	2297-5	UT	3	CS-22	2-Nov	3-Nov	16-Nov	ISI-350-C04 PDI-1-C17	UT09, UT10	R8-37	DW,0,586
FW-E41-2297-0W4	10" Fluted head to pipe	2297-5	UT	3	CS-18	2-Nov	2-Nov	11-Nov	PDI-1-C15, C16	UT08	R8-36	Stm,F12,586

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COM P	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
B-F & B-J Class 1 Piping	RIISI Welds											
3-316A	FW 14" SE to Noz	3537-5	UT	3	CS-46	7-Nov	8-Nov	19-Nov	PDI-1-C28	UT14	R8-69	DW,30,642
N4A	SE Ext. to SE	3537-5	UT	3	CS-46	7-Nov	8-Nov	19-Nov	PDI-1-C29	UT15	R8-70	DW,30,642
FW-N21-2336-15W0	12" Pipe to SE	3537-5	UT	3	CS-15	7-Nov	8-Nov	17-Nov	PDI-1-C27	UT13	R8-68	DW,30,642
SW-N21-2336-15WP	12" Pipe to Elbow	3537-5	UT	3	CS-15	7-Nov	8-Nov	18-Nov	PDI-1-C26	UT12	R8-67	DW,30,641
B-G-1 Bolting	Greater Than 2"											
RPV Closure Nuts	1/3 of locations	5362-5	MT	2	N/A	10-Nov	12-Nov	17-Nov	N/A	MT-027, MT-028 VT-004	R8-83	Refuel Floor
RPV Closure Studs	1/3 of locations in place 48-51		UT	5	RPV Stud	28-Oct 4-Nov.	5-Nov	11-Nov 17-Nov	PDI-5-C01, C02 PDI-5-C03, C04	UT-01	R8-10 R8-50	RPV Cavity
RPV Closure Studs	48-51 removed		MT	2	N/A	10-Nov	12-Nov	17-Nov	N/A	MT-026	R8-50	Refuel Floor
Threads in Flange	1/3 of locations		UT	10	CSCL-52	29-Oct	30-Oct	16-Nov	ISI-55-C01	UT-01, UT-02	R8-11	RPV Cavity
RPV Closure Washers/Bushings	1/3 of locations		VT-1	16	N/A	10-Nov	12-Nov	17-Nov	N/A	VT-005	R8-84	Refuel Floor
Recirc Pump Studs	Pump A 1-16	5365-5	VT-1	16	N/A	10-Nov	17-Nov	27-Nov	N/A	01-035AP		DW,315,579
Recirc Pump Studs	Pump A 1-16		UT	5	B31 Stud	10-Nov	12-Nov	19-Nov	PDI-5-C05, C06		R8-85	DW,315,579
Recirc Pump nuts, bushings, and washers	Pump A 1-16		VT-1	16	N/A	10-Nov	17-Nov	27-Nov	N/A	01-035AP		DW,315,579
RPV Spare Flange	0 deg.	5361-5	VT-1	16	N/A	10-Nov	17-Nov	27-Nov	N/A	01-035AN		Refuel Floor
RPV Spare Flange	180 deg.		VT-1	16	N/A	10-Nov	17-Nov	27-Nov	N/A	01-035A0		Refuel Floor
B-G-2 Bolting	2" and Less											
FBC-B51-2192-01	FE Flange	2192-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035A		DW,360,594
FBC-B21-5352-01L	SRV Flange	5352-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035B		DW,360,594
B21-F013L-VBB	SRV Bonnet	5352-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035C		DW,39,613

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COM P	L III	ANII	CAL SHT	DATA SHIT	Report	Loc/Az/EI
B-G-2 Bolting		2" and Less										
FBC-B21-5353-01K	SRV Flange	5353-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035D		DW,39,613
B21-F013K-VBB	SRV Bonnet	5353-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035E		DW,70,613
FBC-B21-5353-01G	SRV Flange	5353-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035F		DW,70,613
B21-F013G-VBB	SRV Bonnet	5353-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035G		DW,38,613
B21-F028B-VBB	B Line Outboard MSIV	5353-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035H		DW,38,613
FBC-B21-5354-01B	SRV Flange	5354-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035I		DW,298,613
B21-F013B-VBB	SRV Bonnet	5354-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035J		DW,298,613
B21-F028D-VBB	D Line Outboard MSIV	5353-5	VT-1	16	N/A	31-Oct	17-Nov	27-Nov	N/A	01-035K		Strn,F12,599
E21-F006A-VBB	CS Inbd Check	3052-5	VT-1	16	N/A	9-Nov	17-Nov	27-Nov	N/A	01-035L		DW,210,627
E41-F003-VBB	HPCI Outbd ISO Valve	2297-5	VT-1	16	N/A	31-Oct	17-Nov	27-Nov	N/A	01-035M		Stm,F12,587
G33-F001-VBB	RWCU Inbd Iso	3096-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035N		DW,229,603
G33-F120-VBB	RWCU to FW Ck	3536-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035O		Stm,F12,587
B21-F011A-VBB	FW A Manual Iso	3537-5	VT-1	16	N/A	1-Nov	17-Nov	27-Nov	N/A	01-035P		DW,350,603
B-II RPV Integral Attachment Welds												
3-306/4-309 Skirt Weld	10 percent of length	5360-5	MT	2	N/A	4-Nov	6-Nov	19-Nov	N/A	MT-025	R8-52	Bio Annulus
3-306/4-309 Skirt Weld	10 percent of length	5360-5	UT	7		4-Nov	6-Nov	19-Nov	ISI-210-C07, C08, C09	UT12	R8-52	Bio Annulus
10-324A Stabilizer		5360-5	MT	2	N/A	13-Nov	14-Nov	16-Nov	N/A	MT-029	R8-94	DW,0,647

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COMP	L III	ANII	CAL SIIT	DATA SIIT	Report	Loc/Az/EI
B-II RPV Integral Attachment Welds B-O CRD Housing Welds												
CRDH-X02-Y27-W1	Peripheral Housing Weld		PT	1	N/A	9-Nov	10-Nov	18-Nov	N/A	PT-004	R8-80	DWUV
CRDH-X02-Y27-W2	Peripheral Housing Weld		PT	1	N/A	9-Nov	10-Nov	18-Nov	N/A	PT-005	R8-81	DWUV

RPV EXAM DATA BASE

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COM	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
C-A Vessel	Shell Welds		Vol.									
SW-E11-D2-IIX-11	Shell to Flange	5370-5	UT	14	CS-80	30-Oct	2-Nov	16-Nov	ISI-350-C03 ISI-215-C02	UT03, UT04, UT05	R8-34	RB1,B9,
C-B Vessel	Nozzle to Shell Welds		Vol. / Surf.									
SW-E11-D2-IIX-01	Inlet Nozzle to Head	5370-5	UT	14	CS-80	30-Oct	1-Nov	16-Nov	ISI-350-C01 ISI-215-C01	UT01, UT02	R8-13	RB1,B9,
SW-E11-D2-IIX-01	Inlet Nozzle to Head	5370-5	MT	2		29-Oct	1-Nov	16-Nov		MT-009	R8-13	RB1,B9,
C-B Vessel	Inside Radius		Vol.									
SW-E11-D2-IIX-01 IRS	Inlet Nozzle to Head		UT	13	CS-81	30-Oct	1-Nov	15-Nov	ISI-211-C01	UT01	R8-30	RB1,B9,
C-C Vessel	Integral Attachment		Surf.									
SW-E11-D2-IIXS-05	Upper Shell Stiffener Weld		MT	2		31-Oct	1-Nov	16-Nov		MT-013	R8-20	RB1,B9,
SW-E11-D2-IIXS-06	Lower Shell Stiffener Weld		MT	2		31-Oct	1-Nov	16-Nov		MT-012, MT-012A	R8-19	RB1,B9,
SW-E11-D2-IIXS-07	Support Ring		MT	2		31-Oct	1-Nov	16-Nov		MT-014	R8-21	RB1,B9,

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COM P	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
C-C Vessel	Integral Attachment											
												Surf.
SW-E11-D2-HXS-09	Stiffener Plate	MT	2		31-Oct	1-Nov	16-Nov			MT-015	R8-22	RB1,B9,
SW-E11-D2-HXS-10	Stiffener Plate	MT	2		31-Oct	1-Nov	16-Nov			MT-016	R8-23	RB1,B9,
SW-E11-D2-HXS-11	Stiffener Plate	MT	2		31-Oct	1-Nov	16-Nov			MT-017	R8-24	RB1,B9,
SW-E11-D2-HXS-12	Stiffener Plate	MT	2		31-Oct	1-Nov	16-Nov			MT-018	R8-25	RB1,B9,
SW-E11-D2-HXS-21	Stiffener Plate	MT	2		31-Oct	1-Nov	16-Nov			MT-019	R8-26	RB1,B9,
SW-E11-D2-HXS-22	Stiffener Plate	MT	2		31-Oct	1-Nov	16-Nov			MT-020	R8-27	RB1,B9,
SW-E11-D2-HXS-23	Stiffener Plate	MT	2		31-Oct	1-Nov	16-Nov			MT-021	R8-28	RB1,B9,
SW-E11-D2-HXS-24	Stiffener Plate	MT	2		31-Oct	1-Nov	16-Nov			MT-022	R8-29	RB1,B9,
C-F-1 Piping	Circumferential Welds											
												Surf.
FW-C41-2979-72S73	2" Elbow to Pipe	2979-5 PT	1		22-Oct	26-Oct	16-Nov			PT-001	R8-02	RB4,668
FW-C41-2979-2S3	2" Elbow to Reducer	2979-5 PT	1		31-Oct	1-Nov	11-Nov			PT-003	R8-33	RB2,C12,633
FW-C41-2979-1S2	2" Reducer to Pipe	2979-5 PT	1		31-Oct	1-Nov	11-Nov			PT-002	R8-32	RB2,C12,633
C-F-2 Piping	Circumferential Welds											
												Vol. / Surf. / VT
FW-E11-3146-5W0	18" Elbow to Valve	3146-5 MT	2		25-Oct	29-Oct	16-Nov			MT-002	R8-03	Tor,B13,579
FW-E11-3146-5W0		3146-5 UT	3	CS-40	25-Oct	29-Oct	16-Nov	PDI-1-C01, C02		UT01	R8-03	
SW-E11-3153-13WD	24" Pipe to Elbow	3153-5 MT	2		24-Oct	29-Oct	16-Nov			MT-006	R8-07	SW Quad,543Y
SW-E11-3153-13WD	.375" Std.	3153-5 UT	3	PDII-Alt	25-Oct	29-Oct	16-Nov	PDI-1-C06, C07, C08		UT03	R8-07	
FW-E11-3159-0W1	12" Wol to Pipe	3159-5 MT	2		26-Oct	31-Oct	16-Nov			MT-008	R8-09	Tor, B13,575
FW-E11-3159-0W1	.406 Schd. 40	3159-5 UT	3	PDII-Alt	26-Oct	31-Oct	16-Nov	PDI-1-C09, C10, C11, C12		UT04	R8-09	

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COM P	L III	ANII	CAL SHT	DATA SHT	Report	Loc/Az/EI
C-R-2 Piping	Circumferential Welds		Vol. / Surf. / VT									
SW-E21-3145-9WD	10" Elbow to Pipe	3145-5	VT-1	17		31-Oct	31-Oct	16-Nov		VT-001	R8-16	Tor,320,577
SW-E21-3147-5WJ	14" Pipe to Elbow	3147-5	MT	2		23-Oct	29-Oct	16-Nov		MT-003	R8-04	SE Quad,549Y
SW-E21-3147-5WJ	.438 Schd. 40	3147-5	UT	3	PDII-Alt	24-Oct	29-Oct	16-Nov	PDI-1-C03, C04	UT02	R8-04	
SW-E21-3147-19WB	12" Elbow to Pipe	3147-5	MT	2		23-Oct	29-Oct	16-Nov		MT-004	R8-05	RB2,"C11,628
SW-E21-3147-19WB		3147-5	UT	3	CS-15	27-Oct	29-Oct	16-Nov	PDI-1-C05	UT05	R8-05	
SW-E21-3148-5WD	20" Pipe to WOL	3148-5	MT	2		26-Oct	27-Oct	11-Nov		MT-005	R8-06	NE Quad,541
FW-E41-3162-11W0 & LD	24" Elbow to Pipe	3162-5	VT-1	17		29-Oct	31-Oct	16-Nov		VT-003	R8-18	Tor,G11,560
SW-E41-3162-11WC	24" Elbow to Reducer	3162-5	VT-1	17		29-Oct	31-Oct	16-Nov		VT-002	R8-17	Tor,G11,560
FW-N30-3259-4W0	24" Pipe to Valve	3259-5	MT	2		31-Oct	1-Nov	16-Nov		MT-024	R8-31	TB,L12,632
FW-N30-3259-4W0		3259-5	UT	3	CS-9	31-Oct	1-Nov	16-Nov	ISI-350-C02 PDI-C13, C14	UT06, UT07	R8-31	
FW-T48-04-2095-19W0	8" Pipe to Tee	2095-5	MT	2		19-Oct	22-Oct	11-Nov		MT-001	R8-01	RB1,B13,594
SW-E11-3151-8WD	24" Pipe to Weldolet	3151-5	MT	2		26-Oct	27-Oct	16-Nov		MT-007	R8-08	Tor,B12,575
SW-N30-3258-13WB	26" Pipe to Swecpolet	3258-5	MT	2		29-Oct	30-Oct	16-Nov		MT-010	R8-14	Stn,F12,598

RH08 EXAM DATA BASE
AUGMENTED

SYS/COMP ID	DESCRIPTION	ISO	Exams	Procedure	CAL STD	COM P	L III	ANII	CAL SHIT	DATA SHIT	Report	Loc/Az/EI
ANSI B31.1	GL 88-01 Category D											
FW-N21-3109-18W0		3109-1	UT	3/4	CS-86/SSCL-87	5-Nov	7-Nov	17-Nov	PDI-1-C23, C24, C25 PDI-2-C10, C11, C12	UT11, UT12	R8-56	TB3,P5,645
SW-N21-01-B002-AWSE		3109-1	UT	3/4	CS-86/SSCL-87	5-Nov	7-Nov	17-Nov	PDI-1-C20, C21, C22 PDI-2-C07, C08, C09	UT08, UT09, UT10	R8-55	TB3,P5,645
FW-N20-3105-0W13		3105-1	UT	3/4	CS-11/SSCL-88	10-Nov	14-Nov	15-Nov	PDI-1-C36, C37, C38 PDI-2-C15, C16, C17	UT19, UT20 UT17	R8-89	TB2,P4,623
SW-N20-03-B010-BWSE		3105-1	UT	3/4	CS-11/SSCL-88	10-Nov	14-Nov	15-Nov	PDI-1-C39, C42 PDI-2-C18, C19, C20	UT21, UT22, UT23 UT15	R8-90	TB2,P4,623

Procedure	Reference Code	Procedure	Reference Code
39.NDE.001	1	ISI-UT-55	10
39.NDE.002	2	GFRM2-ISI-246	11
PDI-UT-1	3	UNIXDETC	12
PDI-UT-2	4	ISI-UT-211	13
PDI-UT-5	5	ISI-UT-215	14
PDI-UT-6	6	43.000.017	15
ISI-UT-210	7	43.000.014	16
I/UX-PDI-254	8	43.000.019	17
GFRM2-ISI-54	9		

2.4 Interval 2, Period 1, RF07 Examinations

RF07 EXAM DATA BASE Class 2 and Augmented										
Cat/Item	Component ID	DESCRIPTION	ISO	Procedure	EXAMS	CAL STD	COMP	CAL SHT	DATA SHT	Report
B-D	Reactor Vessel	Nozzle Inside Radius Section		6						
B3.100	4-31C IRS	(NUREG-0619) Inner Radius	5361-5	6	UT	70287	17-Apr	AUT-IR-C01		R7-01
B3.100	4-316E IRS	(NUREG-0619) Inner Radius	5361-5	6	UT	70287	13-Apr	AUT-IR-C01		R7-02
B3.100	4-316F IRS	(NUREG-0619) Inner Radius	5361-5	6	UT	70287	17-Apr	AUT-IR-C01		R7-03
NUREG-0619	Reactor Vessel	Nozzle Inner Bore Region								
Augmented	4-316C IBR	FW Nozz Inner Bore Region	5361-5	6	UT	70287	16-Apr	AUT-IR-C01		R7-01
Augmented	4-316E IBR	FW Nozz Inner Bore Region	5361-5	6	UT	70287	13-Apr	AUT-IR-C01		R7-02
Augmented	4-316F IBR	FW Nozz Inner Bore Region	5361-5	6	UT	70287	16-Apr	AUT-IR-C01		R7-03
B-F	RPV / Piping	RPV Noz to Safe End								
B5.10	N5B	Dissimilar Metal Nozz-SE	3052-5	5	UT	FER-44,45	12-Apr	DETC-C05,C06		R7-04
	N5B	Core Spray	3052-5	1	PT	N/A	11-Apr		PT-05	R7-04
B5.10	2-303H	Dissimilar Metal Nozz-SE	5356-5	5	UT	FER-54,56	10-Apr	DETC-C01,C02		R7-05
	2-303H	Recirc Inlet	5356-5	1	PT	N/A	5-Apr		PT-03	R7-05
B5.10	4-303A	Dissimilar Metal Nozz-SE	5357-5	5	UT	FER-55,57	12-Apr	DETC-C03,C04		R7-06
	4-303A	Recirc Suction	5357-5	1	PT	N/A	7-Apr		PT-04	R7-06
B5.10	102-304A	Dissimilar Metal Nozz-SE	5361-5	4	UT	FER47, Alt.1	13-Apr	PDI-1-C15-17	UT-01	R7-07
							13-Apr	PDI-2-C07-09		
	102-304A	Jet Pump Instrumentation	5361-5	1	PT	N/A	13-Apr		PT-06	R7-07
B5.20	5-315	Dissimilar Metal Nozz-SE	5361-5	4	UT	FER28	14-Apr	PDI-2-C10-12	UT-01	R7-08
	5-315	Core DP and Liquid Control	R1-91	1	PT	N/A	14-Apr		PT-07	R7-08

Cat/Item	Component ID	DESCRIPTION	ISO	Procedure	EXAMS	CAL STD	COMP	CAL SHT	DATA SHT	Report
B-K-1	Integral Attach For Piping, Pumps, Valves									
B10.10	SW-PS-2-A2-AA1	Pipe Lug Class 1	5352-5	2	MT	N/A	13-Apr		MT-17	R7-09
	SW-PS-2-A2-AA2	Pipe Lug	5352-5	2	MT	N/A	13-Apr		MT-18	R7-10
	SW-PS-2-A2-AA3	Pipe Lug	5352-5	2	MT	N/A	13-Apr		MT-19	R7-11
	SW-PS-2-A2-AA4	Pipe Lug	5352-5	2	MT	N/A	13-Apr		MT-20	R7-12
C-C	Integral Attach For Piping, Pumps, Valves									
C3.20	PSFW-E21-3147-301	Class 2 Stanchion to pipe	3147-5	2	MT	N/A	30-Mar		MT-02	R7-13
C-F	Pressure Retaining Welds in Piping									
C-F-1/Aug.	FW-C41-2979-P	2" pipe to coupling	2979-5	1	PT	N/A	30-Mar		PT-01	R7-15
C-F-1/Aug.	FW-C41-3361-02W1	3" valve to pipe	3361-5	1	PT	N/A	31-Mar		PT-02	R7-16
C-F-2/C5.51	FW-E11-3146-6W10	20" tee to elbow	3146-5	2	MT	N/A	6-Apr		MT-11	R7-17
	FW-E11-3146-6W10	20" tee to elbow	3146-5	3	UT	FER-41	8-Apr	PDI-1-C10	UT-01	R7-17
C-F-2/C5.51	FW-E11-3146-6WH	24" tee to pipe	3146-5	2	MT	N/A	3-Apr		MT-08	R7-18
	FW-E11-3146-6WH	24" tee to pipe	3146-5	3	UT	FER-43	4-Apr	PDI-1-C03	UT-01	R7-18
C-F-2/C5.51	FW-E11-3158-10WF4	20" pipe to nozzle	3158-5	2	MT	N/A	14-Apr		MT-05,05R	R7-19
	FW-E11-3158-10WF4	20" pipe to nozzle	3158-5	3	UT	FER-42	14-Apr	PDI-1-C18		R7-19
C-F-2/C5.51	SW-N-30-3258-19WJ	26" pipe to reducer	3258-5	2	MT	N/A	7-Apr		MT-12	R7-20
	SW-N-30-3258-19WJ	26" pipe to reducer	3258-5	3	UT	FER-5	8-Apr	PDI-1-C09	UT-01	R7-20
C-F-2/C5.52	SW-N-30-3258-19WJLU	intersecting long seam weld	3258-5	2	MT	N/A	7-Apr		MT-13	R7-20
	SW-N-30-3258-19WJLU	intersecting long seam weld	3258-5	3	UT	FER-5	8-Apr	PDI-1-C09	UT-02	R7-20
C-F-2/C5.51	SW-E11-3035-5WE	6" tee to reducer	3035-5	2	MT	N/A	8-Apr		MT-14	R7-21
C-F-2/C5.51	FW-E11-3157-0W6	16" pump to expander	3157-5	2	MT	N/A	31-Mar		MT-06	R7-22
	FW-E11-3157-0W6	16" pump to expander	3157-5	3	UT	FER-40	31-Mar	PDI-1-C01	UT-01	R7-22
C-F-2/C5.51	FW-E21-3144-0W1	12" pump to expander	3144-5	2	MT	N/A	30-Mar		MT-01	R7-23

Cat/Item	Component ID	DESCRIPTION	ISO	Procedure	EXAMS	CAL STD	COMP	CAL SHIT	DATA SHIT	Report
C-F-2/C5.51	FW-E21-3147-16W17	12" elbow to pipe	3147-5	2	MT	N/A	3-Apr		MT-09	R7-24
	FW-E21-3147-16W17	12" elbow to pipe	3147-5	3	UT	PDI-1 Alt.	6-Apr	PDI-1-C04-5	UT-01	R7-24
C-F-2/C5.51	SW-E21-3149-4WD	20" pipe to tee	3149-5	2	MT	N/A	1-Apr		MT-07	R7-25
	SW-E21-3149-4WD	20" pipe to tee	3149-5	3	UT	PDI-1 Alt.	1-Apr	PDI-1-C02	UT-01	R7-25
C-F-2/C5.51	FW-E41-3163-7W0	16" pipe to valve	3163-5	2	MT	N/A	8-Apr		MT-15	R7-26
	FW-E41-3163-7W0	16" pipe to valve	3163-5	3	UT	FER-85	10-Mar	PDI-1-C11	UT-01	R7-26
C-F-2/C5.51	FW-T48-04-2095-11W12	6" pipe to elbow	2095-5	2	MT	N/A	30-Mar		MT-03	R7-27
C-F-2/C5.51	FW-T48-04-2097-8W9	6" elbow to pipe	2097-5	2	MT	N/A	30-Mar		MT-04	R7-28
C-F-2/C5.51	SW-T48-04-2097-21WB	8" elbow to pipe	2097-5	7	VT-1	N/A	5-Apr		VT-02	R7-29
C-F-2/C5.51	FW-T48-04-2097-20W21	8" pipe to tee	2097-5	2	MT	N/A	8-Apr		MT-16	R7-30
C-F-2/C5.51	SW-T48-04-2097-25WF	10" elbow to elbow	2097-5	7	VT-1	N/A	5-Apr		VT-01	R7-31
C-F-2/C5.81	SW-E11-3146-5WC	24" pipe to weldolet	3146-5	2	MT	N/A	3-Apr		MT-10	R7-32
Augmented GL 88-01	FW-N20-3107-0W17	20" safe end to pipe (dm)	3107-1	3,4	UT	FER-11, 88	10-Apr	PDI-1-C12-14	UT-01	R7-33
								PDI-2-C04-06	UT-01	
Augmented GL 88-01	SW-N20-03-B014-BWSE	20" nozzle to safe end (dm)	3107-1	3,4	UT	FER-11, 88	10-Apr	PDI-1-C12-14	UT-02	R7-34
								PDI-2-C04-06	UT-02	
Augmented GL 88-01	FW-N20-3105-16W0	20" elbow to safe end (dm)	3105-1	3,4	UT	FER-11, 88	6-Apr	PDI-1-C06-08	UT-01	R7-35
								PDI-2-C01-03	UT-01	
Augmented GL 88-01	SW-N20-03-B014-AWSE	20" safe end to nozzle (dm)	3105-1	3,4	UT	FER-11, 88	6-Apr	PDI-1-C06-08	UT-02	R7-36
								PDI-2-C01-03	UT-02	
GE recommended exam	Steam Dryer	Support Ring Indications	5364-5	9	UT	CAL-DSR01	18-Apr	SDSR-CAL1/2	Dat-1/2	SDSR

GE recommended exam

Procedure
39.NDE.001
39.NDE.002
PDI-UT-1
PDI-UT-2

Reference Code
1
2
3
4

Procedure
UNIXDETC
Fermi-800-1/2
43.000.019
43.000.004

Reference Code
5
6
7
8

SECTION 3
SUMMARY OF REACTOR INTERNAL EXAMINATIONS

3.0 CODE CATEGORY

Code Category
B-N-1 and B-N-2 Inspections
Interval 2, Period 2, RF10

Components	Technique	Requirement	Results / Remarks
Brackets			
Feedwater Spargers (3)	VT-3 /EVT-1	ASME/BWRVIP-48	NRI
Core Spray Piping (3)	VT-3/EVT-1	ASME/BWRVIP-48	NRI
Guide Rod Bracket (1)	VT-3/EVT-1	ASME/BWRVIP-48	NRI
Steam Dryer Support (4)	VT-3/EVT-1	ASME/BWRVIP-48	NRI
Steam Dryer Hold Down (4)	VT-3/VT-1	ASME/BWRVIP-48	NRI
Surveillance Holder (1)	VT-1/EVT-1	ASME/BWRVIP-48	NRI
Feedwater			
Spargers (3)	VT-3	NUREG-0619	NRI
Nozzles (3)	VT-3	NUREG-0619	NRI
Core Spray			
Piping / Welds	EVT-1	BWRVIP-18	NRI (Note 1)
Spargers	EVT-1 / VT-1	BWRVIP-18	NRI (Note 1)
Jet Pump			
Riser Brace (Jet Pump No.5/6)	EVT-1 / VT-1	ASME/BWRVIP-41	NRI
Risers (Jet Pump Nos. 5/6 and 7/8)	EVT-1	BWRVIP-41	RI (Note 2)
Assemblies (Jet Pump No.5)	EVT-1	BWRVIP-41	NRI (Note 4)
Diffusers/Adapter welds (Jet Pump Nos. 5,6,8,11,16,17,19)	EVT-1 / VT-3	BWRVIP-41	NRI (Note 4)
Restrainer Bracket Assemblies (Jet Pump Nos. 5 and 15)	EVT-1 / VT-1/3	SIL 574 / SIL 629	RI (Note 6)
Sensing Lines (Jet Pump Nos. 5,6,7,16,17)	VT-3	SIL 420	NRI
Nozzle Inner Radius Surfaces	VT-1	Relief Request RR-A31 and RR-A31	NRI (Note 5)
Top Guide / Core Plate			
2 locations Top Guide	VT-1	SIL 554 / BWRVIP-26	NRI
Shroud			
Shroud Support	EVT-1	BWRVIP-07 / 38	NRI (Note 3)
Gussets	VT-1	BWRVIP-07 / 38	NRI (Note 3)
Steam Dryer			
Assembly 50%	VT-1/VT-3	SIL 474/SIL 644, Rev. 1	RI (Note 7)
Steam Separator			
Assembly 30%	VT-3	N/A	NRI
Shroud Head Bolts 50%	VT-3	SIL 433	NRI

Notes:

- (1) Examined accessible areas of all selected piping welds and components to the extent possible per BWRVIP-18 requirements. Sampling inspections were also performed on sparger welds.
- (2) Reinspected indication adjacent to RS-1 weld (1.75") on Jet Pump Nos. 7 and 8 identified during RF06 (10/98), and no change in length observed. Therefore, no repair is required.
- (3) Examined H-8 and H-9 welds adjacent to Jet Pump No.5. Examined accessible areas of gussets 7 and 8 to VT-1 requirements.
- (4) All assembly welds visually inspected except for welds DF-3, AD-1 and AD-2, which are inaccessible for EVT-1 inspection. An access study was performed in preparation for a UT examination in the future.
- (5) Inspected accessible areas of the following nozzle inside radius areas within limits of design and geometry: Jet Pump Instrumentation (1), Reactor Recirculation inlet (1), RPV head instrumentation.
- (6) Reinspected auxiliary spring wedge installed in RF09 as a permanent repair. No changes were noted. Identified small gap on restrainer screw for Jet Pump No.5 that does not impact operability.
- (7) No changes noted in previous indications. Inspection requirements were changed to "best effort VT-1" per SIL 644, Rev. 1. Indication noted at the base of several vertical welds not previously inspected. Evaluated as acceptable for at least one cycle of operation without repair.

Code Category
B-N-1 and B-N-2 Inspections
Interval 2, Period 2, RF09

Components	Technique	Requirement	Results / Remarks
Brackets			
Feedwater Spargers (3)	VT-3 EVT-1	BWRVIP-48	NRI
Core Spray Piping (4)	EVT-1	BWRVIP-48	RI (PB-015 Wear)
Feedwater			
Spargers (3)	VT-3	NUREG-0619	NRI
Nozzles (3)	VT-3	NUREG-0619	NRI
Core Spray			
Piping / Welds	EVT-1	BWRVIP-18	NRI (Note 1)
Spargers	EVT-1 / VT-1	BWRVIP-18	NRI (Note 1)
Jet Pump			
Riser Brace (Jet Pump Nos. 3 and 4)	EVT-1 / VT-1	ASME/BWRVIP-41	NRI
Risers (Jet Pump Nos. 3, 4, 7)	EVT-1	BWRVIP-41	RI (Note 2)
Assemblies (Jet Pump Nos. 3 and 4)	EVT-1	BWRVIP-41	NRI (Note 4)
Restrainer Bracket Assemblies (Jet Pump Nos. 1 through 20)	EVT-1 / VT-1/3	SIL 574 / SIL 629	RI (Note 6)
Sensing Lines (Jet Pump Nos. 3 and 4)	VT-3	SIL 420	NRI
Nozzle Inner Radius Surfaces	VT-1	Relief Request RR-A31 and RR-A31	NRI (Note 5)
Top Guide / Core Plate			
6 locations Top Guide	VT-1	SIL 554 / BWRVIP-26	NRI
Shroud			
Shroud Support	EVT-1	BWRVIP-07 / 38	NRI (Note 3)
Gussets	EVT-1	BWRVIP-07 / 38	NRI (Note 3)
Steam Dryer			
Assembly 30%	VT-3	SIL 474	No change in indications noted
Steam Separator			
Assembly 30%	VT-3	N/A	NRI
Shroud Head Bolts 50%	VT-3	SIL 433	NRI

Notes:

- (1) Examined accessible areas of all selected piping welds and components to the extent possible per BWRVIP-18 requirements. Sampling inspections were also performed on sparger welds.
- (2) Reinspected indication adjacent to RS-1 weld (1.75") on Jet Pump Nos. 7 and 8 identified during RF06 (10/98), and no change in length observed.
- (3) Examined H-8 and H-9 between Jet Pump Nos. 3 and 4. Examined accessible areas of gussets 2 and 15.
- (4) All assembly welds visually inspected except for welds DF-3, AD-1 and AD-2, which are inaccessible for VT inspection. UT technique not available.
- (5) Inspected accessible areas of the following nozzle inside radius areas within limits of design and geometry: Reactor Recirculation outlet (1), Reactor Recirculation inlet (5).
- (6) Second cracked tack weld discovered on restrainer screw for Jet Pump No.15. Crimped screw and installed auxiliary spring wedge as a permanent repair.

Code Category
B-N-1 and B-N-2 Inspections
Interval 2, Period 1, RF08

Components	Technique	Requirement	Results / Remarks
Brackets			
Steam Dryer Support (4)	EVT-1	BWRVIP-48	NRI
Feedwater Spargers (6)	EVT-1	BWRVIP-48	NRI
Guide Rod Bracket 0° & 180°	EVT-1 / VT-3	BWRVIP-48	NRI
Core Spray Piping (4)	EVT-1	BWRVIP-48	NRI
Feedwater			
Spargers (3)	VT-3	NUREG-0619	NRI
Nozzles (3)	VT-3	NUREG-0619	NRI
Core Spray			
Piping / Welds	EVT-1	BWRVIP-18	NRI (Note 1)
Spargers	EVT-1 / VT-1	BWRVIP-18	NRI (Note 1)
Jet Pump			
Risers (Jet Pump Nos. 7 and 8)	EVT-1	BWRVIP-41	RI (Note 2)
Risers (Jet Pump Nos. 1 and 2)	EVT-1	BWRVIP-41	NRI
Assemblies (Jet Pump Nos. 1 and 2)	EVT-1	BWRVIP-41	NRI (Note 4)
Restrainer Bracket Assemblies (Jet Pump Nos. 1 through 20)	EVT-1 / VT-1/3	SIL 574 / SIL 629	NRI
Sensing Lines	VT-3	SIL 420	NRI
Dry Tubes			
4-SRM	VT-1	SIL 409 /	NRI
8-IRM	VT-1	RICSIL-073	NRI
Top Guide / Core Plate			
8 locations Top Guide	VT-1	SIL 554 / BWRVIP-26	NRI
Core Plate Bolts (4 locations)	VT-1	SIL 588 / BWRVIP-25	NRI (Note 6)
Shroud			
Shroud Support	EVT-1	BWRVIP-07 / 38	NRI (Note 3)
Gussets	EVT-1	BWRVIP-07 / 38	NRI (Note 3)
Steam Dryer			
Assembly 30%	VT-3	SIL 474	No change in indications noted
Steam Separator			
Assembly 30%	VT-3	N/A	NRI
Shroud Head Bolts 50%	VT-3	SIL 433	NRI

Components	Technique	Requirement	Results / Remarks
Nozzle Inside Radius Sections	VT-1 (1 mil wire)	RR-A31 and RR-A32	NRI (Note 5)
RPV Seal Surface		N/A	
Head Flange	VT-1		NRI
Vessel Flange	VT-1		NRI
O-Rings	VT-1 (Direct)		NRI
Vessel Cladding	VT-3		NRI
Control Rod Guide Tubes (10)	EVT-1/VT-3	BWRVIP-47	NRI
Surveillance Specimen Bracket / Lugs	EVT-1 / VT-3	BWRVIP-48	NRI

Notes:

- (1) Examined accessible areas of all welds and components to the extent possible. BWRVIP baseline inspections were completed during RF06 and RF07. Sampling inspections were performed on the spargers.
- (2) Reinspected indication adjacent to RS-1 weld (1.75") identified during RF06 (10/98), and no change in length observed.
- (3) Examined approximately 22% of H-8 and H-9 at 0° and 180° and between Jet Pump Nos. 2 and 3. Examined accessible areas of gussets 1, 2, 3, 11, 12, and 22.
- (4) All assembly welds visually inspected except for welds DF-3, AD-1 and AD-2, which are inaccessible for VT inspection. UT Technique not available.
- (5) Inspected accessible areas of the following nozzle inside radius areas within limits of design and geometry: Main Steam (2), Core Spray (1), CRD Hydraulic Return (1) and Reactor Recirculation (3).
- (6) Inspected top of bolts at four azimuth locations only.

Code Category
B-N-1 and B-N-2 Inspections
Interval 2, Period 1, RF07

Components	Technique	Requirement	Results / Remarks
Brackets			
Steam Dryer Support (4)	EVT-1	BWRVIP-48	NRI
Feedwater Spargers (6)	EVT-1	BWRVIP-48	NRI
Guide Rod Bracket at 180°	EVT-1 / VT-3	BWRVIP-48	NRI
Core Spray Piping (4)	EVT-1	BWRVIP-48	NRI
Feedwater			
Spargers	VT-3	NUREG-0619	NRI
Nozzles	EVT-1	NUREG-0619	NRI
Core Spray			
Piping / Welds	EVT-1	BWRVIP-18	NRI (Note 1)
Spargers	EVT-1	BWRVIP-18	NRI
Jet Pump			
Risers (Jet Pump Nos. 7 and 8)	EVT-1	BWRVIP-41	RI (Note 2)
Risers (Jet Pump Nos. 11 through 20)	EVT-1	BWRVIP-41	NRI
Assemblies (Jet Pump Nos. 11 through 20)	EVT-1	BWRVIP-41	NRI (Note 4)
Set Screw Tack Welds	EVT-1	SIL 574	NRI
Sensing Lines	VT-3	SIL 420	NRI
Dry Tubes			
4-SRM	VT-1	SIL 409 /	NRI
8-IRM	VT-1	RICSIL-073	NRI
Top Guide / Core Plate			
8 locations Top Guide	VT-1	SIL 554	NRI
Core Plate Bolts (4 locations)	VT-1	SIL 588 R1	NRI
Shroud			
H2 Indication	EVT-1	BWRVIP-07	No change in indication
Shroud Support	EVT-1	BWRVIP-07	NRI (Note 3)
Gussets	EVT-1	BWRVIP-07	NRI (Note 3)
Steam Dryer			
Assembly 30%	VT-3	SIL 474	No change
Previous Indications	VT-3/UT		Indications have shallow depth as expected
Steam Separator			
Assembly 30%	VT-3	N/A	NRI
Shroud Head Bolts 50%	VT-3	SIL 433	NRI

Components	Technique	Requirement	Results / Remarks
Control Rod Blade O2-39	EVT-1	CARD 98-17816	Relook of previous indication – no significant changes.
RPV Seal Surface		N/A	
Head Flange	VT-1		NRI
Vessel Flange	VT-1		NRI
O-Rings	VT-1 (Direct)		NRI
Vessel Cladding	VT-3		NRI
Control Rod Guide Rods	EVT-1/VT-3	BWRVIP-47	NRI

Notes:

- (1) Examined accessible areas of all welds except P-1, which was inaccessible.
- (2) Reinspected indication adjacent to RS-1 weld (1.75") identified during RF06 (10/98), and no change in length observed.
- (3) Examined H-8 and H-9 at 0° and 180° only. Examined accessible areas of gussets between Jet Pump Nos. 11 through 20.
- (4) All assembly welds visually inspected expect for welds DF-3, AD-1 and AD-2, which are inaccessible for VT inspection. UT Technique not available.

SECTION 4
SUMMARY OF COMPONENT SUPPORT EXAMINATIONS

4.0 SUMMARY OF COMPONENT SUPPORT EXAMINATIONS

VT-3 examinations were performed on various system and component supports. Functional Testing for ASME Section XI, Article IWF-5000 snubbers was performed in accordance with EF-2 Technical Requirements Manual for functional testing of snubbers (Ref. Paragraph 5.1).

- 4.1 ASME SECTION XI - IWF (Class 1 and 2) Credit for Component Supports for Interval 2, Period 2, Refuel-10.

CLASS	COMPONENT SUPPORTS	SNUBBERS (1)	TOTAL
1	6	145	151
2	16	237	253
3	13	28	41
Other		135	135

Note:

- (1) All Snubbers were visually inspected to the requirements of the Technical Requirements Manual TR 5.1.1 and ASME Section XI using Level I, II and III, VT-3 certified inspectors.

4.2 Technical Requirements Examinations

4.2.1 Refuel-10 Examinations

- VT-3 examinations were performed on all safety related and non-safety related snubbers selected for functional testing per Technical Requirements Manual TR 5.1.1. Total examined was 545.
- A total of 122 safety related snubbers were functionally tested per the Technical Requirements Manual. 66 snubbers were initially selected at random and functionally tested. 8 snubbers that failed in RF09 were tested in RF10. Due to testing failures, 48 additional snubbers were functionally tested as required by the Technical Requirements Manual.
- Seal Life Changeout was performed on 47 snubbers.

4.2.2 Refuel-09 Examinations

- VT-3 examinations were performed on all safety related and non-safety related snubbers selected for functional testing per Technical Requirements Manual TR 5.1.1. Total examined was 198.

2. A total of 149 safety related snubbers were functionally tested per the Technical Requirements Manual. 66 snubbers were initially selected at random and functionally tested. Due to testing failures, 83 additional snubbers were functionally tested as required by the Technical Requirements Manual.
3. Seal Life Changeout was performed on 24 snubbers.

4.2.3 Refuel-08 Examinations

1. VT-3 examinations were performed on all safety related and non-safety related snubbers per Technical Requirements Manual TR 5.1.1. Total examined was 699.
2. A total of 66 safety related snubbers per the Technical Requirements Manual were initially selected at random and functionally tested. No snubbers failed functional testing.
3. Seal Life Changeout was performed on 31 Snubbers.

4.2.4 Refuel-07 Examinations

1. VT-3 examinations were performed on all safety related and non-safety related snubbers selected for functional testing per Technical Requirements Manual TR 5.1.1. Total examined was 223.
2. A total of 66 safety related snubbers per the Technical Requirements Manual. Snubbers were initially selected at random and functionally tested. One additional snubber that failed functional testing during RF06 was also functionally tested as required by the Technical Requirements Manual.
3. Seal Life Changeout was performed on 27 snubbers.
4. An additional 124 pre-service examinations were completed, resulting from the installation of additional supports due to a plant modification.

4.2.5 Preservice Examinations

A preservice visual examination was performed for Technical Requirements Manual Snubbers and ASME Section XI supports, which were modified, replaced, added, or repaired during refueling outages RF07, RF08, RF09, and RF10 (includes seal life changeout).

SECTION 5
ABSTRACT OF CONDITIONS NOTED
AND CORRECTIVE ACTIONS TAKEN

5.0 ABSTRACT OF CONDITIONS NOTED AND CORRECTIVE ACTIONS TAKEN

5.1 Refuel-10

The results of the inservice inspections performed indicate that vessels, piping, and components included in the Fermi ISI-NDE Program are in good structural condition and can support safe and reliable operation during the next operating cycle.

5.1.1 RPV Internals

During RF10, inspections were conducted on numerous reactor vessel components using the recommended inspection methods and techniques contained in ASME Section XI, various Boiling Water Reactor Vessel Internals Project (BWRVIP) inspection and examination guidelines, as well as selected augmented inspections identified in Section 3. The intent is to perform the highest quality inspections on all reactor pressure vessel (RPV) components including some BWRVIP guidelines that have not yet been formally approved by the NRC. This proactive approach will assure the continued structural integrity of RPV components. A detailed listing of inspections is provided in Section 3.

During inspection of the source range monitor (SRM) and intermediate range monitor (IRM) Dry Tubes, it was noted that 8 of the 12 Dry Tubes had linear crack-like indications in the collar region above the pressure boundary. A condition assessment resolution document (CARD) 04-25703 was initiated and evaluated, and no replacements were required during the outage. Replacement of selected Dry Tubes will be performed during future outages.

Inspections were completed on accessible welds on several welds on the Jet Pumps, primarily on Jet Pump No.5 to comply with the BWRVIP-41 reinspection recommendations. Reinspection was performed on the auxiliary spring wedge installed on Jet Pump No.15 and this revealed that the repair was effective. A slight gap was identified at a restrainer screw for Jet Pump No.5; however, no main wedge wear was present. This condition was evaluated in CARD 04-25917 and does not have any impact on plant operation.

During RF06, a crack of approximately 1 3/4 inch long was identified on the thermal sleeve to elbow weld (RS-1) on the riser of Jet Pump Nos. 7 and 8 at 120° AZ. This indication was evaluated and found acceptable for continued operation without repair. This indication was reinspected during RF07, RF08, RF09 and again in RF10, and there continues to be no observable change in length or width. This indication is within the allowable flaw acceptance tolerance for this location and repair is not necessary. Reinspection of this indication will again be performed during RF11. This crack is similar to indications identified in at least 5 other BWR plants.

Inspections of the Steam Dryer were performed, which included VT-1 inspections, following the recommendations contained in SIL 644, Supplement 1, and SIL 644, Rev. 1. Based on these new inspection requirements, several new indications were identified on the Steam Dryer. These indications were evaluated and documented in CARD 04-25416. The Steam Dryer is acceptable for continued operation and several indications will be reinspected during RF11. Selected indications and conditions identified during previous outages were again reinspected during RF10 and no observable changes were noted.

The RPV internals are in very good condition. There is no service related degradation that should impact plant performance during the next operating cycle. Internal inspections are

achieving their goal of detecting and monitoring degradation, and effecting prudent repairs/replacement to maintain the plant in a safe and reliable manner.

5.1.2 RPV External Volumetric and ASME Piping Weld Examinations

RPV weld ultrasonic examinations using ASME Section XI, Appendix VIII/PDI procedures continue to be performed for the first time on scheduled weld locations. These more sensitive examinations identify a significantly larger number of manufacturing flaws than reported during amplitude based examinations performed prior to RF09. A reexamination of a large slag indication/combination in weld 15-308B, which was discovered during RF09, confirmed that there has been no change. The fracture mechanics evaluation performed as part of CARD 03-16383 determined that the flaw would not present a structural or leakage problem during the remaining service-life of the RPV with a projected 20 percent power uprate, including a 20-year life extension. Another similar RPV Shell Weld (15-308A) was also examined. The remote inspection system recorded 66 relevant weld indications. Two of the flaws had a measurable through wall dimension and were typical of those expected in welds fabricated with the sub-vert welding process. One of the flaws was accepted based on the criteria of IWB-3510 and the other was accepted based on the flaw handbook developed for Fermi in accordance with IWB-3600.

During RF10, Detroit Edison continued to implement a Risk Informed Inservice Inspection Program for ASME Class 1 piping welds using degradation mechanism specific exam volumes and methods where applicable. All other welds were examined as required in ASME Section XI. Ultrasonic examination techniques qualified in accordance with ASME Section XI, Appendix VIII and the Utility Performance Demonstration Initiative were used. No service induced piping weld defects were detected.

One ASME Class 2 piping weld that in the previous inspection interval only required a surface examination based on the nominal material thickness, now also requires a volumetric exam under the updated Code requirements. The weld was found to have an ultrasonic exam scanning limitation. The limitation was due to welded support lugs and a Code Plate that prevented obtaining greater than 90 percent coverage (CARD 04-25787). Therefore, another weld on the same line was selected. That weld had not been examined since construction. The initial surface exam detected a manufacturing processing flaw that would have been permitted by the material specification. The flaw was removed with a sanding disc and the required examinations were completed satisfactorily (CARD 04-25870).

No service related degradation was noted during RF10 nondestructive examination (NDE). The RPV and piping systems are in satisfactory condition to support future safe operation of the plant.

CARD 04-20518 was initiated well before RF10 based on Performance Engineering review of industry operating experience (OE) 17638 that identified a potential problem with pressurization of the entire Class 1 boundary during a 10-year interval hydrostatic test. The OE was determined to be applicable to Fermi, and impacted the RF06 pressure test. The Operations test lineup procedure, 24.137.21, was revised and the test was completed as required during RF10.

5.1.3 Component Supports

One hanger was found with a discrepancy between the installed condition and the configuration document. It was determined that this condition did not affect the component's operability and was not reportable. No additional supports were inspected as a result of this observation.

Snubber functional testing found six mechanical snubbers that did not meet its acceptance criteria. Four of the failures were due to grease degradation. The other two failures were due to overload. All snubbers were replaced with rebuilt and tested snubbers. Evaluation of the failed snubbers found no adverse effects on their associated piping. All required sample expansions were completed to meet the requirements of the Technical Requirements Manual TR 5.1.1. Reference the following CARDS: 04-25816, 04-25845, 04-25663, 04-25662, 04-25612, and 04-25275.

5.2 Refuel-09

The results of the inservice inspections performed indicate that vessels, piping, and components included in the Fermi ISI-NDE Program are in good structural condition and can support safe and reliable operation during the next operating cycle.

5.2.1 RPV Internals

During RF09, inspections were conducted on numerous reactor vessel components using the recommended inspection methods and techniques contained in various Boiling Water Reactor Vessel Internals Project (BWRVIP) inspection and examination guidelines as well as selected augmented inspections identified in Section 3. The intent is to perform the highest quality inspections on all RPV components including some BWRVIP guidelines that have not yet been formally approved by the NRC. This proactive approach will assure the continued structural integrity of RPV components. A detailed listing of inspections is provided in Section 3.

During vessel flange inspection after disassembly and prior to flood up, it was noted that a nail had been compressed between the flanges near stud No. 54. The nail was removed leaving a depression outside of the sealing surface. A condition assessment resolution document (CARD) 03-10364 was initiated, and no repairs were required. Additionally, after O-ring removal and prior to cleaning, the grooves were inspected and heavy silver deposits were noted to have been transferred from the O-ring. The deposits were flaky in nature and were removed with scotch brite pads followed by light stoning (CARD 03-14819).

Inspections were completed on all accessible welds on two complete Jet Pump Risers and Assemblies (Nos. 3 and 4) to comply with the BWRVIP-41 reinspection recommendations. Reinspection of a previously cracked restrainer set-screw on Jet Pump No.15 revealed a second cracked tack weld (CARD 03-16929). All 20 Jet Pumps restrainer assemblies were reinspected as recommended by SIL No. 629, including the wedge, restrainer screw contact, as well as the 80 restrainer screw tack welds. No additional cracked welds were found. The set-screw on Jet Pump No.15 was staked to prevent backing out and an auxiliary spring wedge was installed per engineering design package (EDP) 32499.

During RF06, a crack of approximately 1 ¾ inches long was identified on the thermal sleeve to elbow weld (RS-1) on the riser of Jet Pump Nos. 7 and 8 at 120° AZ. This indication was evaluated and found acceptable for continued operation without repair. This indication was reinspected during RF07, RF08, and RF09, and there continues to be no observable change in length or width. This indication is within the allowable flaw acceptance tolerance for this location and repair is not necessary. Reinspection of this indication will again be performed during RF10. This crack is similar to indications identified in at least 5 other BWR plants.

Indications and conditions identified during previous outages were reinspected during RF09. One additional tie rod on the steam dryer was found to have a cracked tack weld (TR-E-6)

similar to those noted previously. There is little or no concern that this nut, or any others, will back out during the current cycle with the remaining sound welds. No other changes were noted.

The RPV internals are in very good condition. There is no service related degradation that should impact plant performance during the next operating cycle. Internal inspections are achieving their goal of detecting and monitoring degradation and effecting prudent repairs/replacement to maintain the plant in a safe and reliable manner.

5.2.2 RPV External Volumetric and ASME Piping Weld Examinations

During RF09, Detroit Edison implemented a Risk Informed Inservice Inspection Program for ASME Class 1 piping welds. No piping weld defects were detected.

New utility performance demonstration initiative requirements (ASME Section XI, Appendix VIII, Supplement 10) were also implemented for two dissimilar metal weld inspections. No indications of service related degradation were detected.

RPV weld ultrasonic examinations using ASME Section XI, Appendix VIII/PDI procedures continue to be performed for the first time on scheduled weld locations. These more sensitive examinations identify a significantly larger number of manufacturing flaws than reported during previous amplitude based examinations. These more sensitive inspections detected 4 indications/combinations that would have been unacceptable per IWB-3510. These pre-existing welding flaws were confirmed by review of the construction radiographs and the pre-service UT data. One large slag indication/combination was detected in lower intermediate shell course weld 15-308B and was accepted in accordance with IWB-3112 (b). However, due to its significant size, a fracture mechanics evaluation was performed as specified in CARD 03-16383 to verify the flaw will not present a structural or leakage problem during the remaining service-life of the RPV with a projected 20 percent power uprate, and including a 20-year life extension. INPO OE16421 was issued to notify other licensees.

During the performance of Category B-G-2 bolting inspections, loose nuts were detected on valve bolting at E11-F009-VBB and CARD 03-16366 was initiated. Investigation determined that the loose bolting was related to torquing practices for pressure seal bonnet bolting. An initial sample expansion was made and additional loose bolting was detected. The sample was extended to cover all pressure seal style bonnet bolting. Additional CARDS (03-16370, 03-16371, and 03-16372) were initiated for loose bolting during the expanded sample examinations of E11-F060B-VBB, B21-F011B-VBB, and E11-F008-VBB. Work requests (000Z031279, 000Z031430, 000Z031420, and 000Z0231490) were initiated to re-torque the pressure seal bonnet bolting with system pressure under the bonnets.

No service related degradation was noted during RF09 NDE. The RPV and piping systems are in satisfactory condition to support future safe operation of the plant.

5.2.3 Component Supports

Several hangers were found with discrepancies between the installed condition and their configuration documents. It was determined that these conditions did not affect the components' operability and were not reportable. No additional supports were inspected as a result of these observations.

Snubber functional testing found eight mechanical snubbers that did not meet its acceptance criteria. Five of the failures were due to grease degradation. The other three failures were due to

overload. All snubbers were replaced with rebuilt and tested snubbers. Evaluation of the failed snubbers found no adverse effects on their associated piping. All required sample expansions were completed to meet the requirements of the Technical Requirements Manual TR 5.1.1. Reference the following CARDS: 03-16111, 03-16112, 03-16921, 03-16933, 03-16934, 03-16935, and 03-16927.

5.3 Refuel-08

The results of the inservice inspections performed indicate that vessels, piping, and components included in the Fermi ISI-NDE Program are in good structural condition and can support safe and reliable operation during the next operating cycle.

5.3.1 RPV Internals

During RF08, inspections were conducted on numerous reactor vessel components utilizing the recommended inspection methods and techniques contained in various Boiling Water Reactor Vessel Internals Project (BWRVIP) inspection and examination guidelines as well as selected augmented inspections identified in Section 3. The intent was to perform the highest quality visual inspections on all RPV components utilizing some BWRVIP guidelines that have not yet been formally approved by the NRC. This proactive approach will assure the continued structural integrity of RPV components. A detailed listing of inspections is provided in Section 3.

Inspections were completed on all accessible welds on two complete Jet Pump Risers and Assemblies (Nos. 1 and 2) to comply with the BWRVIP-41 reinspection recommendations. These inspection points included welds previously inspected and no recordable indications were identified.

Baseline inspections had been previously completed for all Jet Pump assembly welds (Nos. 1 through 20) during RF06 and RF07, with the exception of welds DF-3, AD-1 and AD-2. Inspection of these locations will be conducted during future outages when a technique is developed and qualified.

During RF06, a crack of approximately 1 ¼ inches long was identified on the thermal sleeve to elbow weld (RS-1) on the riser of Jet Pump Nos. 7 and 8 at 120° AZ. This indication was evaluated and found acceptable for continued operation without repair. This indication was reinspected during RF07 and again in RF08, and there continues to be no observable change in length or width. This indication is within the allowable flaw acceptance tolerance for this location and repair is not necessary. Reinspection of this indication will again be performed during RF09. This crack is similar to indications identified in at least 5 other BWR plants.

Because of recent industry findings, all 20 Jet Pumps restrainer assemblies were inspected as recommended by SIL No. 629, including the wedge, restrainer screw contact, as well as the 80 restrainer screw tack welds. The conditions on Jet Pump No.15 were again unchanged, and it still appears to have only one of 2 tack welds cracked. No additional cracked welds were found, therefore, no repairs were required this outage. In addition, there was no wedge damage identified and full contact (no gaps) was verified on all restrainer screws on all Jet Pumps.

Extensive visual inspections of Core Spray internal piping and spargers were performed per BWRVIP-18 guidelines for reinspection. No indications of cracking were identified. All accessible areas of the welds were inspected and no recordable indications were identified.

Inspections were performed on selected integral attachments per the guidelines of BWRVIP-48 and on approximately 22 percent of the Shroud Support Ring as well as several Gussets per the guidelines of BWRVIP-38. In addition, visual inspections were performed on several nozzle inner radius sections per Relief Request RR-A31 and A32. No recordable indications were identified on any of these inspections.

Two new indications were identified on the steam dryer assembly welds in areas not previously inspected. The indications were identical to those previously reported. These indications were evaluated and no repairs were required during RF08. Visual and ultrasonic inspections will continue to be performed during future outages.

Indications and conditions identified during previous outages were reinspected during RF08. The reinspection included the following items with no further degradation identified:

- Steam Dryer tie rod nut to washer tack welds cracks and support ring.
- RPV internal surfaces - "Bathtub Ring".
- SRM / IRM Dry Tubes.

No adverse changes in existing indications were noted. The RPV internals are in very good condition. There is no service related degradation that should impact plant performance during the next operating cycle. Internal inspections are achieving their goal of detecting and monitoring degradation and effecting prudent repairs/replacement to maintain the plant in a safe and reliable manner.

5.3.2 RPV External Volumetric and ASME Piping Weld Examinations

During RF08, Detroit Edison implemented a Risk Informed Inservice Inspection Program for ASME Class 1 piping welds. No piping weld defects were detected.

New utility performance demonstration initiative requirements (ASME Section XI, Appendix VIII, Supplements 4 and 6) were also implemented for RPV weld inspection. These more sensitive inspections detected existing fabrication flaws that were confirmed by review of construction radiographs.

During the performance of Class 2 weld inspections, one service related defect was detected at a stiffener plate weld adjacent to a vessel support ring on the Division 2 RHR heat exchanger. The defect appeared to have originated from a pre-existing construction flaw in the stiffener plate weld tie-in at the support ring weld and propagated into the base material in the heat affected zone of the stiffener plate. The inspection sample was expanded to include all of the stiffener plate welds at that location. No additional indications were detected. The defect was documented on CARD 01-20653, and the defect was ground out and repaired by welding. The repaired area was then reinspected to verify defect removal.

No other service related conditions were noted during RF08 inspections.

5.3.3 Component Supports

Several hangers were found with discrepancies between the installed condition and their configuration documents. It was determined that these conditions did not affect the components' operability and were not reportable. No additional supports were inspected as a result of these observations.

Hanger P45-3353-G14, which was not in the sample scope, was found by plant personnel to be pulled from the wall. A new baseplate was mounted and the strut returned to design settings. An inspection scope expansion was initiated and all other supports on the P45-3353 line were inspected. One minor discrepancy (loose jamb nut) was found and corrected. It was determined that this did not impact component operability.

5.4 Refuel-07

Nondestructive examinations have verified that RPV and internals piping systems and supports are in good structural condition and can support safe and reliable operation during this operating cycle.

5.4.1 RPV Internals

During RF07, inspections were conducted on numerous reactor vessel components utilizing the recommended inspection methods and techniques contained in various Boiling Water Reactor Vessel Internals Project (BWRVIP) inspection and examination guidelines as well as the augmented inspections identified in Section 3. While it is true that many of the guidelines are not yet approved by the NRC, the intent was to perform the highest quality visual inspections on RPV components. This proactive approach will assure the structural integrity of RPV components.

Inspections were initially scheduled for 50 percent of the Jet Pump risers and assemblies (Nos. 11 through 20) to comply with BWRVIP-41 inspection recommendations. These inspection points included welds not previously inspected. During RF06, a crack of approximately 1 ¼ inches long was identified on the thermal sleeve to elbow weld (RS-1) on the riser of Jet Pump Nos. 7 and 8 at 120° AZ. This indication was evaluated and found acceptable for continued operation without repair. This indication was reinspected during RF07 and there was no observable change in length or width. This indication is within the allowable flaw acceptance tolerance for this location and repair is not necessary. Reinspection of this indication will again be performed during RF08. This crack is similar to indications identified in at least 5 other BWR plants.

All accessible welds and locations on Jet Pump assemblies Nos. 11 through 20 were inspected and no recordable indication were identified. A baseline inspection has been completed for all Jet Pump welds (Nos. 1 through 20) with the exception of welds DF-3, AD-1 and AD-2. Inspection of these locations will be conducted during future outages when a technique is developed and qualified. Reinspections on 1 of the 20 original control rod blades (02-39) identified very little change from the cracking on the sheath area near the handle on blade identified in RF06. These indications were evaluated and are not detrimental to the operation of the control blade. While not a code inspection, several blades were periodically inspected as recommended by General Electric, following the chemistry transient in 1993.

No new indications were identified on the steam dryer assembly welds in areas not previously inspected. Both ISI and General Electric previously evaluated the indications. No repairs were required during RF07. In addition, selected linear indications on the steam dryer support ring were ultrasonically inspected to determine the depth. The indications are shallow, less than ½ inch in depth, and pose no threat to the integrity of the steam dryer assembly. Visual and ultrasonic inspections will be performed during future outages.

Indications and conditions identified during previous outages were reinspected during RF06. The reinspection included the following items with no further degradation identified:

- Core Shroud ID linear indication above the H2 weld.
- Steam Dryer tie rod nut to washer tack welds cracks and support ring.
- RPV internal surfaces - "Bathtub Ring".
- SRM / IRM Dry Tubes.

The Jet Pump restrainer screws were again inspected (80 tack welds). The conditions were unchanged this outage on Jet Pump No.15, which had one of 2 tack welds cracked. No additional cracked welds were found. The condition identified previously did not require repair this outage.

Extensive inspection of Core Spray internal piping and spargers were performed per BWRVIP-18 Guidelines. No indications of cracking were identified. All accessible areas of welds were inspected with the exception of the P-1 weld, which is inaccessible for inspection.

No adverse changes in existing indications were noted. The RPV internals are in very good condition to date. There is no service related degradation that should impact plant performance during the next operating cycle. Internal inspections are achieving their goal of detecting and monitoring degradation and effecting prudent repairs/replacement to maintain the plant in a safe and reliable manner.

5.4.2 RPV External Volumetric and ASME Piping Weld Examinations

No service related defects were detected by nondestructive examinations performed during RF07.

5.4.3 Component Supports

Hanger E11-3184-G18 was found to have a loose jamb nut on the main strut and was tightened. It was determined that this condition did affect component's operability.

Hangers N30-3258-G02, G03, G08, G10, G11, G12, G14, G15, G16, N30-3259-G06, G07 and G08 were found with notches worn on the threaded rod at the top of the support. This condition was evaluated and it was determined that this did not impact component's operability. Hangers N30-3258-G07 and G08 the notches were blended to remove sharp edges.

Hangers N30-3258-G04 and G15 were found to be slightly outside their cold setting. It was determined that this condition did not impact component's operability. The hangers were reset to their cold position.

These conditions were not reportable.

5.5 Refuel-06

5.5.1 RPV Internals

During RF06, inspections were conducted on numerous reactor vessel components utilizing the recommended inspection methods and techniques contained in various Boiling Water Reactor Vessel Internals Project (BWRVIP) inspection and examination guidelines. While it is true that many of the guidelines are not yet approved by the NRC, the intent was to perform the highest

quality visual inspections on RPV components. This proactive approach will assure the structural integrity of RPV components.

Inspections were initially scheduled for 50 percent of the Jet Pump risers and assemblies to comply with BWRVIP inspection recommendations. These inspection points included welds not previously inspected on the risers. A crack of approximately 1 3/4 inches long was identified on the thermal sleeve to elbow weld (RS-1) on the riser of Jet Pump Nos. 7 and 8 at 120° AZ. This indication was evaluated and found acceptable for continued operation without repair. Reinspection of this indication will be performed during RF07. This crack is similar to indications identified in at least 5 other BWR plants within the last year.

Inspections of 2 of the 20 original control rod blades identified cracking on the sheath area near the handle on blade 02-39. These indications were evaluated and are not detrimental to the operation of the control blade. However, Reactor Engineering is evaluating future inspection requirements for the additional old style blades. While not a code inspection, these blades are periodically inspected as recommended by General Electric, following the chemistry transient in 1993.

Several new indications were identified on the steam dryer assembly on welds or areas not previously inspected. These indications are similar to other previously reported indications on the dryer. Both ISI and General Electric evaluated the indications. No repairs were required during RF06; however, recommendations were made to reinspect the non-safety related dryer assembly, both visually and ultrasonically in future outages.

Indications and conditions identified during previous outages were reinspected during RF06. The reinspection included the following items with no further degradation identified:

- Core Shroud ID linear indication above the H2 weld.
- Steam Dryer tie rod nut to washer tack welds cracks and support ring.
- Shroud head bolt No.9 was replaced because it would not latch.
- RPV internal surfaces - "Bathtub Ring".

The Jet Pump restrainer screws were again inspected (80 tack welds). The conditions were unchanged this outage on Jet Pump No.15, which had one of 2 tack welds cracked. No additional cracked welds were found. The condition identified previously did not require repair this outage.

Extensive inspection of Core Spray internal piping and spargers were performed per BWRVIP-18 to address recent industry occurrences of cracking. No indications of cracking were identified.

The Core Shroud was ultrasonically inspected as required by NRC commitment in accordance with the latest techniques and methods included in the BWRVIP inspection standards. Fermi 2 surpassed eight years of hot operating time and this resulted in required inspection of the H3, H4, H5, and H7 welds. Inspections were performed using focused phased array ultrasonic techniques. This inspection identified no evidence of intergranular stress corrosion cracking (IGSCC) in the welds and because of the extensive coverage obtained with the GE tooling, reinspection will not be required for 6 years.

No adverse changes in existing indications were noted. The RPV internals are in very good condition to date. There is no service related degradation that should impact plant performance during the next operating cycle. Internal inspections are achieving their goal of detecting and

monitoring degradation and effecting prudent repairs/replacement to maintain the plant in a safe and reliable manner.

5.5.2 External Volumetric and ASME Piping Weld Examinations

No service related defects were detected by nondestructive examinations performed during RF06.

Examinations were encountered with physical limitations that prevented complete code coverage from being achieved. Relief requests have been prepared or are being revised to address all limitations encountered during the First Inspection Interval.

NDE examinations have verified that ASME piping systems are in good structural condition and can support safe and reliable operation during the next operating cycle.

5.5.3 Component Supports

Eight component supports were discovered with minor service related discrepancies from the RF06 inspection population of 138 component supports. Structural integrity evaluations were performed which concluded all component supports satisfied operability requirements. Therefore, no reportable conditions exist.

5.6 Refuel-05

5.6.1 RPV Internals

During RF05, two new concerns were identified and evaluated. Nine of the twelve SRM / IRM dry tubes were found not to be fully engaged in the top guide, but are sufficiently engaged to remain functional.

One of the two tack welds on a Jet Pump restrainer screw were found to be cracked. As a result, all 80 restrainer screw tack welds were inspected. No additional cracked welds were found. This condition did not require repair during this outage.

Extensive inspection of Core Spray internal piping and spargers was performed to address recent industry occurrences of cracking. No indications of cracking were identified.

Indications identified during previous outages were reinspected during RF05. The reinspection included the following items:

- Core Shroud ID linear indications above the H2 weld.
- Steam Dryer tie-rod nut to washer tack welds cracks.
- Steam dryer support ring.
- RPV internal surfaces at the "bathtub ring".

No adverse changes in existing indications were noted. The RPV internals are in very good condition to date. There is no service related degradation that should impact plant performance during the next operating cycle. Internals inspections are achieving their goal of detecting and monitoring degradation and effecting prudent repairs/replacements to maintain the plant in a safe and reliable manner.

Repairs or Replacements Completed	Outage(s)
Shroud Head Bolt replacement	RF04, RF05
Jet Pump Beam replacement	RF04
Steam Dryer End Panel repair welding	RF03

5.6.2 Reactor Pressure Vessel External/Volumetric and ASME Piping Weld Examinations

No service related defects were detected during nondestructive examinations performed during RF05. While it is still too early to draw any global conclusions about effectiveness of IGSCC mitigation treatments (IHSI and MSIP) performed at Fermi, preliminary indications are good. No IGSCC has been detected to date in any piping welds. Additionally, no evidence of fatigue cracking has been detected in any RPV, piping system, or support welds.

5.6.3 Component Supports

Several component supports were found with discrepancies between the existing field configuration versus as-built hanger sketch. Deviation Event Reports (DERs) were issued to perform structural integrity calculations. These evaluations determined that the existing field configurations did not effect the component operability; no reportable configurations were found. No additional component supports were examined as a result of these observations.

5.7 Refuel-04

5.7.1 RPV Internals

During inspection of the RPV Internals/Internal Components a number of indications were reported to Detroit Edison for review/disposition. The reported conditions are listed as follows:

Core Shroud - Extensive Visual Examination of the Core Shroud outside surface welds was performed following hydrolazing of each weld. The circumferential welds on the outside surface of the Core Shroud were visually examined (VT-1) to the maximum extent possible from the H-1 weld through the H-7 weld with no indications being found. The H-8 and H-9 shroud support welds were also examined (VT-3) but from a greater distance and at a greater camera angle. No indications were found.

Core Shroud Inside Surface - The inside surface of the Core Shroud was inspected to the maximum extent on the H-2 through H-4 welds (VT-1). No indications were found on the H-3 and H-4 welds on the inside surface of the shroud. Two small indications <1 inch long were found at the 125° azimuth just above the H-2 weld but not in the H-2 weld. These indications were in a general vertical direction, jagged in nature, and tight with no visible separation. These indications appear to be different from indications found at other BWR plants and most probably are a result of cold working during the fabrication process. These indications were evaluated against established flaw screening criteria and have no significant effect on the structural integrity of the shroud (DER 94-0221).

Corrosion Deposits/Biological Growth Deposits - Unusual surface conditions were identified during IVVI examinations on the unclad feedwater nozzles and also on the RPV cladding near the steam line nozzles 360° around the vessel. As a result, a sampling dive into the RPV was

performed. A diver successfully completed the necessary corrosion product sampling, visual examinations, and exploratory examinations in the RPV. Corrosion deposit samples were removed from both the "C" feedwater nozzle unclad area (150°) and the cladding at approximately the same azimuth. Based on the results of the sampling, there was no evidence of micro biologically induced corrosion (MIC) in the vessel, although the samples did test positive for the presence of bacteria (DER 94-0204).

Additionally, the diver found (loose corrosion) on the feedwater nozzles. The deposits were easy to scrape off. There was no base metal attachment to the unclad surfaces. The corrosion deposits on the vessel cladding (360°) were found to be more tightly adhered than the deposits on the feedwater nozzles. However, the vessel cladding corrosion deposits have been looked at and have been confirmed that there had been no base metal attack.

No pits or degradation of the cladding were identified. A special hydrolazing nozzle was utilized to remove the corrosion deposits on both the feedwater nozzles and the vessel cladding. The hydrolyzing was 100 percent effective in cleaning the feedwater nozzles and approximately 75 percent effective in removing the deposits on the vessel cladding.

Steam Dryer - Tie Rod Nut/Washer Tack Welds - Many of the 48 tie rod end washers/nuts protrude above the unit end plate surface. Fifteen of the protruding tie rods had cracked tack welds; however, all but 4 of these had at least 2 intact tack welds at each location. The remaining 4 tie rod nut/washers, which had failed tack welds, did not represent a structural or functional concern. There is little or no concern that these four nuts will back out during the current cycle with the remaining sound welds. Repairs made during RF03 on the hood to end panel welds were reinspected and found to be in good condition (DER 94-0194).

Steam Dryer Support Ring - Two small indications were identified on the steam dryer support ring this outage. One indication was approximately 1/2 inch in length on the vertical face of the ring, and the other indication was 4 inches - 6 inches in length on the horizontal face of the support ring. Based on experience with support ring cracking on similar dryers, these indications were caused by IGSCC. The primary source of stress is residual fabrication stress. Based on experience from similar dryers of the same design with more severe cracking, this crack does not present a concern for the structural adequacy of the support ring (DER 94-0194).

Shroud Head Bolts - All Shroud Head Bolts were examined using Improved Ultrasonic Testing procedures. Crack-like indications were found in 16 of 48 bolts. The crack location was identical to those found at other BWR plants (i.e., at the collar crevice). The 16 cracked bolts were replaced with those of a new and more IGSCC crack resistant design. A 17th bolt was replaced since it had a slight bow that precluded reinstallation. The remaining old design bolts, which had no indications, were reviewed and found to be acceptable for the next operating cycle. These bolts were reinstalled returning the configuration to the original design of 48 bolts. A design review was performed, in part, to determine the structural significance of operating with indications in 16 shroud head bolts. This review determined that only 20 bolts are required to fulfill design requirements (DER 94-0210).

Jet Pump Hold Down Beams - As a precaution, Detroit Edison replaced all 20 Jet Pump hold down beams. This was done as a conservative measure based on recent industry experience with beam cracking and possible deleterious effects from the chemistry transient. Following replacement, Detroit Edison performed a baseline preservice examination of the installed beams prior to plant start-up using the latest available technique for cracking detection. Of the 20 Jet Pump assemblies, 12 beam bolt assemblies were changed in situ, 7 required that the inlet mixer assembly be removed, and 2 mixer assemblies were removed to permit camera access to the RPV

bottom head area. Each mixer that was removed had a camera inserted for RPV bottom area examination. No discrepancies were observed (DER 93-0643).

5.8 Refuel-03

5.8.1 RPV Internals

During inspection of the RPV Internals/Internal Components, two cracks were reported to Detroit Edison for review/disposition. The reported conditions are listed as follows:

Crack Number 1 was located in hood to end plate weld HE-B-1. The crack was approximately 50 inches long, with a maximum gap of 1/2 inch. The crack ran through the throat of the weld and was caused by high cycle fatigue. This crack is not uncommon to the industry, having occurred at other plants.

Crack Number 2 is located in the end plate of dryer bank "A" just above the weld to the end plate of the drain trough. The crack is in the weld heat affected zone (HAZ) between Tie Rods TR-A-7 and TR-A-8. The crack is caused by IGSCC.

Crack Number 1 was repaired by grinding out the existing failed weld and preparing the base metal edges for the new weld, clamping the crack closed, rewelding the hood to end plate joint, and welding a new reinforcing plate over the replaced/existing weld. With the exception of the original failed weld repair, this repair process was repeated at three (3) similar locations where the potential future weld failure was high. This was performed as a preventive measure to preclude future joint failure, higher personnel exposure, and higher future repair costs.

An evaluation was performed on Crack Number 2, and it was determined that this crack did not require repair as there is low probability that this crack will propagate into weld or base metal outside the HAZ. The crack will tend to grow at a slow rate, as the stresses at this crack location during dryer operation are low. Crack Number 2 will continue to be monitored during future outages.

These indications previously identified during inspections performed in RF01 and RF02 were again reinspected with no change in conditions noted. These areas in addition to the cracks identified and repairs performed during RF03 will be monitored during further inspection of the RPV internals as required by ASME Section XI, Table IWB-2500-1 (B13.10).

5.8.2 Component Supports

Several hangers were found with discrepancies between the installed condition and their configuration documents. Deviation Event Report (DER) 92-0573 was initiated for evaluation. It was determined that their nature was such that it did not effect the components operability and was not reportable. No additional supports were inspected as a result of these observations.

5.9 Refuel-02

5.9.1 RPV Internals

During inspection of the RPV Internals/Internal Components, an additional indication to the ones previously identified during RF01 was reported to Detroit Edison for review/disposition. The reported indications are listed as follows:

An apparent arc strike was noted on core spray internal piping at 310°. This was not recorded in the previous inspection.

This condition and those previously identified during RF01 were evaluated using prudent engineering practices and were determined not to be non-conforming to the original design requirement or detrimental to continued service.

No corrective action was taken to repair these indications. These areas will be monitored during future inspections of the RPV internals as required by ASME Section XI, Table IWB-2500-1 (B13.10).

5.9.2 Piping Welds

No service related defects were detected during the inspection of piping welds, 2 welds having rejectable indications were reported to Detroit Edison for review/disposition. The reported indications are listed as follows:

Weld SW-E11-3151-1WH had rejectable surface indications identified during the magnetic particle examination; DER 91-0262 was initiated for evaluation.

Weld SW-RD-2-B3-W5LU-B had rejectable surface indications identified during the liquid penetrant examination; DER 91-0234 was initiated for evaluation.

Both welds were subsequently blend ground to remove the indications and reexamined by both surface and volumetric techniques with acceptable results. The initial indications on both welds were most likely left over from construction. No additional welds were inspected as a result of these minor indications.

5.10 Refuel-01

5.10.1 RPV Internals

During inspection of the RPV Internals/Internal Components, several conditions were reported to Detroit Edison for review/disposition. The reported indications are listed as follows:

Tack weld on feedwater sparger bracket at 180° for attachment nut/pin was not visible.

Unusual surface conditions (arc strikes and pitting) were noted on Loop A Core Spray Piping at approximately 140°. Additional light scratches were noted on both Loop A and Loop B Core Spray Internal Piping.

Small arc strikes were noted on the Core Spray Internal piping/sparger brackets at 15° and 150°.

A small arc strike was noted on the Upper Core Spray Sparger (shroud area) at 145°.

The above conditions were evaluated using prudent engineering practices and were determined not to be non-conforming to the original design requirement or detrimental to continued service.

No corrective action was taken to repair these indications. These areas will be monitored during future inspections of the RPV internals as require by ASME Section XI, Table IWB-2500-1 (B13.10).

5.10.2 Component Supports

Hanger T48-2097-G21 was found to have insufficient clearances. Deviation Event Report (DER) 89-1315 was initiated for evaluation. It was determined that this was not reportable. The hanger was reworked to provide acceptable clearances as specified on the hanger sketch. Additional adjacent supports were visually inspected with no discrepancies identified.

SECTION 6

PROGRAM STATUS, ASME SECTION XI CREDIT – IWB, IWC & IWF

6.0 PROGRAM STATUS, ASME SECTION XI CREDIT - IWB, IWC, & IWF

Interval 2, Period 2, Refuel-10 (Excludes Pressure Testing)

6.1 CATEGORY B-A

6.1.1 CATEGORY: B-A Pressure Retaining Welds in Reactor Vessel
 ITEM NO: B1.11 Shell Welds-Circumferential

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RPV	4	4 (1)	0	0%
TOTALS:	4	4 (1)	0	0%

NOTE:

- (1) Relief Request RR-A25 was written to alleviate the need for examination of these welds beyond the overlap zone of the intersecting longitudinal seam.

6.1.2 CATEGORY: B-A Pressure Retaining Welds in Reactor Vessel
 ITEM NO: B1.12 Shell Welds - Longitudinal

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RPV	14	14	10	71.4%
TOTALS:	14	14	10	71.4%

6.1.3 CATEGORY: B-A Pressure Retaining Welds in Reactor Vessel
 ITEM NO: B1.21 Head Welds - Circumferential

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RPV Closure Head	2	2	1	50%
RPV Bottom Head	2	1 (1)	1	100%
TOTALS	4	3 (1)	2	66.6%

NOTE:

- (1) Some of these examinations are subject to limitations as identified in ISI/NDE Program Plan, Table A. Relief Request RR-A1 documents these limitations.

6.1.4 CATEGORY: B-A Pressure Retaining Welds in Reactor Vessel
 ITEM NO: B1.22 Head Welds - Meridional

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RPV Closure Head	13	13	8	61.5%
RPV Bottom Head	17	10(1)	8	80.0%
TOTALS:	30	23 (1)	16	69.5%

NOTE:

- (1) Some of these examinations are subject to limitations or are inaccessible as identified in ISI/NDE Program Table A. Relief Request RR-A1 documents these limitations.

6.1.5 CATEGORY: B-A Pressure Retaining Welds in Reactor Vessel
 ITEM NO: B1.30 Shell-To-Flange

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%) (1)
RPV	1	1	.5	50%
TOTALS:	1	1	.5	50%

NOTE:

- (1) The examination of shell-to-flange welds may be performed during the first and third inspection periods in conjunction with the nozzle examinations of Exam. Cat. B-D (Program B). At least 50% of shell-to-flange welds shall be examined by the end of the first inspection period, and the remainder by the end of the third inspection period. (Ref. IWB-2500-1, Category B-A, Footnote (4)).

6.1.6 CATEGORY: B-A Pressure Retaining Welds in Reactor Vessel
 ITEM NO: B1.40 Head-To-Flange

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RPV	1	1	.66	66.6%
TOTALS:	1	1	.66	66.6%

CATEGORY B-A TOTALS

Item No.	Total Requiring Examination (3)	Examined To Date (2)	Minimum Required (%) (1)	Maximum Allowed (%) (2)
B1.11	4	N/A (4)	N/A	N/A
B1.12	14	10 (71.4%)	N/A	N/A
B1.21	3	2 (66.6%)	N/A	N/A
B1.22	23	16 (69.5%)	N/A	N/A
B1.30	1	.5 (50%)	N/A	N/A
B1.40	1	.66 (66.6%)	N/A	N/A
TOTALS:	46	29.2 (63.5%)	N/A	67%

NOTES:

- (1) Table IWB-2500-1 allows deferral to the end of the inspection interval.
- (2) Exam percentage requirements are based on category totals, not item totals. Item percentages are provided for information only.
- (3) Some of these examinations are subject to limitations or are inaccessible as identified in ISI/NDE Program Plan A Table. Relief Request RR-A1 documents these limitations.
- (4) Category B1.11 circumferential welds are only partially examined at the intersection of the Category B1.12 longitudinal welds in accordance with RR-A25 (BWRVIP-05) and are not individually tracked.

6.2 CATEGORY B-D

6.2.1 CATEGORY: B-D Full Penetration Welds of Nozzles in Vessels
 ITEM NO: B3.90 Nozzle-To-Vessel Welds

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%) (1)
RPV	30	30	21	70%
TOTALS:	30	30	21	70%

NOTE:

- (1) At least 25% but not more than 50% (credited) of the nozzles shall be examined by the end of the first inspection period and the remainder by the end of the inspection interval (Ref. Table IWB-2500-1, Category B-D, Footnote (2)).

6.2.2 CATEGORY: B-D Full Penetration Welds of Nozzles in Vessels
 ITEM NO: B3.100 Nozzle Inside Radius Section

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%) (1)
RPV	30	30	21	70%
TOTALS:	30	30	21	70%

NOTE:

- (1) At least 25% but not more than 50% (credited) of the nozzles shall be examined by the end of the first inspection period and the remainder by the end of the inspection interval (Ref. Table IWB-2500-1, Category B-D, Footnote (2)).

CATEGORY B-D TOTALS

Item No.	Total Requiring Examination	Examined to Date	Minimum Required (%) (1)	Maximum Allowed (%) (1)
B3.90	30	21 (70%)	25%	N/A
B3.100	30	21 (70%)	25%	N/A
TOTALS:	60	42 (70%)	25%	N/A

NOTE:

- (1) At least 25% but not more than 50% (credited) of the nozzles shall be examined by the end of the first inspection period and the remainder by the end of the inspection interval (Ref. Table IWB-2500-1, Category B-D, Footnote (2)).

6.3 CATEGORY B-F

6.3.1 CATEGORY: B-F Pressure Retaining Dissimilar Metal Welds
 ITEM NO: B5.10 RPV Nozzle to Safe End Butt Welds \geq 4" Dia.

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RRS	12	4	2	50%
CS	2	2	2	100%
RPV	3	2	1	50%
TOTALS:	17	8	5	62.5%

6.3.2 CATEGORY: B-F Pressure Retaining Dissimilar Metal Welds
 ITEM NO: B5.20 RPV Nozzle to Safe End Butt Welds \leq 4" Dia.

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
SLC	1	1	1	100%
TOTALS:	1	1	1	100%

6.3.3 CATEGORY: B-F Pressure Retaining Dissimilar Metal Welds
 ITEM NO: B5.130 Piping Butt Welds \geq 4" Dia.

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RHR	3	2	1	50%
CS	2	2	2	100%
RWCU	2	0	0	0%
TOTALS:	7	4	3	75%

CATEGORY B-F TOTALS

Item No.	Total Requiring Examination	Examined to Date	Minimum Required (%)	Maximum Allowed (%)
B5.10	8	5 (62.5%)	(2)	(2)
B5.20	1(3)	1 (100%)	N/A	N/A
B5.130	4	3 (75%)	(2)	(2)
TOTALS:	12 (1)	8 (66.6%)	50%	67%

NOTES:

- (1) Risk Informed Inservice Inspection (RIISI) Program sample size.
- (2) Exam percentage requirements are based on Category totals, not item totals. Item percentages are supplied for information only.
- (3) The item listed under B5.20 is a GE SIL No. 571 recommended exam and is not counted for the purposes of Code inspection percentages.

6.4 CATEGORY B-G-1

6.4.1 CATEGORY: B-G-1 Pressure Retaining Bolting Greater than 2" in Dia.
 ITEM NO: B6.10 Closure Head Nuts

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RPV	68	68	45	66.2%
TOTALS:	68	68	45	66.2%

6.4.2 CATEGORY: B-G-1 Pressure Retaining Bolting Greater than 2" in Dia.
 ITEM NO: B6.20 Closure Studs in Place

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RPV	68	64 (1)	41	64%
TOTALS:	68	64 (1)	41	64%

NOTE:

- (1) Inspections are performed in conjunction with Item No. B6.30. Four (4) studs are removed at each Reactor Refueling Outage.

6.4.3 CATEGORY: B-G-1 Pressure Retaining Bolting Greater than 2" in Dia.
 ITEM NO: B6.30 Closure Head Studs when removed

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RPV	68	4 (1)	4	100%
TOTALS:	68	4 (1)	4	100%

NOTE:

- (1) Inspections are performed in conjunction with Item No. B6.20. Four (4) studs are removed at each Reactor Refuel.

6.4.4 CATEGORY: B-G-1 Pressure Retaining Bolting Greater than 2" in Dia.
 ITEM NO: B6.40 Reactor Vessel Threads in Flange

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RPV	68	68	45	66.2%
TOTALS:	68	68	45	66.2%

6.4.5 CATEGORY: B-G-1 Pressure Retaining Bolting Greater than 2" in Dia.
 ITEM NO: B6.50 Reactor Vessel Closure Washers, Bushings
 (When Removed)

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
	Washers			
RPV	68	68	45	66.2%
	Bushings			
	68	68 (1)	0	0%
TOTALS:	136	136 (1)	45	33.1%

NOTE:

(1) Inspection of bushings is only required for connections that are disassembled.

6.4.6 CATEGORY: B-G-1 Pressure Retaining Bolting Greater than 2" in Dia.
 ITEM NO: B6.180 Pumps, Bolts and Studs

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RRS	32	32	16	50%
TOTALS:	32	32	16	50%

6.4.7 CATEGORY: B-G-1 Pressure Retaining Bolting Greater than 2" in Dia.
 ITEM NO: B6.200 Pumps, Nuts, Bushings and Washers (1)

System	Total Comp.	Total Requiring Examination	Examined To Date (1)	Examined To Date (%)
RRS	32	32	16	50%
TOTALS:	32	32	16	50%

NOTE:

- (1) Inspections are performed in conjunction with Stud UT inspection per item B6.180.

CATEGORY B-G-1 TOTALS

Item No.	Total Requiring Examination	Examined To Date	Minimum Required (%)	Maximum Allowed (%)
B6.10	68	45 (66.2%)	(1)	(1)
B6.20	64	41 (64%)	(1)	(1)
B6.30	4	4 (100%)	(1)	(1)
B6.40	68	45 (66.2%)	(1)	(1)
B6.50	136 (2)	45 (33.1%)	(1)	(1)
B6.180	32	16 (50%)	(1)	(1)
B6.200	32	16 (50%)	(1)	(1)
TOTALS:	404	212 (52%)	50%	67%

NOTES:

- (1) Exam percentage requirement are based on Category totals, not item totals. Item percentages are shown for information only.
- (2) Inspection of bushings is only required for connections that are disassembled.

6.5 CATEGORY B-G-2

6.5.1 CATEGORY: B-G-2 Pressure Retaining Bolting 2" and smaller in Dia.
 ITEM NO: B7.10 Reactor Vessel-Bolts, Studs and Nuts

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RPV	3	3 (1)	0	0%
TOTALS:	3	3 (1)	0	0%

NOTE:

- (1) Represents Flanged/Bolted Connections-All bolts, studs and nuts were examined for each flanged connection examined.

6.5.2 CATEGORY: B-G-2 Pressure Retaining Bolting 2" and smaller in Dia.
 ITEM NO: B7.50 Piping-Bolts, Studs and Nuts

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
HPCI & RCIC	2	2 (1)	2	100%
TOTALS:	2	2 (1)	2	100%

NOTE:

- (1) Represents Flanged/Bolted Connections-All bolts, studs and nuts were examined for each flanged connection examined.

6.5.3 CATEGORY: B-G-2 Pressure Retaining Bolting 2" and smaller in Dia.
 ITEM NO: B7.60 Pump Bolts, Studs and Nuts, and Seal Bolting

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RRC	2	2 (1)	1	50%
TOTALS:	2	2 (1)	1	50%

NOTE:

- (1) Represents flanged/bolted connections-all bolts, studs and nuts are examined for each connection examined.

6.5.4 CATEGORY: B-G-2 Pressure Retaining Bolting 2" and smaller in Dia.
 ITEM NO: B7.70 Valves-Bolts, Studs and Nuts

System	Total Comp.	Total Requiring Examination (1)	Examined To Date (2)	Examined To Date (%)
MS	38	38	26	68.4%
RRS	4	4	2	50%
RHR	10	10	6	60%
CS	6	6	4	66.6%
HPCI	3	3	2	66.6%
RCIC	3	3	2	66.6%
RWCU	9	9	5	55.5%
FW	8	8	4	50%
TOTALS:	81	81	51	62.9%

NOTES:

- (1) Represents flanged/bolted connections-all bolts, studs and nuts were examined for each flanged connection examined.
- (2) All replacement bolting material utilized was visually inspected.

6.5.5 CATEGORY: B-G-2 Pressure Retaining Bolting 2" and smaller in Dia.
 ITEM NO: B7.80 CRD Housings-Bolts, Studs and Nuts

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
CRD	185	185 (1)	70 sets*	37.8%
TOTALS:	185	185 (1)	70 sets*	37.8%

*100% of disassembled flange bolting.

NOTE:

- (1) Inspections are only required when CRD Housing Flanges are disassembled (Ref. Table IWB-2500-1, Category B-G-2).

CATEGORY B-G-2 TOTALS

Item No.	Total Requiring Examination	Examined To Date (2)	Minimum Required (%)	Maximum Allowed (%)
B7.10	3	0 (0%)	(1)	(1)
B7.50	2	2 (100%)	(1)	(1)
B7.60	2	1 (50%)	(1)	(1)
B7.70	81	51 (62.9%)	(1)	(1)
B7.80	185 (2)	70 (37.8%)	(1)	(1)
TOTALS:	88	54 (61.3%)	50%	67%

NOTES:

- (1) Exam percentage requirements are based on category totals not item totals. Item packages are supplied for information only.
- (2) Inspections are only required when CRD housing flanges are disassembled, therefore they are not counted in the Code percentage totals.

6.6 CATEGORY B-H

6.6.1 CATEGORY: B-H Integral Attachments for Vessels
 ITEM NO: B8.10 Reactor Vessel-Integrally Welded Attachments

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RPV	1	1	1	100%
Support Skirt				
Stabilizer Bracket Welds	8	1	1	100%
Top Head Lifting Lugs	4	4	1	25%
TOTALS:	13	6	3	50%

6.7 CATEGORY B-J

6.7.1 CATEGORY: B-J Pressure Retaining Welds in Piping
 ITEM NO: B9.11 Circumferential Welds ≥ 4 " Dia.

System	Total Comp.	Total Requiring Examination (1)	Examined To Date	Examined To Date (%)
MS	113	11	9	81.8%
RRS	109	15	6	40%
RHR	71	5	3	60%
CS	42	3	0	0%
HPCI	14	2	2	100%
RCIC	16	2	2	100%
RWCU	70	7	4	57.1%
FW	123	18	11	61.1%
RPV	5	0	0	N/A
TOTALS:	563	63	37	58.7%

NOTE:

(1) Risk Informed Inservice Inspection (RIISI) Program sample size.

CATEGORY B-J TOTALS

Item No.	Total Requiring Examination (1)	Examined To Date	Minimum Required (%) (1)	Maximum Allowed (%) (1)
B9.11	63	37 (58.7%)	50%	67%

NOTE:

- (1) Fermi Risk Informed Inservice Inspection Program sample size.

6.8 CATEGORY B-K-1

6.8.1 CATEGORY: B-K-1 Integral Attachments for Piping Pumps and Valves
 ITEM NO: B10.10/B10.20 Piping-Integrally Welded Attachments

System	Total Comp. (1)	Total Requiring Examination (2)	Examined To Date	Examined To Date (%) (3)
All Class 1 Piping B10.10	13	2 locations (8 welds)	2 locations (8 welds)	100%
Pumps B10.20	3	1	0	0%
TOTALS:	16	3	2	66.6%

NOTES:

- (1) Total component supports with integral attachments selected for examination per Code Case N-491-1.
- (2) Total examinations required for integral attachments per Code Case N-509.
- (3) One location examined each period.

6.9 CATEGORY B-M-2

6.9.1 CATEGORY: B-M-2 Valve Bodies
 ITEM NO: B12.50 Valve Body, exceeding 4" Nominal Pipe Size

System	Total Comp.	Total Requiring Examination	Examined To Date (1)	Examined To Date (%)
MS	23	23	7	30.4%
RRS	4	4	0	0%
RHR	10	10	3	30%
CS	6	6	2	33.3%
HPCI	3	3	1	33.3%
RCIC	1	1	0	0%
RWCU	5	5	0	0%
FW	8	8	6	75%
TOTALS:	60	60	19	(1)

NOTE:

- (1) Per ASME Section XI IWB-2500-1, Table B-M-2 table note, the examinations are limited to one valve within each group of valves that are of the same constructional design and perform similar functions in the system. VT-3 inspections are performed on all Class 1 valves during disassembly for maintenance. Therefore, percentages are not applicable.

6.10 CATEGORY B-O

6.10.1 CATEGORY: B-O Pressure Retaining Welds in Control Rod Housings
 ITEM NO: B14.10 (2) Reactor Vessel-Welds in CRD Housings

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
RPV	40	8 (1)	4	50%	50%	67%
TOTALS:	40	8 (1)	4	50%	50%	67% (3)

NOTES:

- (1) 10% of peripheral housings (2 welds per housing).
- (2) B14.10 is the only Item for this Category.
- (3) Examinations evenly spaced during each period of the inspection interval.

6.11 CATEGORY C-A

6.11.1 CATEGORY: C-A Pressure Retaining Welds in Pressure Vessel
 ITEM NO: C1.10 Shell Circumferential Welds

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RHR	1	1	1	100%
TOTALS:	1	1	1	100%

6.11.2 CATEGORY: C-A Pressure Retaining Welds in Pressure Vessel
 ITEM NO: C1.20 Head Circumferential Welds

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RHR	1	1	0	0%
TOTALS:	1	1	0	0%

CATEGORY C-A TOTALS

Item No.	Total Requiring Examination	Examined To Date	Minimum Required (%)	Maximum Allowed (%)
C1.10	1	1 (100%)	N/A	N/A
C1.20	1	0 (0%)	N/A	N/A
TOTALS:	2	1 (50%)	N/A (1)	N/A (1)

NOTE:

(1) Exams scheduled for the 1st and 3rd period.

6.12 CATEGORY C-B

6.12.1 CATEGORY: C-B Pressure Retaining Welds in Vessels
 ITEM NO: C2.21 Nozzle-To-Shell (or Head) Weld

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RHR	4	2	1	50%
TOTALS:	4	2	1	50%

6.12.2 CATEGORY: C-B Pressure Retaining Nozzle Welds in Vessels
 ITEM NO: C2.22 Nozzle Inside Radius Section

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
RHR	4	2	1	50%
TOTALS:	4	2	1	50%

CATEGORY C-B TOTALS

Item No.	Total Requiring Examination	Examined To Date	Minimum Required (%)	Maximum Allowed (%)
C2.21	2	1(50%)	N/A	N/A
C2.22	2	1(50%)	N/A	N/A
TOTALS:	4	2(50%)	N/A (1)	N/A (1)

NOTE:

- (1) Exams scheduled for the 1st and 3rd examination period.

6.13 CATEGORY C-C

6.13.1 CATEGORY: C-C Integral Attachments for Vessels, Piping, Pumps and Valves
 ITEM NO: C3.10 Pressure Vessels

System	Total Comp. (1)	Total Requiring Examination (2)	Examined To Date	Examined To Date (%)
RHR	5	1 (19 welds)	11 welds	57.9%
TOTALS:	5	1 (19 welds)	11 welds	57.9%

NOTES:

- (1) Total component supports with integral attachment welds selected for examination per Code Case N-491-1.
- (2) Total examinations required for integral attachment welds per Code Case N-509.

6.13.2 CATEGORY: C-C Integral Attachments for Vessels, Piping, Pumps and Valves
 ITEM NO: C3.20 Piping Integrally Welded Attachments

System	Total Comp. (1)	Total Requiring Examination (2)	Examined To Date	Examined To Date (%)
All Class 2 Systems	33	4	2	50%
TOTALS:	33	4	2	50%

NOTES:

- (1) Total component supports with integral attachment welds selected for examination per Code Case N-491-1.
- (2) Total examinations required for integral attachment welds per Code Case N-509.

CATEGORY C-C TOTALS

Item No.	Total Requiring Examination	Examined To Date	Minimum Required (%)	Maximum Allowed (%)
C3.10	1	.58 (58%)	N/A	N/A
C3.20	4	2 (50%)	N/A	N/A
TOTALS:	5	2.58 (51.6%)	50%	67%

6.14 CATEGORY C-F

6.14.1 CATEGORY: C-F-1 Socket Welds (1)
 ITEM NO: N/A NRC Augmented Commitment

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
SLC	131	16	10	62.5%
TOTALS:	131	16	10	62.5%

NOTE:

(1) The Class 2 portion of the Standby Liquid Control System is <4" NPS and is exempt per ASME Section XI. Fermi is committed to examine 16 of 131 system welds during each inspection interval.

6.14.2 CATEGORY: C-F-2 Pressure Retaining Welds in Carbon or Low Alloy Steel Piping
 ITEM NO: C5.51 / C5.81 Piping Welds $\geq 3/8$ " in Normal Wall Thickness for Piping > 4"NPS

System	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)
MS	74	6	5	83.3%
CRD	34	3	1	33.3%
RHR	464	34	22	64.7%
CGC	113	6	4	66.6%
HPCI	154	12	7	58.3%
CS	196	15	7	46.6%
Containment Piping (1)	279	23	14	60.86%
TOTALS:	1314	99	60	60.6%

NOTE:

(1) Containment piping includes augmented selections made in accordance with Relief Request RR-A26.

CATEGORY C-F TOTALS

Item No.	Total Requiring Examination (1)	Examined To Date	Minimum Required (%) (2)	Maximum Allowed (%) (2)
C-F-1 (Augmented)	16	10 (62.5%)	N/A	N/A
C-F-2 (C5.51 & C5.81)	99	60 (60.6%)	N/A	N/A
TOTALS:	115	70 (60.8%)	50%	67%

NOTES:

- (1) Includes Augmented Class 2 selections.
- (2) Exam percentage requirements are based on Category C-F totals, not item totals. Item percentages are supplied for information only.

6.15 CATEGORY F-A

6.15.1 CATEGORY: F-A Plate and Shell Type Supports
 ITEM NO: F1.10-F1.40

Section XI Class	System No.	System ID	Total Requiring Examination	Examined To Date	Examined To Date (%)
Class 1	B11	RPV	9	2	22.2%
	B21	Steam Supply	8	5	62.5%
	B31	Reactor Recirc	6	5	83.3%
	E11	RHR	3	1	33.3%
	E21	CS	3	2	66.7%
	E41	HPCI	1	0	0%
	E51	RCIC	1	1	100%
	G33	RWCU	5	2	40%
	N21	Feedwater	5	3	60%
CLASS 1 TOTALS			41	21	51.2%
Class 2	B21	SRV	6	4	66.7%
	C11	CRD	4	3	75%
	E11	RHR	45	30	66.7%
	E21	CS	16	8	50%
	E41	HPCI	14	9	64.2%
	N30	MS	6	5	83.3%
	P11	Demin	1	1	100%
	T48	GCG	16	11	68.7%
CLASS 2 TOTALS			108	71	65.7%
Class 3	E11	RHRSW	14	10	71.4%
	G33	RWCU	1	1	100%
	P42	RBCCW	1	1	100%
	P44	EECW	33	19	57.5%
	P45	EESW	18	9	50%
	R30	DGSW	10	8	80%
CLASS 3 TOTALS			77	48	62.3%

CATEGORY F-A TOTALS

Item No.	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
F-A Class 1	41	21	51.2%	N/A	N/A
F-A Class 2	108	71	65.7%	N/A	N/A
F-A Class 3	77	48	62.3%	N/A	N/A
TOTALS:	226	140	61.9%	50%	67%

SECTION 7

UPDATED PROGRAM TABLES

7.1 PROGRAM TABLES

7.1.1 Inservice Inspection Program (Plan) Tables (NDE)

The accompanying table lists the components or areas that are to be examined during the interval as updated for this refueling outage. 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 class as defined in accordance with the Code of Federal Regulations (10CFR50.55a), Regulatory Guide 1.26, and NUREG-0800.

Interval: refers to the 120 month inspection interval as identified in Section 1.0 of this document.

Page/Rev.: indicates the consecutive and total page numbers for the NDE program. Rev. or Revision indicates the revision of the individual page or entire document.

Code Category: is the Examination Category as defined by ASME Section XI, Subarticles IWB-2500, 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. Note: all Item Numbers are addressed even though they may not be applicable to Fermi 2.

Description and Unique Identification: repeats the generic descriptions listed in tables IWB-2500-1, IWC-2500-1 or IWD-2500-1. The components to be examined are then listed by system and/or specific identification.

Exam Method-Exam Method Selected: identifies the code required method of examination, i.e., Volumetric, Surface, or Visual. The specific examination selected is shown for the component, i.e., UT, PT, MT, or VT (see list of abbreviations for expanded definitions).

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

Augmented Exam Method: indicates the examination was required to meet a regulatory or licensing commitment and its outage code when completed or scheduled.

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

Period: marks the 40 month period within the 120 month interval when the examination is scheduled (3 periods per interval).

NOTE

A tentative schedule of specific examinations has been completed 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 (i.e., NUREG-0313). 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: are reserved for additional information to explain, amplify, or provide added details necessary to clarify the examination requirements.

7.1.1.1 Examination methods delineated in the following tables are intended to be representative of the ISI practice to be used or of preservice methods utilized. In either case, it should be recognized that either UT or RT is an acceptable volumetric exam and either PT or MT is an acceptable surface exam. 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.

7.1.1.2 List of Abbreviations

The following abbreviations are used:

Plant Identification System (PIS) - Codes for Plant Systems

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
G33	- PIS Number for the Reactor Water Cleanup System
G41	- PIS Number for the Fuel Pool Cooling System
N21	- PIS Number for the Feedwater System
N30	- PIS Number for the Main Steam System
T48	- PIS Number for the Combustible Gas Control System

Acronyms Used to Identify Plant Systems

CGC	- Combustible Gas Control
CRD	- Control Rod Drive
CS	- Core Spray
FPC	- Fuel Pool Cooling
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

Nondestructive 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
RI	- Risk Informed Methodology

Degradation Mechanisms

IGSCC	- Intergranular Stress Corrosion Cracking
CC	- Crevice Corrosion
TASCS	- Thermal Fatigue Cracking

Plant Components and Weld Terminology Abbreviations

CRDH	- Control Rod Drive Housing
EXPJT	- Pipe Expansion
FBC	- Field Weld
HX	- Heat Exchanger
HXS	- Heat Exchanger Shell
IBR	- Inner Bore Region (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
CRC	- Corrosion Resistant Cladding
DWG	- Drawing
DM	- Dissimilar Metal Weld
EF2	- Enrico Fermi 2
in.	- Inches
N/A	- Not Applicable
NUREG	- Nuclear Regulatory Guide
PWR	- Pressurized Water Reactor
RR	- Relief Request
RPV	- Reactor Pressure Vessel

Component Support Abbreviations

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

Outage Codes

"XX"

"Y"

Exam Status "Y" can equal the following codes:

C = Completed
S = Scheduled
CP = Completed Partial
CPL = Completed Partial Limited

Refuel Outage Sequential Number

Example: 07C = Seventh Refueling Outage, Completed Exam
 08S = Eighth Refueling Outage, Scheduled Exam
 08CP = Eighth Refueling Outage, Completed Exam, Partial
 08CPL = Eighth Refueling Outage, Completed Exam, Partial
 Limited

7.1.2 Inservice Inspection Program (Plan) Tables (Component Supports)

7.1.2.1 The accompanying tables list the component supports to be examined during the first inspection interval. The tables are divided into ISI Class – 1, 2, and 3 and start with Class – 1. The tables contain the following information:

Code Class: is the ASME class as defined in accordance with the Code of Federal Regulations (10CFR50.55a), Regulatory Guide 1.26, and NUREG-0800.

Interval: refers to the 120 month inspection interval as identified in Section 1.0 of this document.

Page/Rev.: indicates the consecutive and total page numbers for the NDE program. Rev. or Revision indicates the revision of the individual page or entire document.

Code Category: is the Examination Category as defined by ASME Section XI, Subarticle IWF.

Item Number: NOT USED – because IWF category is the main selection determining factor for component supports, Item No. was not used to make hanger selections. The Item Number depicts inspection points and therefore, is more appropriately addressed in inspection procedures. The Item Numbers for each category was used to identify the type of visual examination(s) each component support will receive and this information is provided in the tables.

PIS No./System: identifies the Plant Identification System Number (PIS No.) and the System Title for each group of component supports to be examined.

Isometric/Multiple Loop: identifies the specific isometric drawing applicable to a particular group of component supports and the Multiple Loop identification No., if applicable.

Unique Identification: identifies the specific component support subject to examination.

Exam Method – 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-1, 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).

Period: marks the 40 month period within the 120 month interval when the examination is scheduled (3 periods per interval).

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

7.1.2.2 List of Abbreviations

For definitions of abbreviations used in the following tables, refer to Paragraph 10.1.2 of this document.

7.1.2.3 Inservice Inspection Program (Plan) Tables (NDE)

- Table A – Class 1, 2, and 3 Welds and Components
- Table B - Supports
- Table C - Snubbers

7.1.3 NOTES

NOTE 1

Examination categories B-F and B-J contain duplicate examination requirements for dissimilar metal pressure retaining welds in piping. Category B-J does not have a separate item number for dissimilar metal (DM) welds. Because of this, all DM welds will be included in category B-F. This will aid in identifying those welds that may have additional augmented, regulatory, or PDI requirements applied to them.

NOTE 2

In response to Generic Letter (GL) 88-01 and NUREG-0313 Rev. 2, Detroit Edison had committed in NRC-88-0243, NRC-89-0297, and NRC-90-0103 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 inspections will be performed utilizing procedures and personnel qualified to current Utility PDI Guidelines. In correspondence letter NRC-01-0038, Detroit Edison had committed to use the NRC approved Generic Letter 88-01 alternative inspection schedule requirements of BWRVIP-75. Sample expansion will be as specified in the Fermi Risk Informed Inservice Inspection Program for Category A welds, and BWRVIP-75 for all other augmented weld selections. 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. Detroit Edison requested that Non-Safety Related, Category D welds be removed from GL 88-01 scope per NRC-92-0090. The NRC response (TAC No. M84117, dated December 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

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Commercial Service Date: 1-23-88 NB No. 21085 (RPV)

sufficient experience was gained to change the frequency of inspection. If a cracked beam were detected, it would be replaced prior to return to power operation. Due to the failure of a jet pump hold down beams at another plant, SIL No. 330, Supplements 1 and 2, and RICSIL No. 065 were issued. As a result, all jet pump hold down beams were replaced with beam assemblies that are less susceptible to IGSCC than the original assemblies during RF04. 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, NUREG/CR-3052, and the latest edition of BWRVIP-41. All beams were reinspected in RF09.

NOTE 4

ASME Section XI Category B-E requires inspection of the external surfaces of 25 percent nozzles among each group of penetrations of comparable size and function. Fermi practice is to perform a VT-2 examination inside the RPV bioshield annulus for RPV instrumentation nozzles, and of the bottom head penetrations through the skirt hatches, and under vessel during the system leakage test each refueling outage. If leakage is identified, further investigation will be made to identify the exact location.

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 No. 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. Inspection will be performed on the Jet Pumps scheduled for inspections during the refueling outage.

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 No. 455. It is essential and required that all examinations be performed by the use of multiple refracted longitudinal waves (45° and 60° recommended) 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 include the full thickness

volume and 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. Beginning with RF09, ASME Section XI, Appendix 8, Supplement 10 requirements as implemented by the Utility Performance Demonstration Initiative are mandatory.

NOTE 9

Per SIL No. 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. All bolts have been replaced with a new design that is more resistant to cracking. Based on industry experience, additional inspections will be performed at subsequent refuel outages.

NOTE 10

During RF06, the Reactor Recirculation pumps were modified to the 4th generation design configuration. This configuration was designed to mitigate known causes of shaft and cover cracking and provides for ultrasonic inspection of the shaft without requiring complete pump disassembly and removal. This modification also included a 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 No. 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 No. 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 No. 474, a visual inspection will be performed on steam dryer drain channel welds during refueling outages. Portions of the steam dryer assembly, dryer banks, and welds will be visually inspected each refueling outage.

NOTE 12

Per IE Bulletin 80-13, and SIL No. 289, Revision 1, Supplement 2, a visual inspection is performed on the core spray internal piping each refueling outage. Inspection points include those identified in IE Bulletin 80-13, SIL No. 289, Revision 1, Supplement 2, and BWRVIP-18. The inspection plan will follow the inspection recommendations and frequency provided in BWRVIP-18 as detailed in the Performance Engineering Program (PEP) 16, Appendix III.

NOTE 13

Per SIL No. 462, inspection of the shroud support access hole cover was performed at the end of the first 10-year interval. Subsequent reinspections will be based on industry experience and the inspection technique applied (Reference PEP16, Appendix II).

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. Limitations encountered that affect the examination volume as prescribed by ASME Section XI will be documented in an examination report.

All previous examinations were conducted in accordance with the requirements of Regulatory Guide 1.150, Revision 1, to the extent practical (Reference NRC-87-0078). Beginning with RF08, ASME Section XI, Appendix VIII, Supplements 4 and 6, requirements for vessel welds were implemented as specified in 10CFR50.55a.

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, and 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, and T50.

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

The extent of inspection and frequency for Jet Pump components and welds will follow the recommendations provided in BWRVIP-41. BWRVIP-41 replaced/modified the recommendations of SIL Nos. 551 and 574. Inspections will continue to be performed per the recommendations of SIL No. 574 on the adjusting screw tack welds in conjunction with the inspection of those Jet Pumps scheduled for inspection each refueling outage. 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 on Jet Pumps selected for

inspection per the recommendations of RICSIL No. 078.

NOTE 18

Per recommendation of SIL No. 571, augmented inspection of this stainless steel nozzle 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. Inspection frequency has been modified per BWRVIP-27 to a 10 -year reinspection period.

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, Revision 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 EVT-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 RF06, a baseline inspection of the shroud welds (H-3, H-4, H-5, and H-7) was completed (approximately 90 percent 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 in BWRVIP-07 and BWRVIP-76. Core shroud support inspections will follow BWRVIP-038 and BWRVIP-104 guidelines utilizing approved techniques. Evaluation of anomalies shall be in accordance with the BWR Core Shroud Evaluation Reports (BWRVIP-01 and GENE-523-A53-0494). Additional references include SIL No. 572, Rev. 1, RICSIL No. 054, Rev. 1, RICSIL No. 068, RICSIL No. 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. Additional detail is provided in PEP16, Appendix I.

NOTE 20

Additional augmented examinations were performed during RF04 and changes were made to the inspection schedule for selected nozzle welds following the 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 Edition, 1992 Addenda, 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; however, it 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.

NOTE 22

Inspections in addition to those listed for Item Nos. B13.10, B13.20, B13.30, and B13.40 will be scheduled and performed as detailed in PEP16. Augmented inspection requirements for selected components and welds are detailed in PEP16 Appendices, including the implementation of various BWRVIP inspection recommendations.

INSERVICE INSPECTION NDE PROGRAM

TABLE A

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-A								
B1.11	Circumferential Shell Weld							
1-313	UT	All B-A Welds	5360-5	RR-A25	N/A	N/A	N/A	Examined only at intersecting long seams
4-308A	UT	All B-A Welds	5360-5	RR-A25	N/A	N/A	N/A	Examined only at intersecting long seams
4-308B	UT	All B-A Welds	5360-5	RR-A25	N/A	N/A	N/A	Examined only at intersecting long seams
9-307	UT	All B-A Welds	5360-5	RR-A25	N/A	N/A	N/A	Examined only at intersecting long seams
B1.12	Longitudinal Shell Weld							
1-308A	UT	All B-A Welds	5360-5		08C			Note 14 Applies to all Category B-A Welds
1-308B	UT	All B-A Welds	5360-5		08C			
1-308C	UT	All B-A Welds	5360-5				12S	
1-308D	UT	All B-A Welds	5360-5				12S	
15-308A	UT	All B-A Welds	5360-5			10C		
15-308B	UT	All B-A Welds	5360-5			09C 10CP		CARD 03-16383, RF10 exam to size indication No. 124 only
15-308C	UT	All B-A Welds	5360-5		08C			
15-308D	UT	All B-A Welds	5360-5				11S	
2-307A	UT	All B-A Welds	5360-5		08C			
2-307B	UT	All B-A Welds	5360-5			10C		
2-307C	UT	All B-A Welds	5360-5			09C		
2-308A	UT	All B-A Welds	5360-5			10C		
2-308B	UT	All B-A Welds	5360-5			09C		
2-308C	UT	All B-A Welds	5360-5				11S	
B1.21	Circumferential Head Weld							
4-319	UT	All B-A Welds	5360-5		08CP	09C		08 - 2-319C to 2-319E 40% 9 - 2-319E to 2-319C 60%
5-306	UT	All B-A Welds	5360-5	RR-A1				Inaccessible Weld
5-319	UT	All B-A Welds	5360-5				11S	
6-306	UT	All B-A Welds	5360-5		08CP	10CP		One sided exam 180-360 Deg, RF08, 0-180 Deg, RF10
B1.22	Meridional Head Weld							
1-306A	UT	All B-A Welds	5360-5		08C			

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-A								
B1.22		Meridional Head Weld						
1-306B	UT	All B-A Welds	5360-5			10C		
1-306C	UT	All B-A Welds	5360-5			10C		
1-306D	UT	All B-A Welds	5360-5		08C			
1-306E	UT	All B-A Welds	5360-5		08C			
1-306F	UT	All B-A Welds	5360-5				12S	
1-306G	UT	All B-A Welds	5360-5		08C			
1-306H	UT	All B-A Welds	5360-5				11S	
1-306J	UT	All B-A Welds	5360-5			09C		
1-306K	UT	All B-A Welds	5360-5		08C			
1-319A	UT	All B-A Welds	5360-5	RR-A1			12S	
1-319B	UT	All B-A Welds	5360-5		08C			
1-319C	UT	All B-A Welds	5360-5	RR-A1			12S	
1-319D	UT	All B-A Welds	5360-5			09C		
1-319E	UT	All B-A Welds	5360-5	RR-A1		10C		
1-319F	UT	All B-A Welds	5360-5			10C		
1-319G	UT	All B-A Welds	5360-5	RR-A1			12S	
1-319H	UT	All B-A Welds	5360-5		08C			
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
2-319A	UT	All B-A Welds	5360-5		08C			
2-319B	UT	All B-A Welds	5360-5		08C			
2-319C	UT	All B-A Welds	5360-5		08C			
2-319D	UT	All B-A Welds	5360-5				11S	

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-A								
B1.22		Meridional Head Weld						
2-319E	UT	All B-A Welds	5360-5				11S	
B1.30		Shell to Flange Weld						
13-308 (from flange)	UT	All B-A Welds	5360-5	RR-A1	08CP		12SP	0-180 Deg, RF-08; 180- 0 Deg, RF-12
13-308 (from shell)	UT	All B-A Welds	5360-5	RR-A1	08CP		12SP	~120 Deg, RF-08 ; Remainder at RF-12
B1.40		Head to Flange Weld						
3-319	UT/MT	All B-A Welds	5360-5		08CP	10CP	12SP	1/3 of weld each scheduled Inspection Period
B-D								
B3.100		RPV Nozzle Inside Radius Section						
13-314A IRS	VT	All BD-IRS	5361-5	RR-A32	08C			
13-314B IRS	VT	All BD-IRS	5361-5	RR-A32	08C			
13-314C IRS	VT	All BD-IRS	5361-5	RR-A32		10C		
13-314D IRS	VT	All BD-IRS	5361-5	RR-A32		09C		
13-314E IRS	VT	All BD-IRS	5361-5	RR-A32		09C		
13-314F IRS	VT	All BD-IRS	5361-5	RR-A32		09C		
13-314G IRS	VT	All BD-IRS	5361-5	RR-A32		09C		
13-314H IRS	VT	All BD-IRS	5361-5	RR-A32			12S	
13-314J IRS	VT	All BD-IRS	5361-5	RR-A32			11S	
13-314K IRS	VT	All BD-IRS	5361-5	RR-A32		09C		
14-316A IRS	VT	All BD-IRS	5361-5	RR-A32			12S	
14-316B IRS	VT	All BD-IRS	5361-5	RR-A32	08C			
15-315 IRS	VT	All BD-IRS	5361-5	RR-A31	08C			
19-314A IRS	VT	All BD Nozzles	5361-5	RR-A32		10C		
19-314B IRS	VT	All BD Nozzles	5361-5	RR-A32	08C			
2-318 IRS	VT	All BD Nozzles	5361-5	RR-A31		10C		
4-316A IBR	UT	A	5361-5		08CA			NUREG-0619/GE-NE-523-A71-594
4-316A IRS	UT	All BD-IRS	5361-5		08CA			NUREG-0619/GE-NE-523-A71-594
4-316B IBR	UT	A	5361-5		08CA			NUREG-0619/GE-NE-523-A71-594
4-316B IRS	UT	All BD-IRS	5361-5		08CA			NUREG-0619/GE-NE-523-A71-594

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-D								
B3.100 RPV Nozzle Inside Radius Section								
4-316C IBR	UT	A	5361-5		07CA			NUREG-0619/GE-NE-523-A71-594
4-316C IRS	UT	All BD-IRS	5361-5		07CA			NUREG-0619/GE-NE-523-A71-594
4-316D IBR	UT	A	5361-5		08CA			NUREG-0619/GE-NE-523-A71-594
4-316D IRS	UT	All BD-IRS	5361-5		08CA			NUREG-0619/GE-NE-523-A71-594
4-316E IBR	UT	A	5361-5		07CA			NUREG-0619/GE-NE-523-A71-594
4-316E IRS	UT	All BD-IRS	5361-5		07CA			NUREG-0619/GE-NE-523-A71-594
4-316F IBR	UT	A	5361-5		07CA			NUREG-0619/GE-NE-523-A71-594
4-316F IRS	UT	All BD-IRS	5361-5		07CA			NUREG-0619/GE-NE-523-A71-594
4-318A IRS	VT	All BD Nozzles	5361-5	RR-A31			11S	
4-318B IRS	VT	All BD Nozzles	5361-5	RR-A31			11S	
5-314A IRS	VT	All BD-IRS	5361-5	RR-A31	08C			
5-314B IRS	VT	All BD-IRS	5361-5	RR-A31			12S	
8-316A IRS	VT	All BD-IRS	5361-5	RR-A31	08C			
8-316B IRS	VT	All BD-IRS	5361-5	RR-A31	08C			
8-316C IRS	VT	All BD-IRS	5361-5	RR-A31			12S	
8-316D IRS	VT	All BD-IRS	5361-5	RR-A31			12S	
B3.90 RPV Nozzle to Vessel Weld								
13-314A	UT	All B-D Nozzles	5361-5	RR-A6	08C			
13-314B	UT	All B-D Nozzles	5361-5	RR-A6	08C			
13-314C	UT	All B-D Nozzles	5361-5	RR-A6		10C		
13-314D	UT	All B-D Nozzles	5361-5	RR-A6	08C			
13-314E	UT	All B-D Nozzles	5361-5	RR-A6		09C		
13-314F	UT	All B-D Nozzles	5361-5	RR-A6		09C		
13-314G	UT	All B-D Nozzles	5361-5	RR-A6	08C			
13-314H	UT	All B-D Nozzles	5361-5	RR-A6			12S	
13-314J	UT	All B-D Nozzles	5361-5	RR-A6			11S	
13-314K	UT	All B-D Nozzles	5361-5	RR-A6	08C			
14-316A	UT	All B-D Nozzles	5361-5	RR-A6		10C		

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-D								
B3.90		RPV Nozzle to Vessel Weld						
14-316B	UT	All B-D Nozzles	5361-5	RR-A6	08C			
15-315	UT	All B-D Nozzles	5361-5	RR-A6		09C		
19-314A	UT	All B-D Nozzles	5361-5	RR-A6		10C		
19-314B	UT	All B-D Nozzles	5361-5	RR-A6	08C			
2-318	UT	All B-D Nozzles	5361-5	RR-A6		10C		
4-316A	UT	All B-D Nozzles	5361-5	RR-A6	08C			
4-316B	UT	All B-D Nozzles	5361-5	RR-A6	08C			
4-316C	UT	All B-D Nozzles	5361-5	RR-A6		09C		
4-316D	UT	All B-D Nozzles	5361-5	RR-A6	08C			
4-316E	UT	All B-D Nozzles	5361-5	RR-A6			11S	
4-316F	UT	All B-D Nozzles	5361-5	RR-A6			11S	
4-318A	UT	All B-D Nozzles	5361-5	RR-A6			11S	
4-318B	UT	All B-D Nozzles	5361-5	RR-A6			11S	
5-314A	UT	All B-D Nozzles	5361-5	RR-A6	08C			
5-314B	UT	All B-D Nozzles	5361-5	RR-A6			12S	
8-316A	UT	All B-D Nozzles	5361-5	RR-A6	08C			Note 14 Applies to all Category B-D Welds
8-316B	UT	All B-D Nozzles	5361-5	RR-A6	08C			
8-316C	UT	All B-D Nozzles	5361-5	RR-A6			12S	
8-316D	UT	All B-D Nozzles	5361-5	RR-A6			12S	
B-E								
B4.11		Partial Penetration Vessel Nozzles						
17-315	VT-2		5361-5		07C, 08C	09C, 10C	11S, 12S	
7-315	VT-2		5361-5		07C, 08C	09C, 10C	11S, 12S	Each Refuel Outage - Note 4 applies to all B-E Items
B4.12		Partial Penetration CRD Nozzles						
1-310-X_-Y_	VT-2		5363-5		07C, 08C	09C, 10C	11S, 12S	25% Nozzles External Surfaces - Note 4

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-E								
B4.12	Partial Penetration CRD Nozzles							
CRDH-Y_-X_	VT-2		5363-5		07C, 08C	09C, 10C	11S, 12S	
B4.13	Partial Penetration Instrumentation Nozzles							
2-315A	VT-2		5361-5		07C, 08C	09C, 10C	11S, 12S	
2-315B	VT-2		5361-5		07C, 08C	09C, 10C	11S, 12S	
2-315C	VT-2		5361-5		07C, 08C	09C, 10C	11S, 12S	
2-315D	VT-2		5361-5		07C, 08C	09C, 10C	11S, 12S	
2-315F	VT-2		5361-5		07C, 08C	09C, 10C	11S, 12S	
IIH-X_-Y_ (55)	VT-2		5363-5		07C, 08C	09C, 10C	11S, 12S	
B-F								
B5.10	Dissimilar Metal RPV Nozzle to Safe End Weld 4" NPS and Larger							
101-304E	UT	A, RI (IGSCC)	5358-5	RR-A30		10C		Notes 2 & 8 Cat. B
102-304A	UT	A (IGSCC)	5361-5		07C		12S	Notes 2 & 8 Cat. B
2-303G	UT	A, RI (IGSCC)	5356-5	RR-A30		09C		Notes 2 & 8 Cat. B
2-303H	UT	A, RI (IGSCC)	5356-5	RR-A30	07C		12S	Notes 2 & 8 Cat. B
4-303A	UT	A, RI (IGSCC)	5357-5	RR-A30	07C		12S	Notes 2 & 8 Cat. B
N-9	UT	A, RI (IGSCC)	5361-5	RR-A30		09C		Notes 2 & 8 Cat. B
N5A	UT	A, (IGSCC, CC)	3053-5			10C		Notes 2 & 8 Cat. B
N5B	UT	A, RI (IGSCC, CC)	3052-5	RR-A30	08C			Notes 2 & 8 Cat. B
B5.130	Dissimilar Metal Piping Butt Weld 4" NPS and Larger							
SW-E11-2298-6WC	UT	A, RI (IGSCC)	2298-5	RR-A30	08C			Note 1 & 2, Category B
SW-E11-2327-6WC	UT	A (IGSCC)	2327-5				11S	Notes 1 & 2, Category B
SW-E21-3052-4WOX	UT	A, RI (IGSCC)	3052-5	RR-A30	08C			Notes 1, 2 & 8 Category B (IGSCC)

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-F								
B5.130	Dissimilar Metal Piping Butt Weld 4" NPS and Larger							
SW-E21-3053-4WOX	UT	A (IGSCC)	3053-5		10C			Notes 1, 2 & 8 Category B (IGSCC)
B5.20	Dissimilar Metal RPV Nozzle to Safe End Weld Less Than 4" NPS							
5-315	PT	A	R1-91		07C			Note 18
5-315	UT	A			07C			Note 18
B-G-1								
B6.10	RPV Closure Head Nuts Greater Than 2"							
326-02, 1 through 68	VT	>2 dia."	5362-5		08CP	09CP	11SP	1/3 Each Period, Code Case N-627
B6.180	Pump Studs Greater Than 2"							
RRC Pump A, Studs 1 through 16	UT	>2 dia."	5365-5		08C			
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		08CP	10CP	11SP	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		08C			
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		08C			48-51 Removed w/refueling chute
B6.40	RPV, Threads in Flange							
1 through 68	UT	>2 dia."	5362-5		08CP	09CP	11SP	1/3 Each Period
B6.50	RPV Closure Washers and Bushings							
326-03, Washers 1 through 68	VT-1	>2 dia."	5362-5		08CP	09CP	11SP	1/3 Each Period
Bushings 1 through 68	VT-1	>2 dia."	5362-5				12S	Only required when studs are removed (48-51 removed with refueling chute)

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-G-2								
B7.10 RPV Bolts, Studs, and Nuts 2" and Less								
Instrumentation Nozzle	VT-1	< 2 dia."	5361-5					11S
Spare Flange (0Deg)	VT-1	< 2 dia."	5361-5					11S
Spare Flange (180Deg)	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			09C		
FBC-E51-2192-01	VT-1	< 2 dia."	2192-5		08C			
B7.60 Pump Bolts, Studs, and Nuts 2" and Less								
RRC Pump A Seal Bolting	VT-1	< 2 dia."	5365-5			10C		
RRC Pump B Seal Bolting	VT-1	< 2 dia."	5365-5					12S
B7.70 Valve Bolts, Studs, and Nuts 2" and Less								
B21-F010A-VBB	VT-1	< 2 dia."	3537-5					12S
B21-F010B-VBB	VT-1	< 2 dia."	3536-5			09C		
B21-F011A-VBB	VT-1	< 2 dia."	3537-5		08C			
B21-F011B-VBB	VT-1	< 2 dia."	3536-5			09C		
B21-F013A-VBB	VT-1	< 2 dia."	5355-5		07C			
B21-F013B-VBB	VT-1	< 2 dia."	5354-5		08C			
B21-F013C-VBB	VT-1	< 2 dia."	5353-5			10C		
B21-F013D-VBB	VT-1	< 2 dia."	5353-5		07C			
B21-F013E-VBB	VT-1	< 2 dia."	5354-5			10C		
B21-F013F-VBB	VT-1	< 2 dia."	5353-5			10C		
B21-F013G-VBB	VT-1	< 2 dia."	5353-5		08C			
B21-F013H-VBB	VT-1	< 2 dia."	5354-5					12S
B21-F013J-VBB	VT-1	< 2 dia."	5354-5		07C			
B21-F013K-VBB	VT-1	< 2 dia."	5353-5		08C			
B21-F013L-VBB	VT-1	< 2 dia."	5352-5		08C			
B21-F013M-VBB	VT-1	< 2 dia."	5352-5		07C			
B21-F013N-VBB	VT-1	< 2 dia."	5352-5					11S
B21-F013P-VBB	VT-1	< 2 dia."	5355-5					12S

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-G-2								
B7.70 Valve Bolts, Studs, and Nuts 2" and Less								
B21-F013R-VBB	VT-1	< 2 dia."	5354-5				12S	
B21-F022A-VBB	VT-1	< 2 dia."	5352-5				11S	
B21-F022B-VBB	VT-1	< 2 dia."	5353-5				12S	
B21-F022C-VBB	VT-1	< 2 dia."	5354-5			10C		
B21-F022D-VBB	VT-1	< 2 dia."	5355-5				12S	
B21-F028A-VBB	VT-1	< 2 dia."	5352-5			10C		
B21-F028B-VBB	VT-1	< 2 dia."	5353-5		08C			
B21-F028C-VBB	VT-1	< 2 dia."	5354-5				11S	
B21-F028D-VBB	VT-1	< 2 dia."	5355-5		08C			
B21-F032A-VBB	VT-1	< 2 dia."	3537-5			09C		
B21-F032B-VBB	VT-1	< 2 dia."	3536-5				11S	
B21-F076A-VBB	VT-1	< 2 dia."	3537-5				11S	
B21-F076B-VBB	VT-1	< 2 dia."	3536-5				11S	
B31-F023A-VBB	VT-1	< 2 dia."	5357-5			09C		
B31-F023B-VBB	VT-1	< 2 dia."	5359-5				11S	
B31-F031A-VBB	VT-1	< 2 dia."	5357-5			09C		
B31-F031B-VBB	VT-1	< 2 dia."	5359-5				11S	
E11-F008-VBB	VT-1	< 2 dia."	2299-5				12S	
E11-F009-VBB	VT-1	< 2 dia."	2299-5			09C		
E11-F015A-VBB	VT-1	< 2 dia."	2298-5		07C			
E11-F015B-VBB	VT-1	< 2 dia."	2327-5				11S	
E11-F050A-VBB	VT-1	< 2 dia."	2298-5		07C			
E11-F050B-VBB	VT-1	< 2 dia."	2327-5		07C			
E11-F060A-VBB	VT-1	< 2 dia."	2298-5				12S	
E11-F060B-VBB	VT-1	< 2 dia."	2327-5			10C		
E11-F067-VBB	VT-1	< 2 dia."	2299-5			09C		
E11-F068-VBB	VT-1	< 2 dia."	2299-5				11S	
E21-F005A-VBB	VT-1	< 2 dia."	3052-5			09C		

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-G-2								
B7.70 Valve Bolts, Studs, and Nuts 2" and Less								
E21-F005B-VBB	VT-1	< 2 dia."	3053-5			09C		
E21-F006A-VBB	VT-1	< 2 dia."	3052-5		08C			
E21-F006B-VBB	VT-1	< 2 dia."	3053-5		07C			
E21-F007A-VBB	VT-1	< 2 dia."	3052-5				12S	
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		08C			
E41-F006-VBB	VT-1	< 2 dia."	3537-5			10C		
E51-F007-VBB	VT-1	< 2 dia."	2192-5			09C		
E51-F008-VBB	VT-1	< 2 dia."	2192-5		07C			
E51-F013-VBB	VT-1	< 2 dia."	3536-5				11S	
FBC-B21-5352-01L	VT-1	< 2 dia."	5352-5		08C			
FBC-B21-5352-01M	VT-1	< 2 dia."	5352-5		07C			
FBC-B21-5352-01N	VT-1	< 2 dia."	5352-5				11S	
FBC-B21-5353-01C	VT-1	< 2 dia."	5353-5			10C		
FBC-B21-5353-01D	VT-1	< 2 dia."	5353-5		07C			
FBC-B21-5353-01F	VT-1	< 2 dia."	5353-5			10C		
FBC-B21-5353-01G	VT-1	< 2 dia."	5353-5		08C			
FBC-B21-5353-01K	VT-1	< 2 dia."	5353-5		08C			
FBC-B21-5354-01B	VT-1	< 2 dia."	5354-5		08C			
FBC-B21-5354-01E	VT-1	< 2 dia."	5354-5			10C		
FBC-B21-5354-01H	VT-1	< 2 dia."	5354-5				12S	
FBC-B21-5354-01J	VT-1	< 2 dia."	5354-5		07C			
FBC-B21-5354-01R	VT-1	< 2 dia."	5354-5				12S	
FBC-B21-5355-01A	VT-1	< 2 dia."	5355-5		07C			
FBC-B21-5355-01P	VT-1	< 2 dia."	5355-5				12S	
G33-F001-VBB	VT-1	< 2 dia."	3096-5		08C			
G33-F004-VBB	VT-1	< 2 dia."	3096-5			09C		

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-G-2								
B7.70 Valve Bolts, Studs, and Nuts 2" and Less								
G33-F100-VBB	VT-1	< 2 dia."	5351-5			10C		
G33-F101-VBB	VT-1	< 2 dia."	3096-5				12S	
G33-F102-VBB	VT-1	< 2 dia."	5351-5				12S	
G33-F106-VBB	VT-1	< 2 dia."	5351-5				11S	
G33-F120-VBB	VT-1	< 2 dia."	3536-5		08C			
G33-F121-VBB	VT-1	< 2 dia."	3536-5		07C			
G33-F220-VBB	VT-1	< 2 dia."	3536-5			10C		
B7.80 CRD Bolts, Studs, and Nuts 2" and Less								
185 sets of Bolts, Studs and Nuts	Visual VT-1	< 2 dia."			08CP	09CP		When Disassembled (24 sets, 08), (23 sets, 09)
B-II								
B8.10 RPV Integral Attachment Weld								
10-324A	MT	B-H Weld	5360-5		08C			Code Case N-509
3-306/4-309	UT	B-H Weld	5360-5		08CP			10% of Weld length
3-306/4-309	MT	B-H Weld	5360-5		08CP			10% of Weld length
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			10C		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
B-J								
B9.11 Circumferential Piping Weld 4" NPS or Larger								
3-316A	UT	RI (TASCS, CC)	3537-5	RR-A30	08C			
3-316D	UT	RI (TASCS, CC)	3536-5	RR-A30			12S	
3-316E	UT	RI (TASCS, CC)	3536-5	RR-A30			11S	
7-316A	UT	RI	5352-5	RR-A30	08C			
FW-E11-2298-6W0	UT	A, (IGSCC)	2298-5		08C			Note 2, Category B
FW-E11-2299-2WF3	UT	RI	2299-5	RR-A30		09C		

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-J								
B9.11 Circumferential Piping Weld 4" NPS or Larger								
FW-E11-2327-0W1	UT	RI	2327-5	RR-A30	08C			
FW-E11-2327-0W6	UT	RI	2327-5	RR-A30		11S		
FW-E11-2327-6W0	PT	A (IGSCC)	2327-5			11S	Note 2 Category B	
FW-E21-3052-4WF1	UT	RI	3052-5	RR-A30		12S		
FW-E41-2297-0W4	MT	RI	2297-5	RR-A30	08C			
FW-E41-2297-2W3	UT	RI	2297-5	RR-A30	08C			
FW-E51-2192-1W2	UT	RI	2192-5	RR-A30		09C		
FW-E51-2192-2W3	UT	RI	2192-5	RR-A30		09C		
FW-G33-3096-10WF3	UT	A, RI (IGSCC)	5351-5	RR-A30	08C			
FW-G33-3096-6WF5	UT	RI	3096-5	RR-A30		11S		
FW-G33-3096-8W11	UT	RI	5351-5	RR-A30		10C		
FW-G33-3096-8W9	UT	RI	5351-5	RR-A30		10C		
FW-G33-3096-9WF1	UT	RI	5351-5	RR-A30		10C		
FW-N21-2336-13W14	UT	RI	3537-5	RR-A30		10C		
FW-N21-2336-14WF1	UT	RI	3537-5	RR-A30		10C		
FW-N21-2336-15W0	UT	RI (TASCS)	3537-5	RR-A30	08C			
FW-N21-2336-16W19	UT	RI	3537-5	RR-A30		11S		
FW-N21-2336-3W4	UT	RI	3536-5	RR-A30		09C	RCIC Selection	
FW-PS-2-A6	UT	RI	5352-5	RR-A30		12S		
FW-PS-2-C3	UT	RI	5354-5	RR-A30		10C		
FW-RD-2-A1-W1	UT	RI, A (IGSCC)	5357-5	RR-A30		12S	Note No. 2, Cat. B	
FW-RD-2-A11	UT	RI, A (IGSCC)	5356-5	RR-A30		11S	Note 2, Category B (CRC)	
FW-RD-2-A16	UT	RI, A (IGSCC)	5356-5	RR-A30		09C	Note 2, Category B (CRC)	
FW-RD-2-A17	UT	A (IGSCC)	5356-5			12S	Note 2, Category B (CRC)	
FW-RD-2-A9	UT	A (IGSCC)	5357-5		08CA		Note 2, Category B	
FW-RD-2-B1-W1	UT	RI, A (IGSCC)	5359-5	RR-A30		11S	Note 2, Category B UFSAR 5.2.3.2	
FW-RD-2-B19	UT	A, (IGSCC)	5358-5			10C	Note 2, Category B (CRC)	
FW-RS-2-A1	UT	A (IGSCC)	5357-5			12SA	Note No. 2, Cat. B	

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-J								
B9.11	Circumferential Piping Weld 4" NPS or Larger							
N4A	UT	RI (TASCS, CC)	3537-5	RR-A30	08C			
N4D	UT	RI (TASCS, CC)	3536-5	RR-A30			12S	
N4E	UT	RI (TASCS, CC)	3536-5	RR-A30			11S	
SW-E21-3053-3WN	UT	RI	3053-5	RR-A30		09C		
SW-E21-3053-3WP	UT	RI	3053-5	RR-A30		09C		
SW-G33-3096-5WD	UT	RI	3096-5	RR-A30			11S	
SW-G33-3096-5WH	UT	RI	3096-5	RR-A30			11S	
SW-N21-2335-1WD	UT	RI	3536-5	RR-A30		09C		RCIC Selection
SW-N21-2336-13WC	UT	RI	3537-5	RR-A30		10C		
SW-N21-2336-13WE	UT	RI	3537-5	RR-A30		10C		
SW-N21-2336-15WP	UT	RI (TASCS)	3537-5	RR-A30	08C			
SW-N21-2336-1WL	UT	RI (TASCS)	3536-5	RR-A30		09C		
SW-N21-2336-1WU	UT	RI	3536-5	RR-A30		09C		RCIC Selection
SW-N21-2336-3WC	UT	RI	3536-5	RR-A30		09C		RCIC Selection
SW-PS-2-A1-A	UT	RI	5352-5	RR-A30	08C			
SW-PS-2-A1-B	UT	RI	5352-5	RR-A30	08C			
SW-PS-2-A4-B	UT	RI	5352-5	RR-A30			12S	
SW-PS-2-C3-A	UT	RI	5354-5	RR-A30		10C		
SW-PS-2-C3-C	UT	RI	5354-5	RR-A30		10C		
SW-PS-2-C3-D	UT	RI	5354-5	RR-A30		10C		
SW-PS-2-C3-J	UT	RI	5354-5	RR-A30	08C			
SW-PS-2-C3-K	UT	RI	5354-5	RR-A30	08C			
SW-RD-2-A3-W7	UT	RI, A (IGSCC)	5356-5	RR-A30			11S	Note 2, Category B
SW-RD-2-A4-W2	UT	RI	5356-5	RR-A30			11S	Note 2, Category A
SW-RD-2-B4-W2	UT	RI, A	5358-5	RR-A30			12S	Note 2, Category A
SW-RD-2-B8-W1	UT	RI, A	5358-5	RR-A30	08C			Note 2, Category A
SW-RD-2-B8-W2	UT	RI, A	5358-5	RR-A30	08C			Note 2, Category A
SW-RS-2-A2-W1	UT	A (IGSCC)	5357-5			09C		Note No. 2, Cat. B

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-J								
B9.11 Circumferential Piping Weld 4" NPS or Larger								
SW-RS-2-B1-W1	UT	RI, A (IGSCC)	5359-5	RR-A30			11S	Note 2, Category B
SW-RS-2A1-W1	UT	RI, A (IGSCC)	5357-5	RR-A30			12S	Note No. 2, Cat. B
B-K-1								
B10.10 Piping Integral Attachment Weld								
SW-N21-2336-20WB	MT	> 5/8 T"	3537-5				10C	ISI Eval. 99-055; Code Case N-509
SW-N21-2336-20WC	MT	> 5/8 T"	3537-5				10C	ISI Eval. 99-055; Code Case N-509
SW-N21-2336-20WD	MT	> 5/8 T"	3537-5				10C	ISI Eval. 99-055; Code Case N-509
SW-N21-2336-20WE	MT	> 5/8 T"	3537-5				10C	ISI Eval. 99-055; Code Case N-509
SW-PS-2-A2-AA1	MT	> 5/8 T"	5352-5				07C	ISI Eval. 99-055; Code Case N-509
SW-PS-2-A2-AA2	MT	> 5/8 T"	5352-5				07C	ISI Eval. 99-055; Code Case N-509
SW-PS-2-A2-AA3	MT	> 5/8 T"	5352-5				07C	ISI Eval. 99-055; Code Case N-509
SW-PS-2-A2-AA4	MT	> 5/8 T"	5352-5				07C	ISI Eval. 99-055; Code Case N-509
B10.20 Pump Integral Attachment Weld								
SW-B31-5365-Pump A-WA	PT	> 5/8 T"	5365-5				12S	ISI Eval. 99-055; Code Case N-509
B-L-2								
B12.20 Pump Casing								
RRC Pump A	VT-3	Visual VT-3	5365-5					Only if Disassembled, Note 10
RRC Pump B	VT-3	Visual VT-3	5365-5					Only if Disassembled, Note 10
B-M-2								
B12.50 Valve Body								
B21F010A	VT-3	>4 NPS"	3537-5				08C 09C	Only if Disassembled
B21F010B	VT-3	>4 NPS"	3536-5				07C 09C	Only if Disassembled
B21F011A	VT-3	>4 NPS"	3537-5					Only if Disassembled
B21F011B	VT-3	>4 NPS"	3536-5					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				08C	Only if Disassembled

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-M-2								
B12.50	Valve Body							
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		08C			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		08C			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		08C			Only if Disassembled
B21F013P	VT-3	>4 NPS"	5355-5					Only if Disassembled
B21F013R	VT-3	>4 NPS"	5354-5					Only if Disassembled
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		07C			Only if Disassembled
B21F028A	VT-3	>4 NPS"	5352-5					Only if Disassembled
B21F028B	VT-3	>4 NPS"	5353-5		07C			Only if Disassembled
B21F028C	VT-3	>4 NPS"	5354-5		07C			Only if Disassembled
B21F028D	VT-3	>4 NPS"	5355-5					Only if Disassembled
B21F032A	VT-3	>4 NPS"	3537-5		07C			Only if Disassembled
B21F032B	VT-3	>4 NPS"	3536-5		07C			Only if Disassembled
B21F076A	VT-3	>4 NPS"	3537-5		07C			Only if Disassembled
B21F076B	VT-3	>4 NPS"	3536-5		07C	09C		Only if Disassembled
B31F023A	VT-3	>4 NPS"	5357-5					Only if Disassembled
B31F023B	VT-3	>4 NPS"	5359-5					Only if Disassembled
B31F031A	VT-3	>4 NPS"	5357-5					Only if Disassembled
B31F031B	VT-3	>4 NPS"	5359-5					Only if Disassembled

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-M-2								
B12.50	Valve Body							
E11F008		VT-3	>4 NPS"	2299-5				Only if Disassembled
E11F009		VT-3	>4 NPS"	2299-5				Only if Disassembled
E11F015A		VT-3	>4 NPS"	2298-5	07C			Only if Disassembled
E11F015B		VT-3	>4 NPS"	2327-5				Only if Disassembled
E11F050A		VT-3	>4 NPS"	2298-5	07C	09C		Only if Disassembled
E11F050B		VT-3	>4 NPS"	2327-5	07C	09C		Only if Disassembled
E11F060A		VT-3	>4 NPS"	2298-5				Only if Disassembled
E11F060B		VT-3	>4 NPS"	2327-5				Only if Disassembled
E11F067		VT-3	>4 NPS"	2299-5				Only if Disassembled
E11F608		VT-3	>4 NPS"	2299-5				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	08C			Only if Disassembled
E21F006B		VT-3	>4 NPS"	3053-5	07C	09C		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
G33F001		VT-3	>4 NPS"	3096-5				Only if Disassembled
G33F004		VT-3	>4 NPS"	3096-5				Only if Disassembled
G33F100		VT-3	>4 NPS"	5351-5				Only if Disassembled
G33F102		VT-3	>4 NPS"	5351-5				Only if Disassembled
G33F106		VT-3	>4 NPS"	5351-5				Only if Disassembled

B-N-1

B13.10 Reactor Vessel Interior -- Vessel Internals are examined using remote visual techniques. Exams listed are code required exams. More detailed techniques are utilized as per BWRVIP I&E Guidelines (Note 22).

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-N-1								
B13.10	Reactor Vessel Interior - Vessel Internals are examined using remote visual techniques. Exams listed are code required exams. More detailed techniques are utilized as per BWRVIP I&E Guidelines (Note 22).							
Access Hole Cover	VT-1	Vessel Interior, A			09C	12S		Note No. 13
CDP and SLC Line	VT-3	Vessel Interior						Only if Accessible
Control Rod Drive Housings	VT-3	Vessel Interior						Only if Accessible
Core Shroud	VT-1	Vessel Interior, A			07CP/ 08CP			Note No. 19
Core Shroud	VT-3	Vessel Interior			07CP/ 08CP			Note No. 19
Core Shroud Welds	UT	Vessel Interior, A				12S		Note No. 19
Core Spray Sparger and Interior Piping	VT-3 / VT-1	Vessel Interior, A			07C/0 8CP	09CP/ 10CP	11SP/ 12SP	Note No. 12
Feedwater Sparger	VT-3	Vessel Interior			07CP/ 08CP	09CP/ 10CP	11SP/ 12SP	NUREG 0619 at least once every 4 Cycles
Flux Monitor Housings	VT-3	Vessel Interior						Only if Accessible
Guide Rod Holders / Brackets	VT-3	Vessel Interior			07CP/ 08CP	10CP	11SP	
Instrumentation Lines	VT-3	Vessel Interior, A			07CP/ 08CP	09CP/ 10CP		Note No. 7
Jet Pump Components	VT-3 / UT	Vessel Interior, A			07CP/ 08CP	09CP/ 10CP		Note No. 17
Jet Pump Hold Down Beams	VT-3	Vessel Interior			07CP/ 08CP	09CP/ 10CP		
Jet Pump Hold Down Beams	UT	Vessel Interior, A				09C		Note No. 3
Recirculation Inlet Nozzle	VT-3	Vessel Interior			08CP	09CP/ 10CP	11SP/ 12SP	
Sample Holders	VT-3	Vessel Interior			08CP	10CP	11SP	
Shroud Head	VT-3	Vessel Interior			07CP/ 08CP	09CP/ 10CP	11SP/ 12SP	
Shroud Head Bolts	UT	A						Note No. 9
Shroud Head Bolts	VT-3	Vessel Interior			07CP/ 08CP	09CP/ 10CP	11SP/ 12SP	

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-N-1								
B13.10	Reactor Vessel Interior - Vessel Internals are examined using remote visual techniques. Exams listed are code required exams. More detailed techniques are utilized as per BWRVIP I&E Guidelines (Note 22).							
Steam Dryer Assembly / Hold Downs	VT-3	Vessel Interior			07CP/ 08CP	09CP/ 10CP	11SP/ 12SP	Note No. 11
Steam Separator Assy.	VT-3	Vessel Interior			07CP/ 08CP	09CP/ 10CP	11SP/ 12SP	
Top Guide	VT-3	Vessel Interior			07CP/ 08CP	09CP/ 10CP	11SP/ 12SP	Note No. 16
B-N-2								
B13.20	RPV Interior Welded Attachments Within Beltline Region - Vessel Internals are examined using remote visual techniques. Exams listed are code required exams. More detailed techniques are utilized as per BWRVIP I&E Guidelines (Note 22).							
Jet Pump Riser Brace Arms	VT-1	Vessel Interior, A			07CP/ 08CP	09CP/ 10CP	11SP/ 12SP	
Surveillance Specimen Bracket	VT-1	Attachment Weld			07CP/ 08CP	10CP	11SP	
B13.30	RPV Interior Welded Attachments Beyond Beltline Region - Vessel Internals are examined using remote visual techniques. Exams listed are code required exams. More detailed techniques are utilized as per BWRVIP I&E Guidelines (Note 22).							
Core Spray Piping Brackets	VT-3	Interior Attachment Beyond Beltline			07CP/ 08CP	09C/ 10CP		
Feedwater Sparger Brackets	VT-3	Interior Attachment Beyond Beltline			07CP/ 08CP	09CP/ 10CP		
Shroud Support Welds	VT-3 / UT	Interior Attachment Beyond Beltline				09CP/ 10CP	11S	Note No. 19
Steam Dryer Support Lugs	VT-3	Interior Attachment Beyond Beltline			07CP/ 08CP	10C		
B13.40	Welded Core Support Structure - Vessel Internals are examined using remote visual techniques. Exams listed are code required exams. More detailed techniques are utilized as per BWRVIP I&E Guidelines (Note 22).							
Core Support Assy. & Bolts	VT-3 / UT	A			07CP/ 08CP		12SP	BWRVIP-25
Lower Core Shroud	VT-3	Core Support, A			07CP	09CP	12SP	Note No. 19
Peripheral Fuel Support	VT-3	A			07CP/ 08CP	09CP		

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
B-O								
B14.10 Welds in CRD Housing								
CRDH-X02-Y27-W1	PT	10% Peripheral Housing Welds	5363-5		08C			
CRDH-X02-Y27-W2	PT	10% Peripheral Housing Welds	5363-5		08C			
CRDH-X02-Y31-W1	PT	10% Peripheral Housing Welds	5363-5			10C		
CRDH-X02-Y31-W2	PT	10% Peripheral Housing Welds	5363-5			10C		
CRDH-X02-Y35-W1	PT	10% Peripheral Housing Welds	5363-5				11S	
CRDH-X02-Y35-W2	PT	10% Peripheral Housing Welds	5363-5				11S	
CRDH-X02-Y39-W1	PT	10% Peripheral Housing Welds	5363-5				12S	
CRDH-X02-Y39-W2	PT	10% Peripheral Housing Welds	5363-5				12S	
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			07C, 08C	09C, 10C	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	VT-2	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		08C			
C1.20 Head Circumferential Weld								
SW-E11-D2-HX-05	UT	Gross Structural Discontinuity	5370-5				11S	

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
C-B								
C2.21 Nozzle to Shell (or Head) Weld								
SW-E11-D2-HX-01	MT	Shell - T >.5"	5370-5		08C			
SW-E11-D2-HX-01	UT	Shell - T >.5"	5370-5		08C			
SW-E11-D2-HX-10	UT	Shell - T >.5"	5370-5				11S	
SW-E11-D2-HX-10	MT	Shell - T >.5"	5370-5				11S	
C2.22 Nozzle Inside Radius Section								
SW-E11-D2-HX-01 IRS	UT	Selected Nozzle			08C			
SW-E11-D2-HX-10 IRS	UT	Selected Nozzle					11S	
C-C								
C3.10 Integally Welded Attachment (Vessel)								
SW-E11-D2-HXS-05	MT	10%	5370-5		08C			Code Case N-509
SW-E11-D2-HXS-06	MT	10%	5370-5		08C			Code Case N-509
SW-E11-D2-HXS-07	MT	10%	5370-5		08C			Code Case N-509
SW-E11-D2-HXS-09	MT	10%	5370-5		08C			Code Case N-509
SW-E11-D2-HXS-10	MT	10%	5370-5		08C			Code Case N-509
SW-E11-D2-HXS-11	MT	10%	5370-5		08C			Code Case N-509
SW-E11-D2-HXS-12	MT	10%	5370-5		08C			Code Case N-509
SW-E11-D2-HXS-13	MT	10%	5370-5			09C		Code Case N-509
SW-E11-D2-HXS-14	MT	10%	5370-5			09C		Code Case N-509
SW-E11-D2-HXS-15	MT	10%	5370-5			09C		Code Case N-509
SW-E11-D2-HXS-16	MT	10%	5370-5			09C		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

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
C-C								
C3.20 Intregally 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
PSFW-E21-3147-301	MT	10%	3147-5		07C			Code Case N-509
PSFW-E41-3167-IWE	MT	10%	3167-5			10C		Code Case N-509
PSFW-E41-3167-IWF	MT	10%	3167-5			10C		Code Case N-509
PSFW-E41-3167-IWG	MT	10%	3167-5			10C		Code Case N-509
PSFW-E41-3167-IWH	MT	10%	3167-5			10C		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
C-R-1								
Augmented NRC Commitment								
FW-C41-2979-11S12	PT	A	2979-5			10C		EF2-53.873
FW-C41-2979-17S18	PT	A	2979-5				12S	EF2-53.873
FW-C41-2979-1S2	PT	A	2979-5		08C			EF2-53.873
FW-C41-2979-2S3	PT	A	2979-5		08C			EF2-53.873
FW-C41-2979-50S51	PT	A	2979-5				11S	EF2-53.873
FW-C41-2979-63S64	PT	A	2979-5			09C		EF2-53.873
FW-C41-2979-64S65	PT	A	2979-5			09C		EF2-53.873

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
C-R-1								
Augmented NRC Commitment								
FW-C41-2979-72S73	PT	A	2979-5		08C			EF2-53.873
FW-C41-2979-81S82	PT	A	2979-5			12S		EF2-53.873
FW-C41-2979-L	PT	A	2979-5			10C		EF2-53.873
FW-C41-2979-P	PT	A	2979-5		07C			EF2-53.873
FW-C41-3361-02W1	PT	A	3361-5		07C			EF2-53.873
FW-C41-3361-1WF22	PT	A	3361-5			12S		EF2-53.873
FW-C41-3361-1WF25	PT	A	3361-5			11S		EF2-53.873
FW-C41-5058-54S55	PT	A	5374-5			09C		EF2-53.873
FW-C41-5058-65S66	PT	A	5374-5			11S		EF2-53.873
C-R-2								
C5.51 Circumferential Weld								
FW-C11-2113-249-B	MT	R	5372-5			12S		
FW-C11-2113-249-B	UT	R	5372-5			12S		
FW-E11-3146-5WO	UT	MS	3146-5		08C			
FW-E11-3146-5WO	MT	MS	3146-5		08C			
FW-E11-3146-6W10	MT	MS	3146-5		07C			
FW-E11-3146-6W10	UT	MS	3146-5		07C			
FW-E11-3146-OW1	MT	TE	3146-5			11S		
FW-E11-3146-OW1	UT	TE	3146-5			11S		
FW-E11-3151-10W0	MT	TE	3151-5			11S		
FW-E11-3151-10W0	UT	TE	3151-5			11S		
FW-E11-3151-3WF2	UT	MS	3151-5			09C		
FW-E11-3151-3WF2	MT	MS	3151-5			09C		
FW-E11-3151-7W11	MT	MS	3151-5			10C		
FW-E11-3151-7W11	UT	MS	3151-5			10C		
FW-E11-3154-13WO	UT	TE	3154-5			09C		
FW-E11-3154-13WO	MT	TE	3154-5			09C		
FW-E11-3154-4WO	UT	TE	3154-5			12S		

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
C-R-2								
C5.51 Circumferential Weld								
FW-E11-3154-4WO	MT	TE	3154-5				12S	
FW-E11-3157-OW6	MT	TE	3157-5		07C			
FW-E11-3157-OW6	UT	TE	3157-5		07C			
FW-E11-3158-10WF4	UT	TE	3158-5		07C			
FW-E11-3158-10WF4	MT	TE	3158-5		07C			
FW-E11-3158-1W2	UT	R	3158-5			09C		
FW-E11-3158-1W2	MT	R	3158-5			09C		
FW-E11-3158-9WF2	MT	R	3158-5			09C		
FW-E11-3158-9WF2	UT	R	3158-5			09C		
FW-E11-3159-OW1	UT	HS	3159-5		08C			
FW-E11-3159-OW1	MT	HS	3159-5		08C			
FW-E11-3160-OW2	VT-1	R	3160-5	RR-A26			11S	Note 21
FW-E11-3161-4WF5	VT-1	R	3161-5	RR-A26			12S	Note 21
FW-E11-3164-4W5	UT	R	3164-5				12S	
FW-E11-3164-4W5	MT	R	3164-5				12S	
FW-E11-4611-1W2	VT-1	R	4611-5	RR-A26			12S	Note 21
FW-E11-4611-1WF2	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-E11-4612-4W5	VT-1	R	4612-5	RR-A26		10C		Note 21
FW-E11-4612-4WF1	VT-1	R	4612-5	RR-A26			12S	Note 21
FW-E11-4612-7W8	VT-1	R	4612-5	RR-A26		10C		Note 21
FW-E11-4612-8WF3	VT-1	R	4612-5	RR-A26		10C		Note 21
FW-E11-4612-9WO	VT-1	R	4612-5	RR-A26			11S	Note 21
FW-E21-3144-OW4	MT	TE	3144-5			10C		
FW-E21-3144-OW4	UT	TE	3144-5			10C		
FW-E21-3144-OW1	MT	TE	3144-5		07C			
FW-E21-3145-11WO	MT	R	3145-5			10C		
FW-E21-3147-16W17	UT	R	3147-5		07C			

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
C-F-2								
C5.51 Circumferential Weld								
FW-E21-3147-16W17	MT	R	3147-5		07C			
FW-E21-3148-0W8	MT	TE	3148-5				12S	
FW-E21-3148-0W8	UT	TE	3148-5				12S	
FW-E21-3148-7W0	MT	TE	3148-5			09C		
FW-E21-3148-7W0	UT	TE	3148-5			09C		
FW-E41-3162-11WF1	VT-1	R	3162-5	RR-A26		09C		Note 21
FW-E41-3162-11WF4	VT-1	R	3162-5	RR-A26		09C		Note 21
FW-E41-3162-11WF5	VT-1	R	3162-5	RR-A26		09C		Note 21
FW-E41-3162-11W0	VT-1	R	3162-5	RR-A26	08C			Note 21
FW-E41-3162-1W2	UT	R	3162-5			10C		
FW-E41-3162-1W2	MT	R	3162-5			10C		
FW-E41-3162-9WF0	UT	TE	3162-5				12S	
FW-E41-3162-9WF0	MT	TE	3162-5				12S	
FW-E41-3163-7W0	MT	TE	3163-5		07C			
FW-E41-3163-7W0	UT	TE	3163-5		07C			
FW-E41-3163-8W0	UT	TE	3163-5				11S	
FW-E41-3163-8W0	MT	TE	3163-5				11S	
FW-E41-3167-1W2	MT	R	3167-5				12S	
FW-E41-3167-1W2	UT	R	3167-5				12S	
FW-E41-3167-9W0	MT	TE	3167-5				11S	
FW-E41-3167-9W0	UT	TE	3167-5				11S	
FW-E41-3167-OW1	MT	TE	3167-5			09C		
FW-E41-3167-OW1	UT	TE	3167-5			09C		
FW-E41-3169-2W0	UT	R	3169-5			09C		
FW-E41-3169-2W0	MT	R	3167-5			09C		
FW-E41-3172-0W1	UT	TE	3172-5			10C		
FW-E41-3172-0W1	MT	TE	3172-5			10C		
FW-E41-3172-0W8	UT	R	3172-5				12S	

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
C-F-2								
C5.51	Circumferential Weld							
FW-E41-3172-0W8	MT	R	3172-5				12S	
FW-G41-3669-0W9	MT	MS	3669-5				12S	
FW-N30-3259-4WO	MT	TE	3259-5		08C			
FW-N30-3259-4WO	UT	TE	3259-5		08C			
FW-T48-04-2095-11W12	MT	R	2095-5		07C			
FW-T48-04-2095-19WO	MT	MS	2095-5	RR-A26	08C			Note 21
FW-T48-04-2095-7W8	MT	R	2095-5			10C		
FW-T48-04-2097-20W21	MT	MS	2097-5	RR-A26	07C			Note 21
FW-T48-04-2097-8W9	MT	R	2097-5		07C			
SW-C11-2113-172-A	UT	R	5375-5			09C		
SW-C11-2113-172-A	MT	R	5375-5			09C		
SW-C11-2113-303-A	UT	R	5372-5				11S	
SW-C11-2113-303-A	MT	R	5372-5				11S	
SW-E11-3035-5WE	MT	R	3035-5		07C			
SW-E11-3035-7WB	MT	R	3035-5			09C		
SW-E11-3146-6WE	UT	HS	3146-5			10C		
SW-E11-3146-6WE	MT	HS	3146-5			10C		
SW-E11-3146-6WH	UT	HS	3146-5		07C			
SW-E11-3146-6WH	MT	HS	3146-5		07C			
SW-E11-3153-13WD	UT	R	3153-5		08C			
SW-E11-3153-13WD	MT	R	3153-5		08C			
SW-E11-3154-4WC	MT	R	3154-5			09C		
SW-E11-3154-4WC	UT	R	3154-5			09C		
SW-E11-3157-1WB	UT	R	3157-5				12S	
SW-E11-3157-1WB	MT	R	3157-5				12S	
SW-E11-3158-4WD	MT	R	3158-5				11S	
SW-E11-3158-4WD	UT	R	3158-5				11S	
SW-E11-3158-8WG	UT	R	3158-5				11S	

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
C-R-2								
C5.51 Circumferential Weld								
SW-E11-3158-8WG	MT	R	3158-5				11S	
SW-E11-3161-1WH	MT	R	3161-5				12S	
SW-E11-3161-4WB	VT-1	R	3161-5	RR-A26		10C		Note 21
SW-E11-3161-4WK	VT-1	R	3161-5	RR-A26			12S	Note 21
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			09C		
SW-E11-3177-9WE	UT	R	3177-5			09C		
SW-E21-3145-9WD	VT-1	R	3145-5	RR-A26	08C			Note 21
SW-E21-3147-15WF	UT	R	3147-5				11S	
SW-E21-3147-15WF	MT	R	3147-5				11S	
SW-E21-3147-15WG	MT	R	3147-5			10C		
SW-E21-3147-15WG	UT	R	3147-5			10C		
SW-E21-3147-19WB	UT	R	3147-5		08C			
SW-E21-3147-19WB	MT	R	3147-5		08C			
SW-E21-3147-5WJ	UT	R	3147-5		08C			
SW-E21-3147-5WJ	MT	R	3147-5		08C			
SW-E21-3148-5WD	MT	R	3148-5		08C			
SW-E21-3149-4WD	MT	R	3149-5		07C			
SW-E21-3149-4WD	UT	R	3149-5		07C			
SW-E21-3149-6WC	UT	R	3149-5				12S	
SW-E21-3149-6WC	MT	R	3149-5				12S	
SW-E21-3149-6WL	UT	R	3149-5				11S	
SW-E21-3149-6WL	MT	R	3149-5				11S	
SW-E41-3162-11WC	VT-1	R	3162-5	RR-A26	08C			Note 21
SW-E41-3162-2WC	MT	R	3162-5			10C		Replaced SW-E41-3162-1WU
SW-E41-3162-2WC	UT	R	3162-5			10C		CARD 04-25787
SW-E41-5373-GW3	UT	R	5373-5			09C		

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection 1	Inspection 2	Inspection 3	Remarks
C-R-2								
C5.51 Circumferential Weld								
SW-E41-5373-GW3	MT	R	5373-5			09C		
SW-G41-3669-3WB	MT	R	3669-5			10C		
SW-N30-3258-13WJ	UT	MS	3258-5				12S	
SW-N30-3258-13WJ	MT	MS	3258-5				12S	
SW-N30-3258-19WJ	MT	MS	3258-5		07C			
SW-N30-3258-19WJ	UT	MS	3258-5		07C			
SW-N30-3258-1WJ	MT	MS	3258-5			10C		
SW-N30-3258-1WJ	UT	MS	3258-5			10C		
SW-N30-3258-7WK	MT	MS	3258-5			09C		
SW-N30-3258-7WK	UT	MS	3258-5			09C		
SW-T48-04-2095-5WD	MT	R	2095-5				11S	
SW-T48-04-2095-WSW3	MT	R	2095-5				11S	
SW-T48-04-2097-18WC	MT	R	2097-5			10C		
SW-T48-04-2097-20WD	MT	MS	3258-5	RR-A26			11S	Note 21
SW-T48-04-2097-21WB	VT-1	R	2097-5	RR-A26	07C			Note 21
SW-T48-04-2097-25WF	VT-1	R	2097-5	RR-A26	07C			Note 21
C5.52 Longitudinal Weld								
SW-E41-3162-11WOLD	VT-1	R	3162-5	RR-A26	08C			Note 21
SW-N30-3258-13WJLU	MT		3258-5				12S	
SW-N30-3258-13WJLU	UT		3258-5				12S	
SW-N30-3258-19WJLU	UT		3258-5		07C			
SW-N30-3258-19WJLU	MT		3258-5		07C			
SW-N30-3258-1WJLU	MT		3258-5			10C		
SW-N30-3258-7WKLU	UT		3258-5			09C		
SW-N30-3258-7WKLU	MT		3258-5			09C		
C5.81 Branch Connection Weld								
FW-E11-3146-15FW01	MT	MS	3146-5				12S	
FW-E11-3157-4WF01	MT	R	3157-5				12S	

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
C-F-2								
C5.81 Branch Connection Weld								
SW-E11-3146-5WC	MT	MS	3146-5		07C			
SW-E11-3146-5WM	MT	HS	3146-5			10C		
SW-E11-3146-7WC	MT	HS	3146-5				12S	
SW-E11-3151-8WD	MT	HS	3151-5		08C			
SW-E11-3160-1WD	MT	HS	3160-5			09C		
SW-E21-3144-5WE	MT	R	3144-5				11S	
SW-N30-3258-13WB	MT	R	3258-5		08C			
C-H								
C.7X Class 2 Pressure Retaining Boundary								
B21 Main Steam	VT-2	Class 2 Boundary	5808-1 5808-2		08C	10C		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period
E11 Residual Heat Removal System	VT-2	Class 2 Boundary	5813-1 5813-2 5813-3		08C	10C		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		08C	10C		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		08C	10C		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		08C	10C		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		08C	10C		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		08C	10C		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		08C	10C		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		08C	10C		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		08C	10C		X includes items C7.10, C7.30, C7.50 and C7.70. Perform each Period

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
C-H								
C7.X	Class 2 Pressure Retaining Boundary							
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
C11 Control Rod Drive System	VT-2	Class 2 Boundary	5810-1		08C	10C		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		08C	10C		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				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	5813-1 5813-2 5813-3				12S	X includes items C7.20, C7.40, C7.60 and C7.80. Perform each Interval; Code Case N498-1
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	RR-A19			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
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

D-B

D2.10 Pressure Retaining Components

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
D-B								
D2.10 Pressure Retaining Components								
E11 Residual Heat Removal System Functional Boundary	Visual, VT-2	System Function	Class 3 Systems		08C	10C	12S	Note 15 Perform Each Period; Code Case 498-1
P42 Reactor Building Closed Cooling Water	Visual, VT-2	System Function	Class 3 Systems		08C	10C	12S	Note 15 Perform Each Period; Code Case 498-1
P44 Emergency Equipment Cooling Water	Visual, VT-2	System Function	Class 3 Systems		08C	10C	12S	Note 15 Perform Each Period; Code Case 498-1
P45 Emergency Equipment Service Water	Visual, VT-2	System Function	Class 3 Systems		08C	10C	12S	Note 15 Perform Each Period; Code Case 498-1
R30 Emergency Diesel Generator & Service Water	Visual, VT-2	System Function	Class 3 Systems		08C	10C	12S	Note 15 Perform Each Period; Code Case 498-1
D2.20 Intregal Attachment (Supports and Restraints)								
P45-3360-G11	VT-3	Integral Attachment Weld	3360-2				11S	
D2.40 Intregal Attachment								
E11-3184-G08	VT-3	Integral Attachment Weld	3184-2			09C		
P44-3048-G10	VT-3	Integral Attachment Weld	3048-2		07C			
N/A								
N/A ANSI B31.1 Augmented								
FW-N20-3105-22WO	UT	NUREG 0313	3105-1			09C		Note 2, Category D
FW-N20-3105-0W13	UT	NUREG 0313	3105-1		08C			Note 2, Category D
FW-N20-3105-0W15	UT	NUREG 0313	3105-1				12S	Note 2, Category D
FW-N20-3105-0W23	UT	NUREG 0313	3105-1			09C		Note 2, Category D
FW-N20-3105-14WO	UT	NUREG 0313	3105-1				12S	Note 2, Category D
FW-N20-3105-16W0	UT	NUREG 0313	3105-1		07C			Note 2, Category D
FW-N20-3105-24W0	UT	NUREG 0313	3105-1			10C		Note 2, Category D
FW-N20-3105-OW21	UT	NUREG 0313	3105-1				11S	Note 2, Category D
FW-N20-3107-OW1	UT	NUREG 0313	3107-1			10C		Note 2, Category D

FERMI 2 NUCLEAR POWER PLANT

Category / Item Identification	Exams Required	Selection Basis	Isometric	Relief Request	Inspection Period			Remarks
					1	2	3	
N/A								
N/A	ANSI B31.1 Augmented							
FW-N20-3107-0W17	UT	NUREG 0313	3107-1		07C			Note 2, Category D
FW-N21-3109-18W0	UT	NUREG 0313	3109-1		08C			Note 2, Category D
FW-N21-3109-29W0	UT	NUREG 0313	3109-1			11S		Note 2, Category D
SW-N20-03-B009-BWSE	UT	NUREG 0313	3105-1			11S		Note 2, Category D
SW-N20-03-B010-BWSE	UT	NUREG 0313	3105-1		08C			Note 2, Category D
SW-N20-03-B011-AWSE	UT	NUREG 0313	3105-1		09C			Note 2, Category D
SW-N20-03-B011-BWSE	UT	NUREG 0313	3105-1		09C			Note 2, Category D
SW-N20-03-B012-AWSE	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
SW-N20-03-B013-AWSE	UT	NUREG 0313	3105-1		10C			Note 2, Category D
SW-N20-03-B013-BWSE	UT	NUREG 0313	3107-1		10C			Note 2, Category D
SW-N20-03-B014-AWSE	UT	NUREG 0313	3105-1		07C			Note 2, Category D
SW-N20-03-B014-BWSE	UT	NUREG 0313	3107-1		07C			Note 2, Category D
SW-N21-01-B001-AWSE	UT	NUREG 0313	3109-1			11S		Note 2, Category D
SW-N21-01-B002-AWSE	UT	NUREG 0313	3109-1		08C			Note 2, Category D

INSERVICE INSPECTION NDE PROGRAM.

TABLE B

FERMI 2 NUCLEAR POWER PLANT

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

FERMI 2 NUCLEAR POWER PLANT

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period			Remarks
					1	2	3	
1	E41-2297-G05	VT-3	SP				12S	
1	E51-2192-G11	VT-3	SP		07C			
1	G33-3096-G01	VT-3	SP			10C		
1	G33-3096-G04	VT-3	SP		07C			
1	G33-3096-G10	VT-3	SP				11S	
1	G33-3096-G32	VT-3	G				11S	
1	N21-3536-G02	VT-3	SP			09C		
1	N21-3536-G03	VT-3	SP				12S	
1	N21-3536-G07	VT-3	SP				11S	
1	N21-3537-G04	VT-3	SP			10C		
1	N21-3537-G06	VT-3	SP			10C		
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			10C		Augmented exam - See ISI 99-056
2	B21-2592-G04	VT-3	R		07C			Augmented exam - See ISI 99-056
2	B21-2594-G06	VT-3	SP			09C		Augmented exam - See ISI 99-056
2	B21-4095-G06	VT-3	R		07C			Augmented exam - See ISI 99-056
2	C11-2113-G262	VT-3	G				11S	
2	C11-2113-G266	VT-3	R			09C		
2	C11-2113-G274	VT-3	G			09C		
2	C11-2113-G294	VT-3	G		07C			
2	E11-3035-G02	VT-3	R			10C		
2	E11-3035-G05	VT-3	SP			09C		
2	E11-3035-G19	VT-3	G			10C		
2	E11-3035-G24	VT-3	R				12S	
2	E11-3146-G30	VT-3	G				12S	
2	E11-3146-G32	VT-3	SP			09C		
2	E11-3146-G36	VT-3	R			10C		
2	E11-3151-G05	VT-3	SP				11S	

FERMI 2 NUCLEAR POWER PLANT

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period			Remarks
					1	2	3	
2	E11-3151-G25A	VT-3	R		07C			
2	E11-3151-G29	VT-3	R			09C		
2	E11-3153-G10	VT-3	G		08C			
2	E11-3153-G12	VT-3	SP			09C		
2	E11-3153-G16	VT-3	R				12S	
2	E11-3154-G05	VT-3	SP			10C		
2	E11-3154-G09	VT-3	R		08C			
2	E11-3154-G22	VT-3	R				11S	
2	E11-3154-G28	VT-3	R			09C		
2	E11-3157-G04	VT-3	SP		07C			
2	E11-3157-G24	VT-3	R			09C		
2	E11-3157-G29	VT-3	R			10C		
2	E11-3158-G33	VT-3	R			09C		
2	E11-3158-G46	VT-3	R			09C		
2	E11-3158-G50	VT-3	SP				12S	
2	E11-3159-G06	VT-3	R		07C			
2	E11-3159-G09	VT-3	R				11S	
2	E11-3160-G01	VT-3	SP		08C			
2	E11-3160-G19	VT-3	G				12S	
2	E11-3161-G11	VT-3	R				12S	
2	E11-3161-G15	VT-3	R		08C			
2	E11-3164-G11	VT-3	G		07C			
2	E11-3164-G17A	VT-3	R				12S	
2	E11-3164-G21	VT-3	SP		08C			
2	E11-3177-G18	VT-3	R			10C		
2	E11-3177-G19	VT-3	R		08C			
2	E11-3177-G30	VT-3	G			10C		
2	E11-4611-G04	VT-3	SP				12S	
2	E11-4611-G09	VT-3	R				12S	

FERMI 2 NUCLEAR POWER PLANT

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period			Remarks
					1	2	3	
2	E11-4611-G15	VT-3	R		08C			
2	E11-4612-G10	VT-3	R				11S	
2	E11-4612-G12	VT-3	G		08C			
2	E11-5370-G01	VT-3	G				11S	Div 2 RHR HTX Supports
2	E11-5370-G02	VT-3	G		08C			Div 2 RHR HTX Supports
2	E11-5370-G03	VT-3	G			09C		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		08C			Div 2 RHR HTX Supports
2	E21-3144-G03	VT-3	SP		07C			
2	E21-3144-G06	VT-3	A				11S	
2	E21-3144-G11	VT-3	R				12S	
2	E21-3144-G16	VT-3	R		08C			
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			09C		
2	E21-3147-G35	VT-3	R		07C			
2	E21-3147-G39	VT-3	SP			10C		
2	E21-3148-G29	VT-3	R			09C		
2	E21-3148-G37	VT-3	SP			10C		
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		07C			
2	E41-3162-G01	VT-3	SP			09C		
2	E41-3162-G03	VT-3	R			09C		
2	E41-3162-G13	VT-3	G				12S	
2	E41-3163-G01	VT-3	SP		08C			
2	E41-3163-G12	VT-3	R				12S	

FERMI 2 NUCLEAR POWER PLANT

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

FERMI 2 NUCLEAR POWER PLANT

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period			Remarks
					1	2	3	
2	T48-2097-G22A	VT-3	R			09C		
2	T48-2097-G25A	VT-3	R		08C			
2	T48-2097-G34	VT-3	G			09C		
3	E11-2179-G20	VT-3	R		07C			
3	E11-2180-G14	VT-3	G				12S	
3	E11-2183-G07	VT-3	G			10C		
3	E11-2183-G15	VT-3	R		08C			
3	E11-2184-G12	VT-3	R			10C		
3	E11-2184-G22	VT-3	G		08C			
3	E11-3184-G04	VT-3	G				12S	
3	E11-3184-G08	VT-3	R			09C		
3	E11-3184-G10	VT-3	R				11S	
3	E11-3184-G18	VT-3	R		07C			
3	E11-3185-G40	VT-3	R			09C		
3	E11-3185-G53	VT-3	SP			09C		
3	E11-3185-G58	VT-3	SP				12S	
3	E11-3185-G60	VT-3	G			09C		
3	G33-3096-G09	VT-3	R			10C		
3	P42-3340-G06	VT-3	SP			09C		
3	P44-3047-G28	VT-3	G				11S	
3	P44-3048-G10	VT-3	SP		07C			
3	P44-3084-G10	VT-3	R		07C			
3	P44-3084-G15	VT-3	R			10C		
3	P44-3189-G38	VT-3	SP		08C			
3	P44-3189-G42	VT-3	R			10C		
3	P44-3189-G47	VT-3	R		07C			
3	P44-3336-G01	VT-3	A			09C		
3	P44-3336-G15	VT-3	R				11S	
3	P44-3337-G13	VT-3	R				12S	

FERMI 2 NUCLEAR POWER PLANT

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period			Remarks
					1	2	3	
3	P44-3337-G16	VT-3	R		10C			
3	P44-3345-G02	VT-3	G	08C				
3	P44-3345-G08	VT-3	R		09C			
3	P44-3346-G02	VT-3	G			11S		
3	P44-3346-G12	VT-3	R			12S		
3	P44-3347-G10	VT-3	R	07C				
3	P44-3347-G14	VT-3	R			12S		
3	P44-3348-G12	VT-3	A	07C				
3	P44-3351-G28	VT-3	R	08C				
3	P44-3351-G41	VT-3	SP			12S		
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		10C			
3	P44-4624-G01	VT-3	G			11S		
3	P44-4624-G12	VT-3	R			12S		
3	P44-4625-G03	VT-3	G			11S		
3	P44-4625-G13	VT-3	R		09C			
3	P44-4628-G02	VT-3	R		10C			
3	P44-4629-G05	VT-3	G		09C			
3	P44-4629-G08	VT-3	R	08C				
3	P44-EECW Head Tank Sprts (Div. 2)	VT-3		08C				
3	P44-EECW Htr Sprts (Div. 1)	VT-3				12S		
3	P45-2178-G09	VT-3	R		09C			
3	P45-2204-G11	VT-3	R			11S		
3	P45-3352-G02	VT-3	G			12S		
3	P45-3352-G06	VT-3	R	07C				
3	P45-3353-G05	VT-3	R		10C			
3	P45-3359-G03	VT-3	G	08C				

Code Class	Identification Number	Exams Method	Component Support Type	Relief Request	Inspection Period			Remarks
					1	2	3	
3	P45-3360-G04	VT-3	R			10C		
3	P45-3360-G07	VT-3	G			09C		
3	P45-4626-G03	VT-3	G				12S	
3	P45-4626-G08	VT-3	A				11S	
3	P45-4627-G06	VT-3	A				12S	
3	P45-4627-G12	VT-3	R				11S	
3	P45-4630-G04	VT-3	R			09C		
3	P45-4631-G04	VT-3	R			09C		
3	P45-4631-G13	VT-3	G				11S	
3	P45-4632-G08	VT-3	R			10C		
3	P45-4632-G10	VT-3	G				11S	
3	R30-2176-G17	VT-3	G		07C			
3	R30-2176-G28	VT-3	A			10C		
3	R30-2176-G31	VT-3	G		08C			
3	R30-2177-G04	VT-3	R			09C		
3	R30-2177-G27	VT-3	R				11S	
3	R30-2177-G31	VT-3	G		08C			
3	R30-2181-G04	VT-3	R				11S	
3	R30-2181-G15	VT-3	R			10C		
3	R30-2182-G02	VT-3	G			09C		
3	R30-2182-G14	VT-3	R		07C			

SECTION 8

SUMMARY OF CONTAINMENT INSPECTIONS (IWE)

**ABSTRACT OF CONDITIONS NOTED
AND CORRECTIVE ACTIONS TAKEN**

UPDATED PROGRAM TABLE

8.0 SUMMARY OF CONTAINMENT INSPECTIONS (IWE)

8.1 PROGRAM STATUS, ASME SECTION XI CREDIT – IWE

8.1.1 CATEGORY: E-A Containment Surfaces (1)
 ITEM NO: E1.11 Accessible Surface Areas (each period)

Description	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Accessible Liner Surfaces	1	1	1	100%	100%	100%
TOTAL	1	1	1	100%	100%	100%

NOTE:

- (1) Per 10CFR50.55a, 100% of the accessible surfaces of the containment were required to be inspected (General Visual) during the first period (RF07) and once every period after. During RF09, a 100% inspection was completed of the accessible areas of the primary containment, which completed the inspection requirement for the 2nd period.

8.1.2 CATEGORY: E-A Containment Surfaces
 ITEM NO: E1.12 Accessible Surface Areas

Description	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%) (1)	Maximum Allowed (%)
Accessible Liner Surfaces	1	1	0 (1)	0%	N/A	N/A
TOTAL	1	1	0 (1)	0%	N/A	N/A

NOTE:

- (1) Inspections (VT-3) will be performed during the 3rd Period (Refueling Outages 11 and 12).

8.1.3 CATEGORY: E-A Containment Surfaces
 ITEM NO: E1.20 Vent System - Accessible Surface Areas

Description	Total Comp.	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%) (1)	Maximum Allowed (%)
Accessible Liner Surfaces	1	1	0 (Note 1)	0%	N/A	N/A
TOTAL	1	1	0 (Note 1)	0%	N/A	N/A

NOTE:

(1) Inspections (VT-3) will be performed during the 3rd Period (Refueling Outages 11 and 12).

8.1.4 CATEGORY: E-C Containment Surfaces Requiring Augmented Examination
 ITEM NO: E4.11 Visible Surface

Description	Total Comp	Total Requiring Examination (1)	Examined To Date (1)	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Visual Surfaces	0	0	0	N/A	N/A	N/A
TOTAL	0	0	0	N/A	N/A	N/A

NOTE:

(1) No Visual augmented examinations have been identified.

8.1.5 CATEGORY: E-C Containment Surfaces Requiring Augmented Examination
 ITEM NO: E1.12 Surface Area Grid, Min Wall Thickness Locations

Description	Total Comp	Total Requiring Examination (1)	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Surface Area Grid	0	0	0	N/A	N/A	N/A
TOTAL	0	0	0	N/A	N/A	N/A

NOTE:

(1) No Visual augmented examinations have been identified.

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 Fermi 2 Nuclear Power Plant, 6400 N. Dixie Hwy., Newport, MI 48166
 Commercial Service Date: 1-23-88 NB No. 21085 (RPV)

8.1.6 CATEGORY: E-D Seals, Gaskets, and Moisture Barriers
 ITEM NO: E5.10 Seals (1)

Description	Total Comp	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Seals	61	61	(1)	N/A	N/A	N/A
TOTAL	61	61	(1)	N/A	N/A	N/A

NOTE:

- (1) Code requires a visual examination, VT-3, of all seals, gaskets, and other devices once each interval. Request for Relief CISI-001 has been approved to verify the leak tightness of seals and gaskets in accordance with the 10CFR50, Appendix J Program.

8.1.7 CATEGORY: E-D Seals, Gaskets, and Moisture Barriers
 ITEM NO: E5.20 Gaskets (1)

Description	Total Comp	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Gasket	31	31	(Note 1)	N/A	N/A	N/A
TOTAL	31	31	(Note 1)	N/A	N/A	N/A

NOTE:

- (1) Code requires a visual examination, VT-3, of all seals, gaskets, and other devices once each interval. Request for Relief CISI-001 has been approved to verify the leak tightness of seals and gaskets in accordance with the 10CFR50, Appendix J Program.

8.1.8 CATEGORY: E-D Seals, Gaskets, and Moisture Barriers
 ITEM NO: E5.30 Moisture Barrier

Description	Total Comp	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Moisture Barrier	1	1	1	67%	35%	67%
TOTAL	1	1	1	67%	35%	67%

NOTE:

During RF07, 100% of the moisture barrier was inspected and replaced. There was no damage to the liner at this location. During RF08, RF090 and RF10, it was inspected again with no degradation identified. 67% credited for RF08, RF09 and RF10.

8.1.9 CATEGORY: E-G Pressure Retaining Bolting
 ITEM NO: E8.10 Bolting Connections

Description	Total Comp	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Bolting Connections	89	89	60	67%	34%	67%
TOTAL	89	89	60	67%	34%	67%

8.1.10 CATEGORY: E-G Pressure Retaining Bolting
 ITEM NO: E8.20 Bolting Connections (1)

Description	Total Comp	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Bolting Connections Torque	89	89	(1)	N/A	N/A	N/A
TOTAL	89	89	(1)	N/A	N/A	N/A

NOTE:

- (1) Code requires a bolt torque or tension test for bolted connections not disassembled. Request for Relief CISI-007 has been approved to verify the leak tightness of bolted connections in accordance with the 10CFR50, Appendix J Program.

8.1.11 CATEGORY: E-P Pressure Retaining Components
 ITEM NO: E9.10 Pressure Retaining Boundary

Description	Total Comp	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Pressure Retaining Boundary	1	1	(1)	N/A	N/A	N/A
TOTAL	1	1	(1)	N/A	N/A	N/A

NOTE:

- (1) Will be tested in accordance with the 10CFR50, Appendix J Program.

8.1.12 CATEGORY: E-P Pressure Retaining Components
 ITEM NO: E9.20 Containment Penetration Bellows

Description	Total Comp	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Containment Penetration Bellows	29	29	(1)	N/A	N/A	N/A
TOTAL	29	29	(1)	N/A	N/A	N/A

NOTE:

(1) Will be tested in accordance with the 10CFR50, Appendix J Program.

8.1.13 CATEGORY: E-P Pressure Retaining Components
 ITEM NO: E9.30 Airlocks

Description	Total Comp	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Airlock	1	1	(1)	N/A	N/A	N/A
TOTAL	1	1	(1)	N/A	N/A	N/A

NOTE:

(1) Will be tested in accordance with the 10CFR50, Appendix J Program.

8.1.14 CATEGORY: E-P Pressure Retaining Components
 ITEM NO: E9.40 Seals and Gaskets

Description	Total Comp	Total Requiring Examination	Examined To Date	Examined To Date (%)	Minimum Required (%)	Maximum Allowed (%)
Seals And Gaskets	92	92	(1)	N/A	N/A	N/A
TOTAL	92	92	(1)	N/A	N/A	N/A

NOTE:

(1) Will be tested in accordance with the 10CFR50, Appendix J Program.

8.2 Refuel-10

This is a summary of the IWE inspection activities completed at Fermi 2 during the tenth refueling outage. RF10 concluded the second period in the second interval and now aligns with the ISI NDE Program. The inspection scope was limited as the majority of the second period inspections were completed during RF09. Inspections consisted of the protective coating areas that were repaired during RF09, the drywell basement moisture seal, primary containment bolting on relief valves that were removed for testing, along with other miscellaneous bolting.

ABSTRACT OF CONDITION NOTED AND CORRECTED ACTIONS TAKEN

During RF10, the following inspections were performed:

- A general visual inspection of the protective coatings in the drywell basement area.
- The moisture seal at the drywell basement floor to steel liner was inspected.
- 18 bolted primary containment connections were inspected, 9 while the bolting material was under tension and 9 while the flanged connection was disassembled.
- While not credited, an inspection was also performed of the interior of the torus vent header during its closeout.
- During the cycle, the exterior of the torus was inspected.

The following discrepancies were identified during the above inspections:

- Degraded protective coating in the drywell basement area, eight locations were identified (CARD 04-26062).
- Degraded protective coatings in the torus vent header (CARD 04-26143).
- Evaluation of degraded protective coating in the drywell basement (CARD 04-26144).

Additionally, in preparation for torus diving inspections and coating repairs schedule for RF10, past inspection reports were reviewed. In the RF08 Torus Desludge, Inspection & Coating Repair Report, the review identified a corrosion pit in the torus shell that had not previously been brought to the attention of Fermi 2 personnel. The corrosion pit is located in Bay 3, Quadrant 2. The pit is ¼ inch in diameter and has a depth of 0.0285 inches. The pit and the surrounding area was cleaned and the protective coating was reapplied. The pit was evaluated and accepted in CARD 04-21434.

8.3 Refuel-09

This is a summary of the IWE inspection activities completed at Fermi 2 during the ninth refueling outage. The RF09 scope included the required 2nd period 100 percent inspection of the accessible surfaces of the primary containment and a representative sample of VT-1 and VT-3 inspections of primary containment bolted components. This is the second refueling outage of the 2nd period, which consist of three refueling outages, with RF09 containing the majority of the inspections.

ABSTRACT OF CONDITION NOTED AND CORRECTED ACTIONS TAKEN

Locations where degraded coating was identified during RF07 and RF08 were reinspected prior to repair. Areas identified showed no further degradation in their condition. These areas had a thin layer of surface rust, which was a result of condensation from overhead lines dripping down onto the primary containment shell.

During RF09, 11 locations below the 583 feet elevation had their protective coating replaced. During the protective coating prep work, no material loss of the primary containment shell was noted. In addition to these 11 areas, a pit at the I-Beam weld, at elevation 583 feet, azimuth 77 deg, was cleaned and repainted. Finally, seven arc strikes, which had been previously blend ground, were recoated.

During RF09, areas that were repaired during RF07 were reinspected with particular attention given to the moisture seal located at the concrete floor to drywell shell interface and the painted surface in this area. These inspections identified no new or unexpected degradation.

The inspections of the remainder of the primary containment resulted in the issuance of 7 condition assessment resolution documents (CARDS). CARD 03-14450, "Water Accumulation in Torus Downcomer to Vent Header Tee Connections," was generated to address the water accumulation in the ring header. None of the other CARDS were an operability concern and were issued for trending and cleanliness issues.

8.4 Refuel-08

This is a summary of the IWE inspection activities completed at Fermi 2 during the eighth refueling outage. The RF08 inspection scope was limited. This was a result of 10CFR50.55a being reissued with the requirement that IWE be implemented on an expedited basis and that all of the 1st period inspections be completed by September 2001. As a result, Fermi 2 was required to complete all the 1st period inspections during RF07. This resulted in the 2nd period consisting of three refueling outages, with RF09 containing the majority of the inspections.

ABSTRACT OF CONDITION NOTED AND CORRECTED ACTIONS TAKEN

Locations where degraded coating was identified during RF07 were reinspected to reassess their condition. No further degradation was identified. These areas were mapped and will be scheduled for re-coating during RF09.

During RF08, areas that were repaired during RF07 were reinspected with particular attention given to the moisture seal located at the concrete floor to drywell shell interface and the painted surface in this area. These inspections identified no new degradation since the repair work was completed.

During RF08, the immersed areas of the torus was desludged, after which both the immersed and vapor spaces were inspected by certified VT inspectors. All areas of coating degradations were recorded. None of the areas where the protective coating was degraded exhibited any pitting or degradation of the containment liner. After the initial VT inspections, locations with degraded protective coating were repaired.

8.5 Refuel-07

This is a summary of the IWE inspection completed at Fermi 2 during the seventh refueling outage. 10CFR50.55a was reissued with the requirement that IWE be implemented on an expedited basis and that all of the 1st period inspections be completed by September 2001. As a result, Fermi 2 was required to complete all the 1st period inspections during the seventh refueling outage as the eighth refueling outage is not scheduled until October 2001.

ABSTRACT OF CONDITION NOTED AND CORRECTED ACTIONS TAKEN

During the general visual inspections of the containment liner, several conditions were reported which required corrective actions. The reported conditions are listed as follows:

- Degradation of the moisture seal at the drywell floor to drywell liner interface.
- Loose protective coating in the area of the drywell floor to steel liner interface, from the floor and up one foot.
- Penetration radiation shield plate was found wedged into the penetration without the required tack welds.
- Outer drywell airlock seal had a crack in the rubber gasket.
- Material loss on a single tie-down eyebolt on the north equipment hatch.

All of the above conditions were repaired or replaced by corrective maintenance activities.

- Arc strikes on the south equipment hatch sealing area.
- Degradation of the protective coating at various locations on the containment liner, both interior and exterior.
- A pit of 0.093 inches in depth at the liner to I beams interface.

The above conditions were evaluated using prudent engineering analysis and were determined to be acceptable for the eighth operating cycle. Corrective maintenance for the above is being planned for future refueling outages.

IWE Containment Program

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2			Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12			
<i>E1.11</i>													
1	Drywell (Drywell Inspections consisted of items 3 through 35.)	E-A	E1.11	VT-G	C	-	C	-	S	S	N/A	Once per Period, Prior to each Type A Test	
2	Suppression Chamber (Torus) (Torus Inspections consisted of items 36 through 120.)	E-A	E1.11	VT-G	C	-	C	-	S	S	N/A	Once per Period, Prior to each Type A Test	
<i>E1.12</i>													
3	Drywell Interior 563' to 583' (Az 0 to 90)	E-A	E1.12	VT-3 VT-G	GC	GC	-	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings	
4	Drywell Interior 563' to 583' (Az 90 to 180)	E-A	E1.12	VT-3 VT-G	GC	GC	-	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings	
5	Drywell Interior 563' to 583' (Az 180 to 270)	E-A	E1.12	VT-3 VT-G	GC	GC	-	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings	
6	Drywell Interior 563' to 583' (Az 270 to 0)	E-A	E1.12	VT-3 VT-G	GC	GC	-	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings	
7	Drywell Interior 583' to 613' (Az 0 to 90)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings	
8	Drywell Interior 583' to 613' (Az 90 to 180)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings	
9	Drywell Interior 583' to 613' (Az 180 to 270)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings	
10	Drywell Interior 583' to 613' (Az 270 to 0)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings	
11	Drywell Interior 613' to 641' (Az 0 to 90)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings	
12	Drywell Interior 613' to 641' (Az 90 to 180)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings	
13	Drywell Interior 613' to 641' (Az 180 to 270)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings	

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
14	Drywell Interior 613' to 641' (Az 270 to 0)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
15	Drywell Interior 641' to 659' (Az 0 to 90)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
16	Drywell Interior 641' to 659' (Az 90 to 180)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
17	Drywell Interior 641' to 659' (Az 180 to 270)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
18	Drywell Interior 641' to 659' (Az 270 to 0)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
19	Drywell Dome Interior and Exterior	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
20	Drywell Exterior 563' to 583' (Az 0 to 90)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
21	Drywell Exterior 563' to 583' (Az 90 to 180)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
22	Drywell Exterior 563' to 583' (Az 180 to 270)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
23	Drywell Exterior 563' to 583' (Az 270 to 0)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
24	Drywell Exterior 583' to 613' (Az 0 to 90)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
25	Drywell Exterior 583' to 613' (Az 90 to 180)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
26	Drywell Exterior 583' to 613' (Az 180 to 270)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
27	Drywell Exterior 583' to 613' (Az 270 to 0)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
28	Drywell Exterior 613' to 641' (Az 0 to 90)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
29	Drywell Exterior 613' to 641' (Az 90 to 180)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
30	Drywell Exterior 613' to 641' (Az 180 to 270)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
31	Drywell Exterior 613' to 641' (Az 270 to 0)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
32	Drywell Exterior 641' to 659' (Az 0 to 90)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
33	Drywell Exterior 641' to 659' (Az 90 to 180)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
34	Drywell Exterior 641' to 659' (Az 180 to 270)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
35	Drywell Exterior 641' to 659' (Az 270 to 0)	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
36	Torus Interior Bay 1	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
37	Torus Interior Bay 2	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
38	Torus Interior Bay 3	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
39	Torus Interior Bay 4	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
40	Torus Interior Bay 5	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
41	Torus Interior Bay 6	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
42	Torus Interior Bay 7	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
43	Torus Interior Bay 8	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
44	Torus Interior Bay 9	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
45	Torus Interior Bay 10	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
46	Torus Interior Bay 11	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
47	Torus Interior Bay 12	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
48	Torus Interior Bay 13	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
49	Torus Interior Bay 14	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
50	Torus Interior Bay 15	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
51	Torus Interior Bay 16	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
52	Torus Exterior Bay 1	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
53	Torus Exterior Bay 2	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
54	Torus Exterior Bay 3	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
55	Torus Exterior Bay 4	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
56	Torus Exterior Bay 5	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
57	Torus Exterior Bay 6	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
58	Torus Exterior Bay 7	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1	Period 2		Period 3		Relief Request	Remarks	
					RF07	RF08	RF09	RF10	RF11			RF12
59	Torus Exterior Bay 8	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
60	Torus Exterior Bay 9	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
61	Torus Exterior Bay 10	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
62	Torus Exterior Bay 11	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
63	Torus Exterior Bay 12	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
64	Torus Exterior Bay 13	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
65	Torus Exterior Bay 14	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
66	Torus Exterior Bay 15	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
67	Torus Exterior Bay 16	E-A	E1.12	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
E1.20												
68	Drywell to Torus Downcomer to Bay 2 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
69	Drywell to Torus Downcomer to Bay 4 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
70	Drywell to Torus Downcomer to Bay 6 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
71	Drywell to Torus Downcomer to Bay 8 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
72	Drywell to Torus Downcomer to Bay 10 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
73	Drywell to Torus Downcomer to Bay 12 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	NA	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
74	Drywell to Torus Downcomer to Bay 14 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
75	Drywell to Torus Downcomer to Bay 16 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
76	Drywell to Torus Expansion Bellows Downcomer to Bay 2	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
77	Drywell to Torus Expansion Bellows Downcomer to Bay 4	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
78	Drywell to Torus Expansion Bellows Downcomer to Bay 6	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
79	Drywell to Torus Expansion Bellows Downcomer to Bay 8	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
80	Drywell to Torus Expansion Bellows Downcomer to Bay10	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
81	Drywell to Torus Expansion Bellows Downcomer to Bay12	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
82	Drywell to Torus Expansion Bellows Downcomer to Bay14	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
83	Drywell to Torus Expansion Bellows Downcomer to Bay16	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes parts of reinforcing structure, stiffing rings, manhole covers and reinforcement around openings
84	Flow Channeling Devices (Ring Header) In Bay 1 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
85	Flow Channeling Devices (Ring Header) In Bay 2 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
86	Flow Channeling Devices (Ring Header) In Bay 3 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
87	Flow Channeling Devices (Ring Header) In Bay 4 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
88	Flow Channeling Devices (Ring Header) In Bay 5 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
89	Flow Channeling Devices (Ring Header) In Bay 6 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
90	Flow Channeling Devices (Ring Header) In Bay 7 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
91	Flow Channeling Devices (Ring Header) In Bay 8 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
92	Flow Channeling Devices (Ring Header) In Bay 9 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
93	Flow Channeling Devices (Ring Header) In Bay 10 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
94	Flow Channeling Devices (Ring Header) In Bay 11 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
95	Flow Channeling Devices (Ring Header) In Bay 12 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
96	Flow Channeling Devices (Ring Header) In Bay 13 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
97	Flow Channeling Devices (Ring Header) In Bay 14 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
98	Flow Channeling Devices (Ring Header) In Bay 15 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
99	Flow Channeling Devices (Ring Header) In Bay 16 - Exterior	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
100	Drywell Penetration Expansion Bellow X-007A	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
101	Drywell Penetration Expansion Bellow X-007B	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
102	Drywell Penetration Expansion Bellow X-007C	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
103	Drywell Penetration Expansion Bellow X-007D	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1	Period 2		Period 3		Relief Request	Remarks	
					RF07	RF08	RF09	RF10	RF11			RF12
104	Drywell Penetration Expansion Bellow X-008	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
105	Drywell Penetration Expansion Bellow X-009A	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
106	Drywell Penetration Expansion Bellow X-009B	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
107	Drywell Penetration Expansion Bellow X-010	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
108	Drywell Penetration Expansion Bellow X-011	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
109	Drywell Penetration Expansion Bellow X-012	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
110	Drywell Penetration Expansion Bellow X-013A	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
111	Drywell Penetration Expansion Bellow X-013B	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
112	Drywell Penetration Expansion Bellow X-016A	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
113	Drywell Penetration Expansion Bellow X-016B	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
114	Drywell Penetration Expansion Bellow X-017	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
115	Drywell Penetration Expansion Bellow X-035B	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
116	Drywell Penetration Expansion Bellow X-035C	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
117	Drywell Penetration Expansion Bellow X-035D	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
118	Drywell Penetration Expansion Bellow X-035E	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
119	Drywell Penetration Expansion Bellow X-035F	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
120	Drywell Penetration Expansion Bellow X-043	E-A	E1.20	VT-3 VT-G	GC	-	GC	-	-	S	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
401	Flow Channeling Devices (Ring Header) In Bay 1 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
402	Flow Channeling Devices (Ring Header) In Bay 2 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
403	Flow Channeling Devices (Ring Header) In Bay 3 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
404	Flow Channeling Devices (Ring Header) In Bay 4 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
405	Flow Channeling Devices (Ring Header) In Bay 5 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
406	Flow Channeling Devices (Ring Header) In Bay 6 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
407	Flow Channeling Devices (Ring Header) In Bay 7 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
408	Flow Channeling Devices (Ring Header) In Bay 8 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
409	Flow Channeling Devices (Ring Header) In Bay 9 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
410	Flow Channeling Devices (Ring Header) In Bay 10 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
411	Flow Channeling Devices (Ring Header) In Bay 11 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
412	Flow Channeling Devices (Ring Header) In Bay 12 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers
413	Flow Channeling Devices (Ring Header) In Bay 13 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2			Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12			
414	Flow Channeling Devices (Ring Header) In Bay 14 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers	
415	Flow Channeling Devices (Ring Header) In Bay 15 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers	
416	Flow Channeling Devices (Ring Header) In Bay 16 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	N/A	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers	
417	Drywell to Torus Downcomer to Bay 2 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	NA	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers	
418	Drywell to Torus Downcomer to Bay 4 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	NA	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers	
419	Drywell to Torus Downcomer to Bay 6 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	NA	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers	
420	Drywell to Torus Downcomer to Bay 8 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	NA	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers	
421	Drywell to Torus Downcomer to Bay 10 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	NA	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers	
422	Drywell to Torus Downcomer to Bay 12 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	NA	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers	
423	Drywell to Torus Downcomer to Bay 14 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	NA	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers	
424	Drywell to Torus Downcomer to Bay 16 - Interior	E-A	E1.20	VT-3 VT-G	-	-	-	-	S	-	NA	Includes all welds, reinf. plates shell surfaces on the ventline, the vent header and downcomers	
E4.11													
121	Drywell Interior	E-C	E4.11	VT-1	-	-	-	-	-	-	-	NA	No areas identified for augmented exams at this time
123	Drywell Exterior	E-C	E4.11	VT-1	-	-	-	-	-	-	-	NA	No areas identified for augmented exams at this time
125	Suppression Chamber Interior	E-C	E4.11	VT-1	-	-	-	-	-	-	-	NA	No areas identified for augmented exams at this time
127	Suppression Chamber Exterior	E-C	E4.11	VT-1	-	-	-	-	-	-	-	NA	No areas identified for augmented exams at this time
E4.12													
122	Drywell Interior	E-C	E4.12	VOLU	-	-	-	-	-	-	-	NA	No areas identified for augmented exams at this time

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
124	Drywell Exterior	E-C	E4.12	VOLU	-	-	-	-	-	-	N/A	No areas identified for augmented exams at this time
126	Suppression Chamber Interior	E-C	E4.12	VOLU	-	-	-	-	-	-	N/A	No areas identified for augmented exams at this time
128	Suppression Chamber Exterior	E-C	E4.12	VOLU	-	-	-	-	-	-	N/A	No areas identified for augmented exams at this time
E5.10												
129	Drywell Head Flange Seal X-001A	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
130	South Equipment Hatch Seal X-001B	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
131	North Equipment Hatch Seal X-001C	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
132	Drywell Personnel Airlock Seals (2) X-001D	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
133	Reactor Vessel Stabilization Manhole Seal X-001E	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
134	Reactor Vessel Stabilization Manhole Seal X-001F	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
135	Reactor Vessel Stabilization Manhole Seal X-001G	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
136	Reactor Vessel Stabilization Manhole Seal X-001H	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
137	Reactor Vessel Stabilization Manhole Seal X-001J	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
138	Reactor Vessel Stabilization Manhole Seal X-001K	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
139	Reactor Vessel Stabilization Manhole Seal X-001L	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
140	Reactor Vessel Stabilization Manhole Seal X-001M	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
141	CRD Hatch Seal X-006	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
142	TIP Penetration Seal X-035A	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
143	TIP Penetration Seal (2) X-035B	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
144	TIP Penetration Seal (2) X-035C	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
145	TIP Penetration Seal (2) X-035D	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
146	TIP Penetration Seal (2) X-035E	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
147	TIP Penetration Seal (2) X-035F	E-D	E5.10	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1			Period 2			Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12				
148	Electrical Penetration Bolting X-100A (X-100A)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
149	Electrical Penetration Seal X-100B (X-102A)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
150	Electrical Penetration Seal (100C)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
151	Electrical Penetration Seal (X-100E)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
152	Electrical Penetration Seal X-100F (X-103B)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
153	Electrical Penetration Seal X-100G (X-100G)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
154	Electrical Penetration Seal X-101A (X-101A)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
155	Electrical Penetration Seal X-101B (X-101B)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
156	Electrical Penetration Seal X-101C (X-101C)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
157	Electrical Penetration Seal X-101D (X-101D)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
158	Electrical Penetration Seal X-101E (X-101E)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
159	Electrical Penetration Seal X-101F (X-101F)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
160	Electrical Penetration Seal X-102A (X-105B)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
161	Electrical Penetration Seal X-102B (X-102B)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
162	Electrical Penetration Seal X-102C (X-100B)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
163	Electrical Penetration Seal X-102D (X-105C)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
164	Electrical Penetration Seal X-103A (X-103A)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
165	Electrical Penetration Seal X-103B (X-107B)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
166	Electrical Penetration Seal X-104A (X-104A)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
167	Electrical Penetration Seal X-104B (X-104B)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
168	Electrical Penetration Seal X-104C (X-104C)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	
169	Electrical Penetration Seal X-104D (X-104D)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program	

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2			Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12			
170	Electrical Penetration Seal X-104E (X-104E)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
171	Electrical Penetration Seal X-104F (X-104F)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
172	Electrical Penetration Seal X-105A (X-105A)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
173	Electrical Penetration Seal X-105D (X-105D)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
174	Electrical Penetration Seal X-106A (X-100D)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
175	Electrical Penetration Seal X-106B (X-106B)	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
176	South Torus Hatch Seal Penetration X-200A	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
177	North Torus Hatch Seal Penetration X-200B	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
178	Electrical Penetration Seal X-209A	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
179	Electrical Penetration Seal X-209C	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
180	Vacuum Breaker-Electrical Penetration Seal X-228A	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
181	Vacuum Breaker-Electrical Penetration Seal X-228B	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
182	Vacuum Breaker-Electrical Penetration Seal X-228C	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
183	Vacuum Breaker-Electrical Penetration Seal X-228D	E-D	E5.10	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
E5.20													
184	Penetration Flange Rupture Disk Gasket X-018	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
185	Penetration Flange Rupture Disk Gasket X-019	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
186	Spectacle Flange Gasket X-020	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
187	Penetration Flange Gasket X-039A	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
188	Penetration Flange Gasket X-039B	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
189	Butterfly Valve Flange Gasket Penet. X-205C	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
190	Butterfly Valve Flange Gasket Penet. X-205D	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
191	RHR Test Line Orifice D008B Gasket Penetration X-210A	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2			Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12			
192	RHR Test Line Orifice D009B Gasket Penetration X-210A	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
193	Relief Valve Flange Gasket E1100F001B Penetration X-210A	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
194	Relief Valve Flange Gasket E1100F025B Penetration X-210A	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
195	RHR Blind Flange Gasket Penetration X-210A	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
196	RHR Test Line Orifice D008A Gasket Penetration X-210B	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
197	RHR Test Line Orifice D009A Gasket Penetration X-210B	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
198	Relief Valve Flange Gasket E1100F001A Penetration X-210B	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
199	Relief Valve Flange Gasket E1100F025A Penetration X-210B	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
200	Relief Valve Flange Gasket E1100F029 Penetration X-210B	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
201	RHR Blind Flange Gasket Penetration X-210B	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
202	TWMS Spool Gasket 4055-1 Penetration X-213A	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
203	TWMS Spool Gasket 4055-2 Penetration X-213A	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
204	TWMS Spool Gasket 4056-1 Penetration X-213B	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
205	TWMS Spool Gasket 4056-2 Penetration X-213B	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
206	Relief Valve Flange Gasket T4804F016A Penetration X-218	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
207	Relief Valve Flange Gasket T4804F016B Penetration X-218	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
208	Relief Valve Flange Gasket E1100F030D Penetration X-223A	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
209	Relief Valve Flange Gasket E1100F030B Penetration X-223B	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
210	Relief Valve Flange Gasket E1100F030C Penetration X-223C	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
211	Relief Valve Flange Gasket E1100F030A Penetration X-223D	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
212	Relief Valve Flange Gasket E2100F011B Penetration X-227A	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
213	Relief Valve Flange Gasket E2100F012B Penetration X-227A	E-D	E5.20	VT-3	-	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
214	Relief Valve Flange Gasket E2100F032B Penetration X-227A	E-D	E5.20	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
215	Relief Valve Flange Gasket E2100F011A Penetration X-227B	E-D	E5.20	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
216	Relief Valve Flange Gasket E2100F012A Penetration X-227B	E-D	E5.20	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
217	Relief Valve Flange Gasket E2100F032A Penetration X-227B	E-D	E5.20	VT-3	-	-	-	-	-	-	CISI-001	No Examinations Required, In Appendix J Program
E5.30												
218	Drywell Moisture Seal (Drywell concrete floor to metal liner)	E-D	E5.30	VT-3	34% Complete	-	67% Complete	-	100%	-	N/A	
E8.10												
219	Drywell Head Flange Bolting X-001A	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
220	South Equipment Hatch Bolting X-001B	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
221	North Equipment Hatch Bolting X-001C	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
222	Drywell Personnel Airlock Bolting X-001D	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
223	Reactor Vessel Stabilization Manhole Bolting X-001E	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
224	Reactor Vessel Stabilization Manhole Bolting X-001F	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
225	Reactor Vessel Stabilization Manhole Bolting X-001G	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
226	Reactor Vessel Stabilization Manhole Bolting X-001H	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
227	Reactor Vessel Stabilization Manhole Bolting X-001J	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
228	Reactor Vessel Stabilization Manhole Bolting X-001K	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
229	Reactor Vessel Stabilization Manhole Bolting X-001L	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
230	Reactor Vessel Stabilization Manhole Bolting X-001M	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
231	CRD Hatch Bolting X-006	E-G	E8.10	VT-1	-	C	C	-	-	-	N/A	
232	Penetration Flange Rupture Disk Bolting X-018	E-G	E8.10	VT-1	-	-	C	-	-	-	N/A	
233	Penetration Flange Rupture Disk Bolting X-019	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	
234	Spectacle Flange Bolting X-020	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A	
235	TIP Penetration Bolting X-035A	E-G	E8.10	VT-1	C	-	C	-	-	-	N/A	

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
236	TIP Penetration Bolting X-035B	E-G	E8.10	VT-1	C	-	C	-	-	-	N/A	
237	TIP Penetration Bolting X-035C	E-G	E8.10	VT-1	C	-	C	-	-	-	N/A	
238	TIP Penetration Bolting X-035D	E-G	E8.10	VT-1	C	-	C	-	-	-	N/A	
239	TIP Penetration Bolting X-035E	E-G	E8.10	VT-1	C	-	C	-	-	-	N/A	
240	TIP Penetration Bolting X-035F	E-G	E8.10	VT-1	C	-	C	-	-	-	N/A	
241	Penetration Flange Bolting X-039A	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
242	Penetration Flange Bolting X-039B	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
243	Electrical Penetration Bolting X-100A (X-100A)	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
244	Electrical Penetration Bolting X-100B (X-102A)	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
245	Electrical Penetration Bolting (X-100C)	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
246	Electrical Penetration Bolting (X-100E)	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
247	Electrical Penetration Bolting X-100F (X-103B)	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	
248	Electrical Penetration Bolting X-100G (X-100G)	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	
249	Electrical Penetration Bolting X-101A (X-101A)	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A	
250	Electrical Penetration Bolting X-101B (X-101B)	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A	
251	Electrical Penetration Bolting X-101C (X-101C)	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A	
252	Electrical Penetration Bolting X-101D (X-101D)	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	
253	Electrical Penetration Bolting X-101E (X-101E)	E-G	E8.10	VT-1	-	-	-	-	-	S	N/A	
254	Electrical Penetration Bolting X-101F (X-101F)	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	
255	Electrical Penetration Bolting X-102A (X-105B)	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
256	Electrical Penetration Bolting X-102B (X-102B)	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A	
257	Electrical Penetration Bolting X-102C (X-100B)	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
258	Electrical Penetration Bolting X-102D (X-105C)	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A	
259	Electrical Penetration Bolting X-103A (X-103A)	E-G	E8.10	VT-1	-	-	C	-	-	-	N/A	
260	Electrical Penetration Bolting X-103B (X-107B)	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2			Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12			
261	Electrical Penetration Bolting X-104A (X-104A)	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A		
262	Electrical Penetration Bolting X-104B (X-104B)	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A		
263	Electrical Penetration Bolting X-104C (X-104C)	E-G	E8.10	VT-1	-	-	-	-	-	S	N/A		
264	Electrical Penetration Bolting X-104D (X-104D)	E-G	E8.10	VT-1	-	-	C	-	-	-	N/A		
265	Electrical Penetration Bolting X-104E (X-104E)	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A		
266	Electrical Penetration Bolting X-104F (X-104F)	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A		
267	Electrical Penetration Bolting X-105A (X-105A)	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A		
268	Electrical Penetration Bolting X-105D (X-105D)	E-G	E8.10	VT-1	-	-	-	-	-	S	N/A		
269	Electrical Penetration Bolting X-106A (X-100D)	E-G	E8.10	VT-1	-	-	-	-	-	S	N/A		
270	Electrical Penetration Bolting X-106B (X-106B)	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A		
271	South Torus Hatch Bolting Penetration X-200A	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A		
272	North Torus Hatch Bolting Penetration X-200B	E-G	E8.10	VT-1	-	C	-	-	-	-	N/A		
273	Butterfly Valve Flange Bolting Penet. X-205C	E-G	E8.10	VT-1	-	-	C	-	-	-	N/A		
274	Butterfly Valve Flange Bolting Penet. X-205D	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A		
275	Electrical Penetration Bolting X-209A	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A		
276	Electrical Penetration Bolting X-209C	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A		
277	RHR Test Line Orifice D008B Bolting Penetration X-210A	E-G	E8.10	VT-1	-	-	C	-	-	-	N/A		
278	RHR Test Line Orifice D009B Bolting Penetration X-210A	E-G	E8.10	VT-1	-	-	C	-	-	-	N/A		
279	Relief Valve Flange Bolting E1100F001B Penetration X-210A	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A		
280	Relief Valve Flange Bolting E1100F025B Penetration X-210A	E-G	E8.10	VT-1	-	C	-	-	-	-	N/A		
281	RHR Blind Flange Bolting Penetration X-210A	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A		
282	RHR Test Line Orifice D008A Bolting Penetration X-210B	E-G	E8.10	VT-1	-	-	C	-	-	-	N/A		

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
283	RHR Test Line Orifice D009A Bolting Penetration X-210B	E-G	E8.10	VT-1	-	-	C	-	-	-	N/A	
284	Relief Valve Flange Bolting E1100F001A Penetration X-210B	E-G	E8.10	VT-1	-	C	-	-	-	-	N/A	
285	Relief Valve Flange Bolting E1100F025A Penetration X-210B	E-G	E8.10	VT-1	-	C	-	-	-	-	N/A	
286	Relief Valve Flange Bolting E1100F029 Penetration X-210B	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	
287	RHR Blind Flange Bolting Penetration X-210B	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	
288	TWMS Spool Bolting 4055-1 Penetration X-213A	E-G	E8.10	VT-1	-	-	-	-	-	S	N/A	
289	TWMS Spool Bolting 4055-2 Penetration X-213A	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	
290	TWMS Spool Bolting 4056-1 Penetration X-213B	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	
291	TWMS Spool Bolting 4056-2 Penetration X-213B	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	
292	Relief Valve Flange Bolting T4804F016A Penetration X-218	E-G	E8.10	VT-1	-	C	-	-	-	-	N/A	
293	Relief Valve Flange Bolting T4804F016B Penetration X-218	E-G	E8.10	VT-1	-	C	-	-	-	-	N/A	
294	Relief Valve Flange Bolting E1100F030D Penetration X-223A	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A	
295	Relief Valve Flange Bolting E1100F030B Penetration X-223B	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A	
296	Relief Valve Flange Bolting E1100F030C Penetration X-223C	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A	
297	Relief Valve Flange Bolting E1100F030A Penetration X-223D	E-G	E8.10	VT-1	-	C	-	-	-	-	N/A	
298	Relief Valve Flange Bolting E2100F011B Penetration X-227A	E-G	E8.10	VT-1	-	-	-	C	-	-	N/A	
299	Relief Valve Flange Bolting E2100F012B Penetration X-227A	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A	
300	Relief Valve Flange Bolting E2100F032B Penetration X-227A	E-G	E8.10	VT-1	-	-	C	-	-	-	N/A	
301	Relief Valve Flange Bolting E2100F011A Penetration X-227B	E-G	E8.10	VT-1	C	-	C	-	-	-	N/A	
302	Relief Valve Flange Bolting E2100F012A Penetration X-227B	E-G	E8.10	VT-1	C	-	-	-	-	-	N/A	
303	Relief Valve Flange Bolting E2100F032A Penetration X-227B	E-G	E8.10	VT-1	C	-	C	-	-	-	N/A	
304	Vacuum Breaker-Electrical Penetration Bolting X-228A	E-G	E8.10	VT-1	-	-	-	-	-	S	N/A	

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2			Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12			
305	Vacuum Breaker-Electrical Penetration Bolting X-228B	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A		
306	Vacuum Breaker-Electrical Penetration Bolting X-228C	E-G	E8.10	VT-1	-	-	-	-	-	S	N/A		
307	Vacuum Breaker-Electrical Penetration Bolting X-228D	E-G	E8.10	VT-1	-	-	-	-	S	-	N/A		
E8.20													
308	Drywell Head Flange Bolting X-001A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
309	South Equipment Hatch Bolting X-001B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
310	North Equipment Hatch Bolting X-001C	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
311	Drywell Personnel Airlock Bolting X-001D	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
312	Reactor Vessel Stabilization Manhole Bolting X-001E	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
313	Reactor Vessel Stabilization Manhole Bolting X-001F	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
314	Reactor Vessel Stabilization Manhole Bolting X-001G	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
315	Reactor Vessel Stabilization Manhole Bolting X-001H	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
316	Reactor Vessel Stabilization Manhole Bolting X-001J	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
317	Reactor Vessel Stabilization Manhole Bolting X-001K	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
318	Reactor Vessel Stabilization Manhole Bolting X-001L	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
319	Reactor Vessel Stabilization Manhole Bolting X-001M	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
320	CRD Hatch Bolting X-006	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
321	Penetration Flange Rupture Disk Bolting X-018	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
322	Penetration Flange Rupture Disk Bolting X-019	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
323	Spectacle Flange Bolting X-020	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
324	TIP Penetration Bolting X-035A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
325	TIP Penetration Bolting X-035B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	
326	TIP Penetration Bolting X-035C	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40	

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2			Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12			
327	TIP Penetration Bolting X-035D	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
328	TIP Penetration Bolting X-035E	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
329	TIP Penetration Bolting X-035F	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
330	Penetration Flange Bolting X-039A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
331	Penetration Flange Bolting X-039B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
332	Electrical Penetration Bolting X-100A (X-100A)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
333	Electrical Penetration Bolting X-100B (X-102A)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
334	Electrical Penetration Bolting (100C)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
335	Electrical Penetration Bolting (X-100E)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
336	Electrical Penetration Bolting X-100F (X-103B)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
337	Electrical Penetration Bolting X-100G (X-100G)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
338	Electrical Penetration Bolting X-101A (X-101A)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
339	Electrical Penetration Bolting X-101B (X-101B)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
340	Electrical Penetration Bolting X-101C (X-101C)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
341	Electrical Penetration Bolting X-101D (X-101D)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
342	Electrical Penetration Bolting X-101E (X-101E)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
343	Electrical Penetration Bolting X-101F (X-101F)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
344	Electrical Penetration Bolting X-102A (X-105B)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
345	Electrical Penetration Bolting X-102B (X-102B)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
346	Electrical Penetration Bolting X-102C (X-100B)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
347	Electrical Penetration Bolting X-102D (X-105C)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
348	Electrical Penetration Bolting X-103A (X-103A)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
349	Electrical Penetration Bolting X-103B (X-107B)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
350	Electrical Penetration Bolting X-104A (X-104A)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
351	Electrical Penetration Bolting X-104B (X-104B)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
352	Electrical Penetration Bolting X-104C (X-104C)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
353	Electrical Penetration Bolting X-104D (X-104D)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
354	Electrical Penetration Bolting X-104E (X-104E)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
355	Electrical Penetration Bolting X-104F (X-104F)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
356	Electrical Penetration Bolting X-105A (X-105A)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
357	Electrical Penetration Bolting X-105D (X-105D)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
358	Electrical Penetration Bolting X-106A (X-100D)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
359	Electrical Penetration Bolting X-106B (X-106B)	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
360	South Torus Hatch Bolting Penetration X-200A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
361	North Torus Hatch Bolting Penetration X-200B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
362	Butterfly Valve Flange Bolting Penet. X-205C	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
363	Butterfly Valve Flange Bolting Penet. X-205D	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
364	Electrical Penetration Bolting X-209A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
365	Electrical Penetration Bolting X-209C	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
366	RHR Test Line Orifice D008B Bolting Penetration X-210A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
367	RHR Test Line Orifice D009B Bolting Penetration X-210A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
368	Relief Valve Flange Bolting E1100F001B Penetration X-210A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
369	Relief Valve Flange Bolting E1100F025B Penetration X-210A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
370	RHR Blind Flange Bolting Penetration X-210A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2			Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12			
371	RHR Test Line Orifice D008A Bolting Penetration X-210B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
372	RHR Test Line Orifice D009A Bolting Penetration X-210B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
373	Relief Valve Flange Bolting E1100F001A Penetration X-210B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
374	Relief Valve Flange Bolting E1100F025A Penetration X-210B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
375	Relief Valve Flange Bolting E1100F029 Penetration X-210B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
376	RHR Blind Flange Bolting Penetration X-210B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
377	TWMS Spool Bolting 4055-1 Penetration X-213A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
378	TWMS Spool Bolting 4055-2 Penetration X-213A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
379	TWMS Spool Bolting 4056-1 Penetration X-213B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
380	TWMS Spool Bolting 4056-2 Penetration X-213B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
381	Relief Valve Flange Bolting T4804F016A Penetration X-218	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
382	Relief Valve Flange Bolting T4804F016B Penetration X-218	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
383	Relief Valve Flange Bolting E1100F030D Penetration X-223A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
384	Relief Valve Flange Bolting E1100F030B Penetration X-223B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
385	Relief Valve Flange Bolting E1100F030C Penetration X-223C	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
386	Relief Valve Flange Bolting E1100F030A Penetration X-223D	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
387	Relief Valve Flange Bolting E2100F011B Penetration X-227A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
388	Relief Valve Flange Bolting E2100F012B Penetration X-227A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
389	Relief Valve Flange Bolting E2100F032B Penetration X-227A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
390	Relief Valve Flange Bolting E2100F011A Penetration X-227B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
391	Relief Valve Flange Bolting E2100F012A Penetration X-227B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
392	Relief Valve Flange Bolting E2100F032A Penetration X-227B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40

Component Examination Schedule

ISI-NDE Program
Rev.4; Change 0
Appendix F4.7

Item	Exam Area Identification	Cat.	Code	NDE Method	Period 1		Period 2		Period 3		Relief Request	Remarks
					RF07	RF08	RF09	RF10	RF11	RF12		
393	Vacuum Breaker-Electrical Penetration Bolting X-228A	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
394	Vacuum Breaker-Electrical Penetration Bolting X-228B	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
395	Vacuum Breaker-Electrical Penetration Bolting X-228C	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
396	Vacuum Breaker-Electrical Penetration Bolting X-228D	E-G	E8.20	Torque/Tension	-	-	-	-	-	-	CISI-007	To Be Inspected In Accordance With E8.10 and Tested Per E9.40
<i>E9.10</i>												
397	Pressure Retaining Boundary	E-P	E9.10	VT-2	-	-	-	-	-	-		After repair, modification or replacement.
<i>E9.20</i>												
398	Containment Penetration Bellows	E-P	E9.20	App. J	-	-	-	-	-	-		10CFR50.AppendixJ
<i>E9.30</i>												
399	Airlock	E-P	E9.30	App. J	-	-	-	-	-	-		10CFR50.AppendixJ
<i>E9.40</i>												
400	Seals and Gaskets	E-P	E9.40	App. J	-	-	-	-	-	-		10CFR50.AppendixJ

C = Complete

GC = General Inspection Complete

GS = General Inspection Scheduled

S = Scheduled

SECTION 9

SECTION XI REPAIR/REPLACEMENT NIS-2 FORMS INDEX

9.0 NIS-2 DATA REPORT INDEX

LOG No.	WORK PKG. - No.	COMPONENT No.	ASME CLASS	DESCRIPTION
02-003	000Z020885	E4100F067	2	Replace Valve Bonnet
02-018A	VARIOUS	P4500C002A	3	Install Make-up Pump, Piping, and Valves
02-018B	VARIOUS	P4500C002B	3	Install Make-up Pump, Piping, and Valves
03-004	VARIOUS	VARIOUS	1	Rebuild CRDM's for installation in RF10 – Replace parts as necessary
03-027	000Z032283	R300F083C	3	Replace Valve
03-031	000Z030996	R30001B025	3	Replace Ht Exchanger bolting (studs)
03-032	000Z030832	R3001B026	3	Replace Ht Exchanger bolting (studs)
03-033	000Z030833	R3001B027	3	Replace Ht Exchanger bolting (studs)
03-034	000Z030837	R3001B028	3	Replace Ht Exchanger bolting (studs)
03-035	000Z033202	G3300F120	1	Seal Weld Body to Bonnet Connection
03-036	P522060100	P4500F002A	3	Replace Disc in Check Valve
03-038	A473010100	P45F401	3	Replace Valve
04-001	B273030100	B2104F013A - R	1	Safety Relief Valve (SRV) Refurbishment
04-002	VARIOUS	B2104F013A - R	1	Safety Relief Valve Replacements during RF10
04-003	000Z022442	E51F015	2	E51F015 valve replacement per EDP-32161
04-005	000Z032413	E41F035	2	E41F035 valve replacement per EDP-32036
04-007	C261040100	E5100F018	2	E5100F018 disc, nozzle, and bushing replacement
04-008	I130050100	R3000C006	3	Pump Replacement

LOG No.	WORK PKG. No.	COMPONENT No.	ASME CLASS	DESCRIPTION
04-009	I461040100	P4500C002A	3	Pump Replacement
04-013	VARIOUS	VARIOUS	1	RF10 CRDM Replacements
04-015	000Z034791	R3000F140A	3	Disc replacement
04-017	000Z042049	R3000F140A	3	Repair valve disc for use as a spare
04-018	A498040100/ A519040100	VARIOUS	1, 2, 3	Mechanical Snubber Refurbishment/Replacement for RF10
04-019	A497040100/ A514040100	VARIOUS	N/A	Hydraulic Snubber Refurbishment/Replacement for RF10
04-020	B937040100	E1100F029	2	Replace Relief Valve
04-021	H606040100	B2100F080D	2	Replace Valve Internals
04-022	B940090100	E1100F030D	2	Replace Relief Valve Disc
04-023	000Z032755	B2100F010B	1	Refurbish Check Valve Stuffing Box
04-024	T211040100	B2100F076B	1	Replace bolting material
04-025	T250040100	B2100F032A	1	Replace bolting material
04-026	T211040100	B2100F076B	1	Replace bolting material
04-027	T251040100	B2100F032B	1	Replace bolting material
04-028	D648040100	E1100F037P	2	Repair valve seating surfaces and replace spring washer/nut
04-029	A560040100	SW-E41-3162-2WC	2	Remove indication in base metal
05-001	000Z050273	VARIOUS	1	Mechanical Snubber Replacement for Forced Outage 05-01

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner <u>Detroit Edison Company</u>	Date <u>August 14, 2003</u>
Name	
<u>6400 North Dixie Highway, Newport MI 48166</u>	Sheet <u>1 of 2</u>
Address	
2. Plant <u>Fermi 2 Nuclear Power Plant</u>	Unit <u>2</u>
Name	
<u>6400 North Dixie Highway, Newport MI 48166</u>	
Address	
3. Work Performed by <u>Detroit Edison Company</u>	<u>Deco Maintenance</u>
Name	Repair Organization P.O. No., Job No., etc.
<u>6400 North Dixie Highway, Newport, MI 48166</u>	Type Code Symbol <u>N/A</u>
Address	Stamp <u>N/A</u>
	Authorization No. <u>N/A</u>
	Expiration Date <u>N/A</u>
4. Identification of System <u>High Pressure Coolant Injection (HPCI) System Steam Supply Line</u>	
5. (a) Applicable Construction Code <u>ASME III, Class 2</u> 19 <u>71</u> Edition <u>71</u> Addenda <u>N/A</u> Code Case	
(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements <u>1992-92 Addenda</u>	

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
E4100F067	Schutte & Koerting	M67-05774-v	N/A	V17-2026	N/A	Replacement	N

7. Description of Work Install replacement cover/bonnet

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure [X]
Other Pressure _____ psi Test Temp. _____

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks: Replacement Bonnet/Cover procured per PO# 363191, Dresser Rand no 68-XC-71, Heat E-7401. This valve is a non stamped control/stop valve within the ASME Section XI boundary

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original valve records to be supplemented by Owners Section XI Program 02-003

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer [Signature] Date AUGUST 14 2003
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 5-24-02 to 8-15-03, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions MB610
Inspector's Signature National Board, State, Province, and Endorsements

Date August 15 2003

(10/94)

For complete work package, see Work Request 000Z020885

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date February 23, 2005
 Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 2
 Address

2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166
 Address

3. Work Performed by Detroit Edison Company Type Code Symbol N/A
 Name Stamp
6400 North Dixie Highway, Newport, MI 48166 Authorization No. N/A
 Address Expiration Date N/A
 Deco Maintenance
 Repair Organization P.O. No., Job No., etc.

4. Identification of System (N5 - 0053, - 0241, & - 0352) Division 1 Emergency Equipment Service Water / Emergency Equipment Cooling Water Systems

5. (a) Applicable Construction Code ASME III, Class 3 19 71 Edition 71 Addenda N/A Code Case
 (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
P4400C002A	Flowsolve Corp.	02RLCA 0081801001	N/A	N/A	2002	Replacement	Y

7. Description of Work Modify existing piping systems by installing a pump between EESW / EECW to provide additional make-up capability to the EECW system to support component cooling requirements per EDP-30844. In addition to the pump listed above, piping and valves were also installed.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure Ref. Code Case N-416-2
 Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks Data reports are attached for all components installed that are greater than 1" diameter. All pressure retaining material including small bore pipe, fittings and bolting material installed meet ASME III, Class 3 requirements. Reference purchase orders for material installed is included in EDP-30844 and associated work requests.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data reports to be supplemented by Owners Section XI Program 02-018 A.

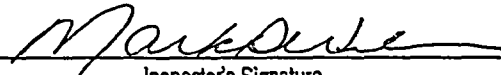
Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer  Date FEBRUARY 23 20 05
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 11-13-02 to 02-23-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions MI 610
Inspector's Signature National Board, State, Province, and
Endorsements

Date Feb. 23 20 05

(10/94)

For complete list of work packages, see page 2 of this NIS-2

EDP-30844 Division 1 NIS-2 02-018A Sheet 2 of 8

Component PIS Number	Alternate Identification *	Serial Number	Purchase Order No.
P4400C002A	N/A	S/N No. 02RLCA0081801001	317696
P4400F201A	N/A	S/N No. 16410750	317696
P4400F504A	V30-1373	S/N No. E635T-1-1	379806
P4400F625A	V8-1280	S/N No. 11228	371565
P4400F629A	V30-1363	S/N No. 89-168860	380071
P4400F630A	V30-1316	S/N No. 58AVY	371730
P4400F634A	V30-1318	S/N No. 59AVY	371730
P4500F014A	V30-1383	S/N No. 90-168860	380071
P4500F205A	V30-1353	S/N No. 84-168860	380071

* Alternate Identification Number assigned by EDP-30844

All pressure retaining material installed including pipe, fittings, and bolting material meet ASME III, Class 3 requirements. Reference purchase order numbers for all material installed is detailed in EDP-30844 as well as the following work requests:

- 000Z022255
- 000Z022256
- 000Z022257
- 000Z023255
- 000Z023294
- 000Z023553
- 000Z040199
- 000Z040200

02-018A
3 of 8

FORM NPV-1 CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section III, Division 1

1. Manufactured and certified by Flowserve Corp., 2300 E. Vernon Ave., Vernon, CA 90058
(name and address of N Certificate Holder)

2. Manufactured for Detroit Edison, 2000 2nd Avenue, Detroit, Michigan 48226-1279
(name and address of Purchaser)

3. Location of installation Detroit Edison, Fermi 2, 6400 North Dixie Highway, Newport, MI 48166
(name and address)

4. Model No., Series No., or Type IK 1.5X1-82 Drawing L004519 Rev Orig. CRN NA

5. ASME Code, Section III, Division 1: 1995 1996 3 NA
(edition) (addenda date) (class) (Code Case no.)

6. Pump or valve Pump Nominal inlet size 1.5" Outlet size 1"
(in.) (in.)

7. Material: Body NA Bonnet NA Disk NA Bolting NA

(a) Cert. Holder's Serial No.	(b) Nat'l Board No.	(c) Body Serial No.	(d) Bonnet Serial No.	(e) Disk Serial No.
02RLCA0081801001	NA	NA	NA	NA
02RLCA0081801002	NA	NA	NA	NA



* Supplemental information in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 x 11, (2) information in items 1 through 4 on this Data Report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/88) This form (E00037) may be obtained from the Order Dept., ASME, 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300 REPRNT 6/83

FORM NPV-1 (Back -- Pg. 2 of 2)

Certificate Holder's Serial No 02RLCA0081801001/2

8. Design conditions 120 (pressure) psi 125 (temperature) °F or valve pressure class NA (1)
 9 Cold working pressure NA psi at 100°F
 10. Hydrostatic test 180 psi. Disk differential test pressure NA psi

11. Remarks: Material, Fabrication, & Examination. ASME Code, Section III, 1995 Edition, 1996 Addenda
Material. ASME Code, Section II, Parts A, B, C, 1995 Edition, 1996 Addenda
Design and Stamping: ASME Code, Section III, Class 3, 1995 Edition, 1996 Addenda
NOTE: Nameplate attached to one arm on the upper portion of the bearing housing using stainless steel wire

CERTIFICATION OF DESIGN

Design Specification certified by Louis Bertani P E. State MI Reg no 19924
 Design Report certified by Carl F. Reimers P E. State CA Reg no M018283

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.
 N Certificate of Authorization No. N-1130 Expires June 10, 2005
 Date 12/30/02 Name Flowserve Corp. Pump Division Signed [Signature]
(N Certificate Holder) (authorized representative)

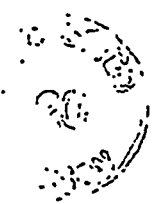
CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of California and employed by HSB-CT of Hartford, CT have inspected the pump, or valve, described in this Data Report on 12/30/02, and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied concerning the component described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 12/30/02 Signed [Signature] Commissions CA 1969
(Authorized Inspector) (Nat'l Bd (incl. endorsements) and state or prov. and no 1)

(1) For manually operated valves only.



FORM NPV-1 CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
 As Required by the Provisions of the ASME Code, Section III, Division 1

NR-371696 D #1

1. Manufactured and certified by FISHER CONTROLS INT'L INC., VALVE DIVISION, 205 S. CENTER STREET, MARSHALLTOWN, IA. 50158
(name and address of N Certificate Holder)

2. Manufactured for Detroit Edison Co. PO Box 1659, Detroit, Michigan 48231
(name and address of Purchaser)

3. Location of installation Fermi II Power Plant, 6400 N. Dixie Highway, Newport, MI 48166
(name and address)

4. Model No., Series No., or Type 95H Drawing AAA04230 Rev. A CRN N/A

5. ASME Code, Section III, Division 1: 1989 No Addenda 3 N/A
(edition) (addenda date) (class) (Code Case no.)

6. Pump or valve VALVE Nominal inlet size 1 1/2 Outlet size 1 1/2
(in.) (in.)

7. Material: Body SA216 WCC Bonnet SA216 WCC Disk A582 416 Bolting SA193 B7 SA194 7

(a) Cert. Holder's Serial No.	(b) Nat'l Board No.	(c) Body Serial No.	(d) Bonnet Serial No.	(e) Disk Serial No.
<u>16410750</u>	<u>7354</u>	<u>64795 U80 9</u>	<u>65099 A446 11</u>	<u>7797H</u>

*Supplemental information in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 x 11, (2) information in items 1 through 4 on this Data Report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.



Certificate Holder's Serial No. 16410750

8. Design conditions 150 psi 125 °F or valve pressure class N/A (1)
 (pressure) (temperature)
9. Cold working pressure 290 psi at 100°F
10. Hydrostatic test 450 psi. Disk differential test pressure N/A psi
11. Remarks: Design: ASME BPVC Sec III, 1989 Edition, No Addenda, Class 3

CERTIFICATION OF DESIGN

Design Specification certified by Lawrence D. Burr P.E. State ML Reg. no. 33999
 Design Report certified by N/A P.E. State N/A Reg. no. N/A

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME code, Section III, Division 1.

N Certificate of Authorization No. 1929 Expires 11-11-2004

Date 3-10-03 Name FISHER CONTROLS INT'L INC. Signed Linda Laird
 (N Certificate Holder) (authorized representative)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa

and employed by Hartford Steam Boiler of CT of Hartford, CT
 have inspected the pump, or valve, described in this Data Report and state that to the best of my knowledge and on 3-10-03
 on belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 3-10-03 Signed KT Cochran Commissions NB 7881 NBA 822 IA.
 (Authorized Inspector) (Nat'l. Bd. (include endorsements) and state or prov. and no.)

(1) For manually operated valves only.



02018A
5 of 8

FORM NPV-1 CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*

As Required by the Provisions of the ASME Code, Section III, Division 1

- 1. Manufactured and certified by Flowserve Corporation, 701 First Street, Williamsport, PA 17701
(name and address of N Certificate Holder)
- 2. Manufactured for Detroit Edison, P.O. Box 1659, Detroit, MI 48231
(name and address of Purchaser)
- 3. Location of installation Enrico Fermi Unit 3, 6400 Dixie Highway, Newport, MI 48166
(name and address)
- 4. Model No., Series No., or Type D.D. Gate Drawing W0225975 Rev. B CRN N/A
- 5. ASME Code, Section III, Division 1: 1986 None 3 N/A
(edition) (addenda date) (class) (Code Case no.)
- 6. Pump or valve Valve Nominal Inlet size 1 1/2" Outlet size 1 1/2"
(in.) (in.)
- 7. Material: Body SA216-WCB Bonnet SA351-CF8M Disk NOREM B1 Bolting SA453-660B
Nuts: SA194-8M

(a) Cert. Holder's Serial No.	(b) 'Nat'l Board No.	(c) Body Serial No.	(d) Bonnet Serial No.	(e) Disk Serial No.
E635T-1-1	N/A	1	14	Ht. #2461
E635T-1-2	N/A	2	16	Ht. #2461

*Supplemental information in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 x 11, (2) information in items 1 through 4 on this Data Report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Certificate Holder's Serial No. E635T-1-1 & -1-2

8. Design conditions _____ 150 _____ psi _____ 125 _____ °F or valve pressure class _____ 300 _____ (1)
(pressure) (temperature)
9. Cold working pressure _____ 740 _____ psi at 100°F
10. Hydrostatic test _____ 1125 _____ psi. Disk differential test pressure _____ 814 _____ psi
11. Remarks: Material: Bonnet Studs: Ht. #536632; Trace Code A562
Bonnet Nuts: Ht. #713217; Ht. Code H3

CERTIFICATION OF DESIGN

Design Specification certified by Lawrence D. Burr P.E. State MI Reg. no. 33999
 Design Report certified by N/A P.E. State _____ Reg. no. _____

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.

N Certificate of Authorization No. N1712 Expires 4/15/04

Date 1/23/03 Name Flowserve Corporation Signed [Signature]
(N Certificate Holder) (authorized representative)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of ~~MASSACHUSETTS~~ Pennsylvania and employed by One Beacon America Insurance of Boston, Mass. have inspected the pump, or valve, described in this Data Report on 8-902ch 1-23-03, and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 1-23-03 Signed [Signature] Commissions 9 Pennsylvania 2392
(Authorized Inspector) (Nat'l. Bd. (incl. endorsements) and state or prov. and no.)

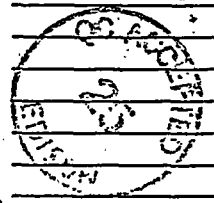
(1) For manually operated valves only.

02-018A
6 of 8

FORM NPV-1 CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section III, Division 1

- 1. Manufactured and certified by Enertech, A Div. of Curtiss-Wright Flow Control Corp., 2950 Birch St.; Brea, CA 92821
(name and address of N Certificate Holder)
- 2. Manufactured for Detroit Edison; 2000 2nd Avenue; Detroit, MI 48226-1279
(name and address of Purchaser)
- 3. Location of installation Detroit Edison; Fermi EF2; 6400 Dixie Hwy.; Newport, MI 48166
(name and address)
- 4. Model No., Series No., or Type ERV-Z Drawing MD20906 Rev. C CRN None
- 5. ASME Code, Section III, Division 1: 1986 No 2 None
(edition) (addenda date) (class) (Code Case no.)
- 6. Pump or valve Nozzle Check Valve Nominal Inlet size 1-1/2 S.W. Outlet size 1-1/2 S.W.
(in.) (in.)
- 7. Material: Body SA-479 Type 316 Bonnet N/A Disk SA-479 Type 316 Bolting N/A

(a) Cert. Holder's Serial No.	(b) Nat'l Board No.	(c) Body Serial No.	(d) Bonnet Serial No.	(e) Disk Serial No.
11228	None	KLX-001	None	KLY-001
11229	None	KLX-002	None	KLY-002



* Supplemental information in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 x 11, (2) information in items 1 through 4 on this Data Report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Certificate Holder's Serial No. 11228 & 11229

8. Design conditions 150 psi 125 °F or valve pressure class 600 (1)
(pressure) (temperature)

9. Cold working pressure 1440 psi at 100°F

10. Hydrostatic test 2175 psi. Disk differential test pressure 1600 psi

11. Remarks: Qty. 2, Enertech Job Number 27832V

CERTIFICATION OF DESIGN			
Design Specification certified by	<u>Lawrence D. Burr</u>	P.E. State	<u>MI</u> Reg. no. <u>33999</u>
Design Report certified by	<u>Ira J. Silverman</u>	P.E. State	<u>CA</u> Reg. no. <u>23241</u>

CERTIFICATE OF COMPLIANCE			
We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.			
N Certificate of Authorization No.	<u>N-2826</u>	Expires	<u>10/26/02</u>
Date	<u>9/30/02</u>	Name	<u>Enertech, A Div. of Curtiss-Wright Flow Control Corp.</u> <small>(N Certificate Holder)</small>
		Signed	<u><i>[Signature]</i></u> <small>(authorized representative)</small>

CERTIFICATE OF INSPECTION			
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>HSB CT</u> of <u>Connecticut</u> have inspected the pump, or valve, described in this Data Report on <u>9-30-02</u> , and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.			
By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.			
Date	<u>9-30-02</u>	Signed	<u><i>[Signature]</i></u> <small>(Authorized Inspector)</small>
		commissions	<u>CA 1520 NB 9435 N</u> <small>(Nat'l. Bd. (incl. endorsements) and state or prov. and no.)</small>

(1) For manually operated valves only.



LOT #3/LINE 4
02-010A
70FB

FORM NPV-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section II, Div. 1

Correct Copy Pg. 1 of 2

1. Manufactured by Flowserve Corporation, 1900 S. Saunders St., Raleigh, NC 27603
(Name and Address of Manufacturer)

2. Manufactured for SIGMA, INC., 1295 HWY 62, CHARLESTOWN, IN 47111
(Name and Address of Purchaser or User)

3. Location of Installation UNKNOWN
(Name and Address)

4. Pump or Valve Valve - Nominal Inlet Size 1 1/2 Outlet Size 1 1/2
(Inch) (Inch)

(1)	(a) Model No. Series No. or Type	(b) N Certificate Holder's Serial No.	(c) Canadian Registration No.	(d) Drawing No.	(e) Class	(f) Nat'l. Bd. No.	(g) Year Built
(1)	A848JYT3	58AVY	N/A	02-22100-01 R/O	3	N/A	2002
(2)		59AVY					
(3)		60AVY					
(4)	A848JYT3	61AVY	N/A	02-22100-01 R/O	3	N/A	2002
(5)							
(6)							
(7)							
(8)							
(9)							
(10)							

5. 1 1/2" GLOBE VALVE
(Brief description of service for which equipment was designed)

22100

6. Design Conditions 1065 psi 700 °F or Valve Pressure Class 600 (1)
(Pressure) (Temperature)

7. Cold Working Pressure 1480 psi at 100 °F

8. Pressure Retaining Pieces

Mark No	Material Spec. No.	Manufacturer	Remarks
(a) Castings			
C	AISI615	CONSOLIDATED CAST	DISK
(b) Forgings			
9QAB	SA105	TRINITY FORGE	BODY
KKL	SA105	TRINITY FORGE	BONNET

(1) For 1 1/2 inch nominal valve size;
 *Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 5-1/2" x 11", (2) information in items 1, 2 and 5 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.



LOTT 3/LINEY

FORM NPV-1 (Back)

Pg. 2 of 2

Valve S/N 5BAVY through 61AVY

Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Eolong			
DK	SA193 GR B7	WALKER BOLT	CAPSCREW
(d) Other Parts			

9. Hydrostatic test 2225 psi. Disk Differential test pressure 1650 psi.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. 1, Edition 1977

Addenda WINTER '77 Code Case No N/A Date 2/4/03

Signed Flowserve Corporation by [Signature]

Our ASME Certificate of Authorization No. N-1562 to use the N symbol expires 11-26-03 (Date)

CERTIFICATION OF DESIGN

FLOWSERVE CORPORATION

Design information on file at _____
 Stress analysis report (Class 1 only) on file at _____
 Design specifications certified by (1) LEONARD J STEPHENS
 PE State NC Reg. No. 16927
 Stress analysis certified by (1) _____
 PE State _____ Reg. No. _____

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of North Carolina and employed by HSB CT of Hartford Connecticut have inspected the pump, or valve, described in this Data Report on 121 13102, and state that, to the best of my knowledge and belief, the N Certificate Holder has constructed this pump, or valve, in accordance with ASME Code, Section III.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 2/4/03

Signed [Signature] (Inspector) Commissions N2 11666 NBB NC 1421 (National Board, State, Province No.)

02-018A
3 of 8



FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES

As Required by the Provisions of the ASME Code Rules

1. Manufactured by Henry Vogt Machine Co., P.O. Box 1918 CRO 168860
Louisville, KY 40201 Vogt Item 17
(Name & Address of Manufacturer) Order No.

2. Manufactured for Portland General Electric Co., 621 S.W. N00331
Alder St., Portland, Oregon 97205 PGE Item 1.5
(Name and Address) Order No.

3. Owner Portland General Electric Co., Trojan Nuclear Plant.

4. Location of Plant Trojan, Oregon

5. Pump or Valve Identification 2" Manual Line SW Gate Valve - Vogt SN 79-168860 thru 102-168860 (See Attached Sheet)

Main Steam System

(Brief description of service for which equipment was designed)

(a) Drawing No. E-48494 Prepared by Henry Vogt Machine Company

(b) National Board No. _____

6. Design Conditions 1440 psi 100 °F
(Pressure) (Temperature)

7. The material, design, construction, and workmanship complies with ASME Code Section III, Class 2

Edition July, 71, Addenda Date Winter, 72, Case No. _____

Mark No.	Material Spec. No.	Manufacturer	Remarks
(a) Castings			
(b) Forgings			
(Bodies)			
R1698	SA 105 Gr. II	Vogt	
(Bonnet)			
R1710	SA 105 Gr. II	Vogt	

BEST AVAILABLE COPY



FORM NIV-1 (back)

Work No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting B7	SA-193 B7	Texas Bolt	
(d) Gate (Gate) BXR	SA-479 (Chemistry Only)	Vogt	

8. Hydrostatic test 2175 psi.

CERTIFICATION OF DESIGN

Design information on file at Henry Vogt Machine Company
 Stress analysis report on file at _____
 Design specifications certified by B. H. Leonard, Jr. (1) Prof. Eng. State Texas Reg. No. 25165
 Stress analysis report certified by _____ (1) Prof. Eng. State _____ Reg. No. _____
 (1) Signature not required. Give name only. Y

We certify that the statements made in this report are correct.

Date April 8, 1974 Signed Henry Vogt Mach. Co., Inc. by Ray A. Jolly
(Manufacturer)

Certificate of Authorization No. N-357 expires Jan. 11, 1975

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of Kentucky and employed by Commercial Union Ins. Co. of Boston, Massachusetts have inspected the equipment described in this Data Report on March 29, 1974 and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date April 8, 1974

[Signature] _____
 (Inspector) _____
 Commission Kentucky #1
 (National Board, State, Province and Reg.)

BEST AVAILABLE COPY

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As required by the Provisions of the ASME Code Section XI

1. Owner <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Date <u>February 23, 2005</u> Sheet <u>1 of 8</u> Unit <u>2</u>
2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Deco Maintenance Repair Organization P.O. No., Job No., etc. Type Code Symbol <u>N/A</u> Stamp _____ Authorization No. <u>N/A</u> Expiration Date <u>N/A</u>
3. Work Performed by <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport, MI 48166</u> Address	(N5 - 0025, 0297, & 0381) Division 2 Emergency Equipment Service Water / Emergency Equipment Cooling Water System
5. (a) Applicable Construction Code <u>ASME III, Class 3</u> 19 <u>71</u> Edition <u>71</u> Addenda <u>N/A</u> Code Case (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements <u>1992-92 Addenda</u>	

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
P4400C002B	Flowserve Corp	02RLCA 0081801002	N/A	N/A	2002	Replacement	Y

7. Description of Work: Modify existing piping systems by installing a pump between EESW / EECW to provide additional make-up capability to the EECW system to support component cooling requirements per EDP-30844. In addition to the pump listed above, piping and valves were also installed.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure Ref. Code Case N-416-2
 Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks Data reports are attached for all components installed that are greater than 1" diameter. All pressure retaining material including small bore pipe, fittings and bolting material installed meet ASME III, Class 3 requirements. Reference purchase orders for material installed is included in EDP-30844 and associated work requests.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data reports to be supplemented by Owners Section XI Program 02-018 B.

- Certificate of Authorization No. N/A Expiration Date N/A
- Signed R.M. Hambleton Lead ISI Engineer Date FEBRUARY 23, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 11-13-03 to 02-23-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions MI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date Feb. 23 20 05

(10/94)

For complete list of work packages, see page 2 of this NIS-2

...

EDP-30844 Division 2 NIS-2 02-018B Sheet 2 of 8

Component PIS Number	Alternate Identification *	Serial Number	Purchase Order No.
P4400C002B	N/A	S/N No. 02RLCA0081801002	317696
P4400F201B	N/A	S/N No. 16410751	317696
P4400F504B	V30-1374	S/N No. E635T-1-2	379806
P4400F625B	V8-1281	S/N No. 11229	9061255
P4400F630B	V30-1317	S/N No. 60AVY	371730
P4400F634B	V30-1319	S/N No. 61AVY	371730
P4500F014B	V30-1384	S/N No. 96-168860	380071
P4500F205B	V30-1362	S/N No. 87-168860	9061255

- Alternate Identification Number assigned by EDP-30844

All pressure retaining material installed including pipe, fittings, and bolting material meet ASME III, Class 3 requirements. Reference purchase order numbers for all material installed is detailed in EDP-30844 as well as the following work requests:

- 000Z022251
- 000Z022252
- 000Z022254
- 000Z023295
- 000Z023554

FORM NPV-1 CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section III, Division 1

1. Manufactured and certified by Flowserve Corp., 2300 E. Vernon Ave., Vernon, CA 90058
(name and address of N Certificate Holder)

2. Manufactured for Detroit Edison, 2000 2nd Avenue, Detroit, Michigan 48226-1279
(name and address of Purchaser)

3. Location of installation Detroit Edison, Fermi 2, 6400 North Dixie Highway, Newport, MI 48166
(name and address)

4. Model No., Series No., or Type 1K 1.5X1-82 Drawing L004519 Rev _____ Orig. _____ CRN NA

5. ASME Code, Section III, Division 1: 1995 1996 3 NA
(edition) (addenda date) (class) (Code Case no.)

6. Pump or valve Pump Nominal inlet size 1.5" Outlet size 1"
(in.) (in.)

7. Material: Body NA Bonnet NA Disk NA Bolting NA

(a) Cert. Holder's Serial No.	(b) Nat'l Board No.	(c) Body Serial No.	(d) Bonnet Serial No.	(e) Disk Serial No.
<u>02RLCA0081801001</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<u>02RLCA0081801002</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>



* Supplemental information in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 x 11, (2) information in items 1 through 4 on this Data Report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Certificate Holder's Serial No 02RLCA0081801001/2

8. Design conditions 120 psi 125 °F or valve pressure class NA (1)
(pressure) (temperature)
- 9 Cold working pressure NA psi at 100°F
10. Hydrostatic test 180 psi. Disk differential test pressure NA psi

11. Remarks: Material Fabrication & Examination. ASME Code, Section III, 1995 Edition, 1996 Addenda
Material. ASME Code, Section II, Parts A, B, C, 1995 Edition, 1996 Addenda
Design and Stamping: ASME Code, Section III, Class 3, 1995 Edition, 1996 Addenda
NOTE: Nameplate attached to one arm on the upper portion of the bearing housing using stainless steel wire

CERTIFICATION OF DESIGN

Design Specification certified by Louis Bertani P E. State MI Reg no 19924
 Design Report certified by Carl F. Reimers P E State CA Reg no M018283

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.

N Certificate of Authorization No. N-1130 Expires June 10, 2005

Date 12/30/02 Name Flowserve Corp. Pump Division Signed [Signature]
IN Certificate Holder (authorized representative)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of California and employed by HSB-CT of Hartford, CT have inspected the pump, or valve, described in this Data Report on 12/30/02, and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied concerning the component described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 12/30/02 Signed [Signature] Commissions CA 1969
(Authorized Inspector) (Nat'l Bd (incl. endorsements) and state or prov. and no.)

(1) For manually operated valves only.



02-018B 4 of 8

FORM NPV-1 CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section III, Division 1

NR-371696 DT#1

1. Manufactured and certified by FISHER CONTROLS INT'L INC., VALVE DIVISION, 205 S. CENTER STREET, MARSHALLTOWN, IA. 50158
(name and address of N Certificate Holder)

2. Manufactured for Detroit Edison Co, PO Box 1659, Detroit, Michigan 48231
(name and address of Purchaser)

3. Location of installation Fermi II Power Plant, 6400 N. Dixie Highway, Newport, MI 48166
(name and address)

4. Model No., Series No., or Type 95H Drawing AAA04230 Rev. A CRN N/A

5. ASME Code, Section III, Division 1: 1989 No Addenda 3 N/A
(edition) (addenda date) (class) (Code Case no.)

6. Pump or valve VALVE Nominal inlet size 1 1/2 Outlet size 1 1/2
(in.) (in.)

7. Material: Body SA216 WCC Bonnet SA216 WCC Disk A582 416 Bolting SA193 B7
SA194 7

(a) Cert. Holder's Serial No.	(b) Nat'l Board No.	(c) Body Serial No.	(d) Bonnet Serial No.	(e) Disk Serial No.
16410751	7355	64795 U80 10	65099 A446 12	7797H

*Supplemental information in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 x 11, (2) information in items 1 through 4 on this Data Report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.



Certificate Holder's Serial No. 16410751

- 8. Design conditions 150 psi 125 °F or valve pressure class N/A (1)
(pressure) (temperature)
- 9. Cold working pressure 290 psi at 100°F
- 10. Hydrostatic test 450 psi. Disk differential test pressure N/A psi
- 11. Remarks: Design: ASME BPVC Sec III, 1989 Edition, No Addenda, Class 3

CERTIFICATION OF DESIGN

Design Specification certified by Lawrence D. Burr P.E. State ML Reg. no. 33999
 Design Report certified by N/A P.E. State N/A Reg. no. N/A

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME code, Section III, Division 1.

N Certificate of Authorization No. 1929 Expires 11-11-2004
 Date 3-10-03 Name FISHER CONTROLS INT'L INC. Signed [Signature]
 (N Certificate Holder) (authorized representative)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa
 and employed by Hartford Steam Boiler of CT of Hartford, CT
 have inspected the pump, or valve, described in this Data Report on 3-10-03 and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 3-10-03 Signed [Signature] Commissions NB 7881 NBA 822 IA
 (Authorized Inspector) (Nat'l. Bd. (include endorsements) and state or prov. and no.)

(1) For manually operated valves only.



02-018B
SOFB

FORM NPV-1 CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section III, Division 1

1. Manufactured and certified by Flowsolve Corporation, 701 First Street, Williamsport, PA 17701
(name and address of N Certificate Holder)
2. Manufactured for Detroit Edison, P.O. Box 1659, Detroit, MI 48231
(name and address of Purchaser)
3. Location of installation Enrico Fermi Unit 3, 6400 Dixie Highway, Newport, MI 48166
(name and address)
4. Model No., Series No., or Type D.D. Gate Drawing W0225975 Rev. B CRN N/A
5. ASME Code, Section III, Division 1: 1986 None 3 N/A
(edition) (addenda date) (class) (Code Case no.)
6. Pump or valve Valve Nominal inlet size 1 1/2" Outlet size 1 1/2"
(in.) (in.)
7. Material: Body SA216-WCB Bonnet SA351-CF8M Disk NOREM B1 Bolting Studs: SA453-660B
Nuts: SA194-8M

(a) Cert. Holder's Serial No.	(b) Nat'l Board No.	(c) Body Serial No.	(d) Bonnet Serial No.	(e) Disk Serial No.
E635T-1-1	N/A	1	14	Ht. #2461
E635T-1-2	N/A	2	16	Ht. #2461

* Supplemental information in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 x 11, (2) information in items 1 through 4 on this Data Report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Certificate Holder's Serial No. E635T-1-1 & -1-2

8. Design conditions 150 psi 125 °F or valve pressure class 300 (1)
(pressure) (temperature)

9. Cold working pressure 740 psi at 100°F

10. Hydrostatic test 1125 psi. Disk differential test pressure 814 psi

11. Remarks: Material: Bonnet Studs: Ht. #536632; Trace Code A562
Bonnet Nuts: Ht. #713217; Ht. Code H3

CERTIFICATION OF DESIGN

Design Specification certified by Lawrence D. Burr P.E. State MI Reg. no. 33999
 Design Report certified by N/A P.E. State Reg. no.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.

N Certificate of Authorization No. N1712 Expires 4/15/04

Date 1/23/03 Name Flowserve Corporation Signed [Signature]
(N Certificate Holder) (authorized representative)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of ~~XXXXXX~~ Pennsylvania and employed by One Beacon America Insurance of Boston, Mass. have inspected the pump, or valve, described in this Data Report on 89026h 1-23-03, and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component described in this Data Report. Furthermore, neither the inspector or his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 1-23-03 Signed [Signature] Commissions 9 Pennsylvania 2392
(Authorized Inspector) (Nat'l. Bd. (incl. endorsements) and state or prov. and no.)

(1) For manually operated valves only.

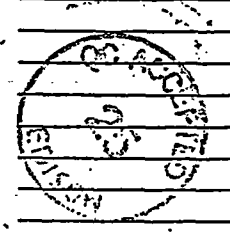
02-0183
6059

FORM NPV-1 CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*

As Required by the Provisions of the ASME Code, Section III, Division 1

- 1. Manufactured and certified by Enertech, A Div. of Curtiss-Wright Flow Control Corp., 2950 Birch St.; Brea, CA 92821
(name and address of N Certificate Holder)
- 2. Manufactured for Detroit Edison; 2000 2nd Avenue; Detroit, MI 48226-1279
(name and address of Purchaser)
- 3. Location of installation Detroit Edison; Fermi EF2; 6400 Dixie Hwy.; Newport, MI 48166
(name and address)
- 4. Model No., Series No., or Type ERV-Z Drawing MD20906 Rev. C CRN None
- 5. ASME Code, Section III, Division 1: 1986 No 2 None
(edition) (addenda date) (class) (Code Case no.)
- 6. Pump or valve Nozzle Check Valve Nominal inlet size 1-1/2 S.W. Outlet size 1-1/2 S.W.
(in.) (in.)
- 7. Material: Body SA-479 Type 316 Bonnet N/A Disk SA-479 Type 316 Bolting N/A

(a) Cert. Holder's Serial No.	(b) Nat'l Board No.	(c) Body Serial No.	(d) Bonnet Serial No.	(e) Disk Serial No.
<u>11228</u>	<u>None</u>	<u>KLX-001</u>	<u>None</u>	<u>KLY-001</u>
<u>11229</u>	<u>None</u>	<u>KLX-002</u>	<u>None</u>	<u>KLY-002</u>



*Supplemental information in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 x 11, (2) information in items 1 through 4 on this Data Report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Certificate Holder's Serial No. 11228 & 11229

8. Design conditions 150 (pressure) psi 125 (temperature) °F or valve pressure class 600 (1)
9. Cold working pressure 1440 psi at 100°F
10. Hydrostatic test 2175 psi. Disk differential test pressure 1600 psi
11. Remarks: Qty. 2, Enertech Job Number 27832V
- _____
- _____
- _____

CERTIFICATION OF DESIGN

Design Specification certified by Lawrence D. Burr P.E. State MI Reg. no. 33999
 Design Report certified by Ira J. Silverman P.E. State CA Reg. no. 23241

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.

N Certificate of Authorization No. N-2826 Expires 10/26/02

Date 9/30/02 Name Enertech, A Div. of Curtiss-Wright Flow Control Corp. Signed [Signature]
 (N Certificate Holder) (authorized representative)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of California and employed by HSB CT of Connecticut; have inspected the pump, or valve, described in this Data Report on 9-30-02, and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 9-30-02 Signed [Signature] commissions CA1520 NB 9435 N
 (Authorized Inspector) (Nat'l. Bd. (incl. endorsements) and state or prov. and no.)

(1) For manually operated valves only.



LOT A3/LINE 4

02-018B
TOPS

FORM NFV-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section II, Div. 1

Correct Copy Pg. 1 of 2

1. Manufactured by Flowserve Corporation, 1900 S. Saunders St., Raleigh, NC 27603
(Name and Address of N Certificate Holder)

2. Manufactured for SIGMA, INC., 1295 HWY 62, CHARLESTOWN, IN 47111
(Name and Address of Purchaser or User)

3. Location of Installation UNKNOWN
(Name and Address)

4. Pump or Valve Valve Nominal Inlet Size 1 1/2 Outlet Size 1 1/2
(in) (in)

(1)	(2) Model No. Series No or Type	(3) N Certificate Holder's Serial No.	(4) Canadian Registration No.	(5) Drawing No.	(6) Class	(7) Nat'l. Bd. No.	(8) Year Built
(1)	AB48JYT3	58AVY	N/A	02-22100-01 R/O	3	N/A	2002
(2)		59AVY					
(3)		60AVY					
(4)	AB48JYT3	61AVY	N/A	02-22100-01 R/O	3	N/A	2002
(5)							
(6)							
(7)							
(8)							
(9)							
(10)							

5. 1 1/2" GLOBE VALVE
(Brief description of service for which equipment will be designed) 22100

6. Design Conditions 1065 psi 700 °F or Valve Pressure Class 600 (1)

7. Cold Working Pressure 1450 psi at 100 °F

8. Pressure Retaining Pieces

Mark No	Material Spec. No.	Manufacturer	Remarks
(a) Castings			
C	AISI615	CONSOLIDATED CAST	DISK
(b) Forgings			
9QAB	SA105	TRINITY FORGE	BODY
KKL	SA105	TRINITY FORGE	BONNET

(1) For normally operated valves only.
*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

LOTT 3 / LINEY

FORM NPV-1 (Back)

Pg. 2 of 2

Valve S/N 55AVY through 61AVY

Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting			
DK	SA193 GR B7	WALKER BOLT	CAPSCREW
(d) Other Parts			

9. Hydrostatic test 2225 psi. Disk Differential test pressure 1650 psi.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. 1, Edition 1977

Addenda WINTER '77 Code Case No N/A Date 2/14/03

Signed Flowsolve Corporation by [Signature]

(If Certificate Holder)

Our ASME Certificate of Authorization No. N-1562 to use the N symbol expires 11-26-03
(Year)

CERTIFICATION OF DESIGN

Design information on file at FLOWSERVE CORPORATION

Stress analysis report (Class 1 only) on file at _____

Design specifications certified by (1) LEONARD J STEPHENS

PE State NC Reg. No. 16927

Stress analysis certified by (1) _____

PE State _____ Reg. No. _____

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of North Carolina and employed by HSB CT of Hartford Connecticut have inspected the pump, or valve, described in this Data Report on 121 13102 and state that, to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with ASME Code, Section III.

By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 2/14/03

Signed [Signature] (Inspector) Commissions NR #116664/ASME NC1421 (Print last, State, Prov. and No)

02-018B
SDFB



FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES

As Required by the Provisions of the ASME Code Rules

1. Manufactured by Henry Vogt Machine Co., P.O. Box 1918 CRO 168860
Louisville, KY 40201 Vogt Item 17
(Name & Address of Manufacturer) Order No.

2. Manufactured for Portland General Electric Co., 621 S.W. N00331
Alder St., Portland, Oregon 97205 PGE Item 1.5
(Name and Address) Order No.

3. Owner Portland General Electric Co., Trojan Nuclear Plant

4. Location of Plant Trojan, Oregon PLS A7

5. Pump or Valve Identification 2" Manual Line SW Gate Valve - Vogt SN 79-168860 thru 102-168860 (See Attached Sheet)

Main Steam System

(Brief description of service for which equipment was designed)

(a) Drawing No. E-48494 Prepared by Henry Vogt Machine Company

(b) National Board No. _____

6. Design Conditions 1440 psi 100 °F
(Pressure) (Temperature)

7. The material, design, construction, and workmanship complies with ASME Code Section III, Class 2

Edition July, 71, Addenda Date Winter, 72, Case No. _____

Mark No.	Material Spec. No.	Manufacturer	Remarks
(a) Castings			
(b) Forgings			
(Bodies)			
R1698	SA 105 Gr. II	Vogt	
(Bonnet)			
R1710	SA 105 Gr. II	Vogt	

BEST AVAILABLE COPY



FORM NPV-1 (back)

Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting B7	SA-193 B7	Texas Bolt	
(d) SA-193 (Gate) BXR	SA-479 (Chemistry Only)	Voigt	

8. Hydrostatic test 2175 psi.

CERTIFICATION OF DESIGN

Design information on file at Henry Voigt Machine Company
 Stress analysis report on file at _____
 Design specifications certified by B. H. Leonard, Jr. (I) Prof. Eng. State Texas Reg. No. 25165
 Stress analysis report certified by _____ (I) Prof. Eng. State _____ Reg. No. _____
 (I) Signature not required. List name only.

We certify that the statements made in this report are correct.

Date April 8, 1974. Signed Henry Voigt Mach. Co. by Ray A. Jolley
(Manufacturer)

Certificate of Authorization No. N-357 expires Jan. 11, 1975

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of Kentucky and employed by Commercial Union Ins. Co. of Boston, Massachusetts have inspected the equipment described in this Data Report on March 29, 1974, and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.
 By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date April 8, 1974

[Signature]
(Inspector)

Commissionary Kentucky II
(National Board, State, Province and No.)

BEST AVAILABLE COPY

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

<p>1. Owner <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address</p>	<p>Date <u>10-30-2003</u></p> <p>Sheet <u>1 of 24</u></p>
<p>2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address</p>	<p>Unit <u>2</u></p> <p><u>Deco Maintenance</u> Repair Organization P.O. No., Job No., etc.</p>
<p>3. Work Performed by <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport, MI 48166</u> Address</p>	<p>Type Code Symbol Stamp <u>N/A</u></p> <p>Authorization No. <u>N/A</u></p> <p>Expiration Date <u>N/A</u></p>
<p>4. Identification of System <u>(N5-J120-N5-1) Control Rod Drive System</u></p>	
<p>5. (a) Applicable Construction Code <u>ASME III, Class 1</u> 19 <u>71</u> Edition <u>Winter 1971</u> Addenda, <u>N/A</u> Code Case</p> <p>(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements <u>1992-W '92 Addenda</u></p>	

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
Control Rod Drive Mechanisms	General Electric	Various	N/A	C1102D@	Various	Replacement	Yes

7. Description of Work Refurbish Control Rod Drive Mechanisms for installation in RF10.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks Refurbished Control Rod Drive Mechanisms for Installation in RF-10. Replacement parts were procured per various Purchase Orders as detailed on attached sheets. Copies of available Code Data Reports are attached.

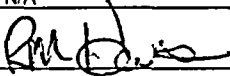
Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code Data Reports for each Control Rod Drive will be supplemented by Owners Section XI Program Plan 03-004 and various work requests as listed on attached Sheet 2. For tracking purposes CRDM information will be maintained in N5-J120-N5-1

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer  Date OCTOBER 30 20 03
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 03-03-02 to 12-06-04, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions MI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date Dec. 4  19 2004

Serial No.	Rebuild WR	(1) Cylinder Tube/ Flange (480-8571)	Piston Tube	Other ASME Parts
4340	000Z021104	-	#0455, PO#371815	None
6397	000Z021047	-	#0454, PO# 371815	None
4488	000Z021049	#6277, PO# 266443	#0489, PO# 371815	None
3326	000Z021051	#6417, PO# 266443	#0505, PO# 371815	None
4436	000Z021053	-	-	None
4312	000Z021055	-	-	None
7019	000Z021057	-	#0654, PO# 371815	None
3410	000Z021059	#5866, PO# 266443	-	None
4189	000Z021061	#6017, PO# 266443	-	None
4584	000Z021063	-	-	None
4459	000Z021065	-	#0490, PO# 371815	None
3608	000Z021069	-	#1983, PO# 295214	None
6541	000Z021071	-	#0456, PO# 371815	None
3623	000Z021073	-	-	None
4286	000Z021075	-	#0695, PO# 371815	None
5655	000Z021090	-	-	None
4315	000Z021092	#3918, PO# 266443	-	None
4391	000Z021094	#6035, PO# 266443	#0656, PO# 371815	None
3521	000Z021096	-	#2984, PO# 314467	None
4330	000Z021098	-	-	None
3999	000Z021100	-	#0650, PO# 371815	None
4309	000Z021102	-	-	None
4523	000Z021067	-	-	None

- 1) Replacement Cylinder Tube/Flange assemblies were utilized from Shoreham Nuclear Station Control Rod Drive Mechanisms that were procured per P.O. 266443. Product Quality Certifications were supplied, however, manufacturers data reports were not supplied with these items. The CRDM's obtained were disassembled and inspected and the usable parts were put into the Fermi stock system.

03-004
3 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part : 0454 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D.L. Peterson
- (b) Description of Part Inspected: Piston Tube Assembly
- (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1351-2 Class 1
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

Sheet 1 of 2

We certify that the statements in this report are correct and this vessel part or appurtenance as defined in the code conforms to the rules of construction of the ASME Code Section III. (The applicable Designed Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report).

Date: 03/27/91 Signed GE-NEBG-NF & CM-OA By [Signature]
(NPT Certificate Holder) (SC SA Representative)

Certificate of Authorization Expires: 6/16/93 Certification of Authorization No. : NPTN-1151

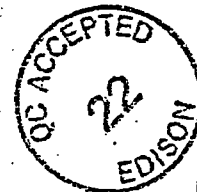
Certification of Design for Appurtenance

Design information on file at GE Company, San Jose, California

Stress analysis report on file at GE Company, San Jose, California

DC22A6253 Rev. 1
Design specification certified by Blorn Haaberg Prof. Eng. State Calif. Reg. No. 15570

DC22A6254 Rev 1
Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. M018545



Certification of Shop Inspection

I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of North Carolina and employed by Department of Labor of State of North Carolina have inspected the part of a pressure vessel described in this Partial Data Report on 3/27, 1991 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in the Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damages or a loss of any kind arising from or connected with this inspection.

3/27, 1991 [Signature] NC 1231, Ohio
Date Inspector's Signature National Board, State, Province And No.

*Supplemental sheets in form of lists, sketches or drawing may be used provided (1) size is 8-1/2" x 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3. "REMARKS".

(67/M)

FORM N-2 (back)

Items 4-8 Incl. to be completed for single wall vessels, jackets vessels, or shells of heat exchangers.

4. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

6. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location (Top Bottom, Ends)	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (conv. or conc.)
(a) _____	_____	_____	_____	_____	_____	_____	_____	_____
(b) _____	_____	_____	_____	_____	_____	_____	_____	_____

If removable, bolts used _____ Other fastening: _____
(Material, Spec. No., T.S. Size Number) (Describe or attach sketch)

7. Jacket Closure: _____
(Describe as ogee and weld, bar, etc. if bar give dimensions, if bolts, describe or sketch)

8. Design pressure ² _____ 1250 _____ psi at _____ 575 _____ ° F at temp of _____ ° F
 Drop Weight _____
 Charpy Impact _____ ft-lb

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)

Floating. Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes: Material _____ O.D. _____ in. Thickness _____ inches or gage. Number _____ Type _____
(St. or U)

Items 11 - 14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

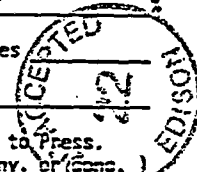
12. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

13. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (conv. or conc.)
(a) Top, bottom, ends	_____	_____	_____	_____	_____	_____	_____	_____
(b) Channel	_____	_____	_____	_____	_____	_____	_____	_____

If removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening _____
(Describe or attach sketch)

14. Design pressure ² _____ psi at _____ ° F at temp of _____ ° F
 Drop Weight _____
 Charpy Impact _____ ft-lb



Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number _____ Size _____ Location _____

16. Nozzles: Purpose (Inlet, Outlet, Drain) _____ Number _____ Dia. or Size _____ Type _____ Material _____ Thickness _____ Reinforcement Material _____ How Attached _____

17. Inspection Manholes, No. _____ Size _____ Location _____
 Openings: Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____

18. Supports: Skirt _____ Lugs _____ Legs _____ Other _____ Attached _____
(Yes or No) (Number) (Number) (Describe) (Where & How)

1 - If Postweld Heat-Treated.
 2 - Use either internal or external pressure with coincident temperature when applicable.

1 0 5 6 4 3 0 1 1 7 2 5

03-004
4 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES
As required by the Provision of the ASME Code Rules, Section III, Div. I

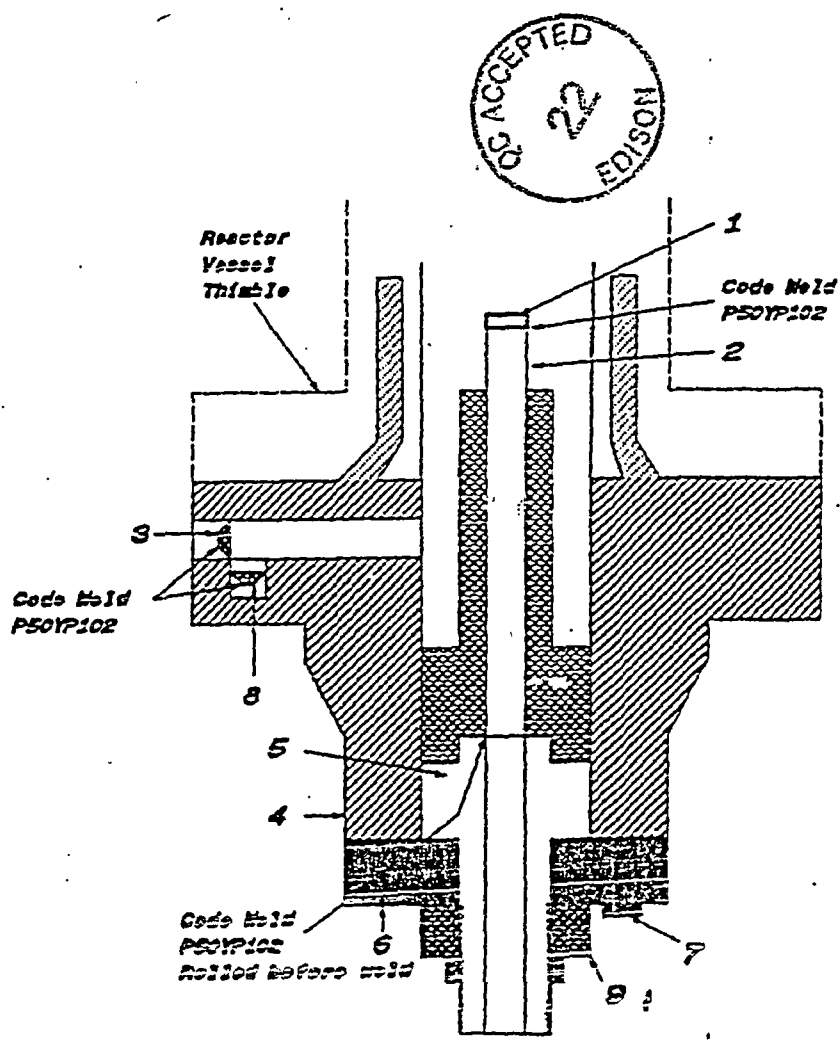
1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part : 0454 Nat'l Bd. No. N/A
 - (a) Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D. L. Peterson
 - (b) Description of Part Inspected: Piston Tube Assembly
 - (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1361-2 Class 1
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

The Piston Tube Assembly consists of the Cap Item 1, the Indicator Pipe Item 2, and the Base Item 5, and the two related Code Welds.

Serial # and tester stamp is an alternate method of marking.

Sheet 2 of 2

1. Cap 166B9274P001
SA182 - F304
3/8" thick x 1 1/16" OD
2. Indicator Tube 165B313P001
SA312 - TP316
3/4" sch 40 - seamless pipe
0.113" wall thickness
1.055" max. dia.
3. Plug 159A1175P001
SA182 - F304
1/4" thick x 0.812" OD
4. Flange 919D610P001 (719E474)
SA182 - F304
3.37" thick x 9 5/8" OD
5. Base 137C5311P001
SA182 - F304
7/8" thick x 2.875" dia.
6. Ring Flange 114B5122P002, P003
137C8151P001, P0G2
SA182 - F304
7" thick x 5.0" OD x 1.75" ID
7. Cap Screw . . . 7C4515P002
SA193 - B6
6 ea. 1/2" dia. on 4 1/8" bolt circle
8. Plug 175A7851P001
SA182 - F304
0.38" thick x 1.267" dia.
9. Nut 137C5334P001
XM - 19 SA479
1.30" thick x 2.62" dia.



2 0 1 6 5 4 3 2 1 0

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

- 1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for : Brunswick Southport, North Carolina 28451
(Name and Address of N Certificate Holder for completed nuclear component)
- 2. Identification - Certificate Holder's S/N of Part : 0455 Nat'l Bd. No. N/A
 - (a) Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D. L. Peterson
 - (b) Description of Part Inspected: Piston Tube Assembly
 - (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1351-2 Class 1
- 3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

We certify that the statements in this report are correct and this vessel part or appurtenance as defined in the code conforms to the rules of construction of the ASME Code Section III. (The applicable Designed Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report).

Date: 03/27/91 Signed GE-NEBG-NF & CM-OA By [Signature]
(NPT Certificate Holder) (SC Or Representative)

Certificate of Authorization Expires: 6/16/93 Certification of Authorization No. : NPTN-1151

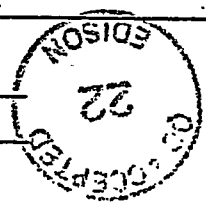
Certification of Design for Appurtenance

Design information on file at GE Company, San Jose, California

Stress analysis report on file at GE Company, San Jose, California

DC22A6253 Rev. 1
Design specification certified by Blom Haaberg Prof. Eng. State Calif. Reg. No. 15570

DC22A6254 Rev 1
Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. M018546



Certification of Shop Inspection

I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of North Carolina and employed by Department of Labor of State of North Carolina have inspected the part of a pressure vessel described in this Partial Data Report on 3/27, 1991 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in the Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damages or a loss of any kind arising from or connected with this inspection.

3/27, 1991 [Signature] NC 1231, Ohio
Date Inspector's Signature National Board, State, Province And No.

*Supplemental sheets in form of lists, sketches or drawing may be used provided (1) size is 8-1/2" x 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 3. "REMARKS".

FORM N-2 (back)

Items 4-8 Incl. to be completed for single wall vessels, jackets vessels, or shells of heat exchangers.

4. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

6. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____
 Location (Top Bottom, Ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (conv. or conc.)
 (a) _____
 (b) _____
 If removable, bolts used _____ Other fastening _____
(Material, Spec. No., T.S. Size Number) (Describe or attach sketch)

7. Jacket Closure: _____
(Describe as edge and weld, bolt, etc. If bolt give dimension, if bolt, describe or sketch)
 Drop Weight _____
 Charpy Impact _____ ft-lb

8. Design pressure ² _____ 1250 psi at _____ 575 ° F at temp of _____ ° F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)
 Floating. Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes: Material _____ O.D. _____ in. Thickness _____ inches or pipe. Number _____ Type _____
(St. or U)

Items 11 - 14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

13. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____
 Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (conv. or conc.)
 (a) Top, bottom, ends _____
 (b) Channel _____
 If removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening _____
(Describe or attach sketch)
 Drop Weight _____
 Charpy Impact _____ ft-lb

14. Design pressure ² _____ psi at _____ ° F at temp of _____ ° F

Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number _____ Size _____ Location _____

16. Nozzles: Purpose (Inlet, Outlet, Drain) Number Dia. or Size Type Material Thickness Reinforcement Material How Attached

Purpose (Inlet, Outlet, Drain)	Number	Dia. or Size	Type	Material	Thickness	Reinforcement Material	How Attached

17. Inspection Openings: Manholes, No. _____ Size _____ Location _____
 Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____

18. Supports: Skirt: _____ Lugs _____ Legs _____ Other _____ Attached _____
(Yes or No) (Number) (Number) (Describe) (Where & How)

1 - If Postweld Heat-Treated.

2 - Use other internal or external pressure with calculated temperature when applicable.

03-004
6 of 24

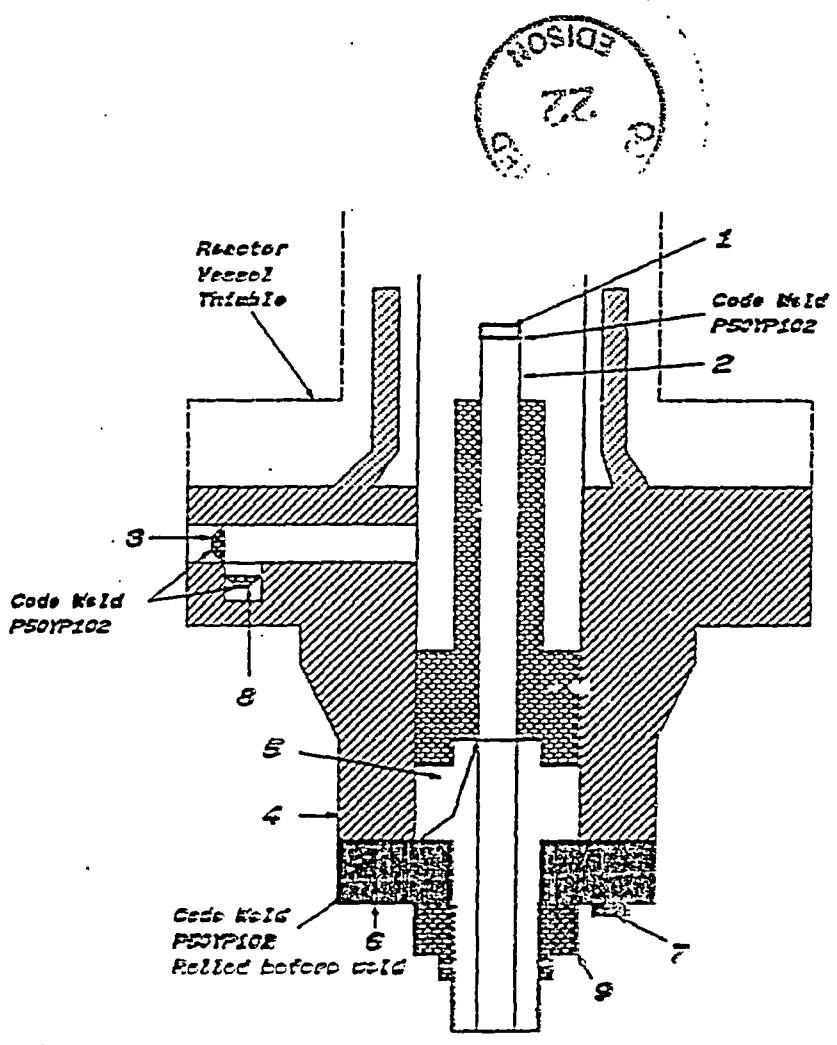
FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part : 0455 Nat'l Bd. No. N/A
 - (a) Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D. L. Peterson
 - (b) Description of Part Inspected: Piston Tube Assembly
 - (c) Applicable ASME Code: Section III , Edition 1974 , Addenda Date W75 , Case No. N207 1351-2 Class 1
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1625 psi. min.
(Brief description of service for which component was designed)

The Piston Tube Assembly consists of the Cap Item 1, the Indicator Pipe Item 2, and the Base Item 5, and the two related Code Welds.

Serial # and tester stamp is an alternate method of marking. Sheet 2 of 2

1. Cap 155B5274P001
SA162 - F304
3/8" thick x 1 1/16" OD
2. Indicator Tube 155B3313P001
SA312 - TP316
3/4" sch 40 - seamless pipe
0.113" wall thickness
1.055" max. dia.
3. Plug 155A1176P001
SA162 - F304
1/4" thick x 0.812" OD
4. Flange 919D510P001 (719E474)
SA162 - F304
3.37" thick x 9 5/8" OD
5. Base 137C5311P001
SA162 - F304
7/8" thick x 2.875" dia.
6. Ring Flange 114B5122P002, P003
137C6151P001, P002
SA162 - F304
1" thick x 5.6" OD x 1.75" ID
7. Cap Screw 117C4515P002
SA193 - B5
6 ea. 1/2" dia. on 4 1/8" bolt circle
8. Plug 175A7951P001
SA162 - F304
0.38" thick x 1.307" dia.
9. Nut 137C5334P001
XX - 18 SA476
1.30" thick x 2.62" dia.



03-004
7 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
 - (b) Manufactured for : Brunswick Southport, North Carolina 28451
(Name and Address of R Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part : 0456 Nat'l Bd. No. N/A
 - (a) Constructed According to Drawing No: 795D228G012 Rev 35 Dwg. Prepared by D. L. Peterson
 - (b) Description of Part Inspected: Piston Tube Assembly
 - (c) Applicable ASME Code: Section III , Edition 1974 , Addenda Date W75 , Case No. N207 1351-2 Class 1
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

Sheet 1 of 2

We certify that the statements in this report are correct and this vessel part or appurtenance as defined in the code conforms to the rules of construction of the ASME Code Section III. (The applicable Designed Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report).

Date: 03/27/91 Signed GE-NEBG-NF & CM-OA By [Signature]
(NPT Certificate Holder) (SC QA Representative)

Certificate of Authorization Expires: 6/15/93 Certification of Authorization No. : NPTN-1151

Certification of Design for Appurtenance

Design information on file at GE Company, San Jose, California

Stress analysis report on file at GE Company, San Jose, California

DC22A5253 Rev. 1
Design specification certified by Blorn Haaberg Prof. Eng. State Calif. Reg. No. 15570

DC22A5254 Rev 1
Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. M018546



Certification of Shop Inspection

I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of North Carolina and employed by Department of Labor of State of North Carolina have inspected the part of a pressure vessel described in this Partial Data Report on S/RJ, 1971, and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in the Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damages or a loss of any kind arising from or connected with this inspection.

3/27, 1991 [Signature] NC 1231, Ohio
Date Inspector's Signature National Board, State, Province And No.

*Supplemental sheets in form of lists, sketches or drawing may be used provided (1) size is 8-1/2" x 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3. "REMARKS".

(67/66)

FORM N-2 (back)

Items 4-6 incl. to be completed for single wall vessels, jackets vessels, or shells of heat exchangers.

4. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

6. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location (Top Bottom, Ends)	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (conv. or conc.)
(a) _____	_____	_____	_____	_____	_____	_____	_____	_____
(b) _____	_____	_____	_____	_____	_____	_____	_____	_____

If removable, bolts used _____ Other fastening _____
(Material, Spec. No., T.S. Size Number) (Describe or attach sketch)

7. Jacket Closure: _____
(Describe as ogee and weld, bar, etc. If bar give dimensions, if bolts, describe or sketch)

Drop Weight _____
 Charpy Impact _____ ft-lb

8. Design pressure ² _____ 1250 _____ psi at _____ 575 _____ ° F at temp of _____ ° F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)

Floating. Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes: Material _____ O.D. _____ in. Thickness _____ inches or gage. Number _____ Type _____
(Std. or U)

Items 11 - 14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

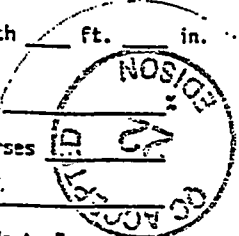
13. Heads (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (conv. or conc.)
(a) Top, bottom, ends	_____	_____	_____	_____	_____	_____	_____	_____
(b) Channel	_____	_____	_____	_____	_____	_____	_____	_____

If removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening _____
(Describe or attach sketch)

Drop Weight _____
 Charpy Impact _____ ft-lb

14. Design pressure ² _____ psi at _____ ° F at temp of _____ ° F



Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number _____ Size _____ Location _____

16. Nozzles	Purpose (Inlet, Outlet, Drain)	Number	Dia. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

17. Inspection Openings: Handholes, No. _____ Size _____ Location _____
 Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____

18. Supports: Skirt _____ Lugs _____ Legs _____ Other _____ Attached _____
(Yes or No) (Number) (Number) (Describe) (Where & How)

1 - If Postweld Heat-Treated.
 2 - List other internal or external pressure with coincident temperature when applicable.

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

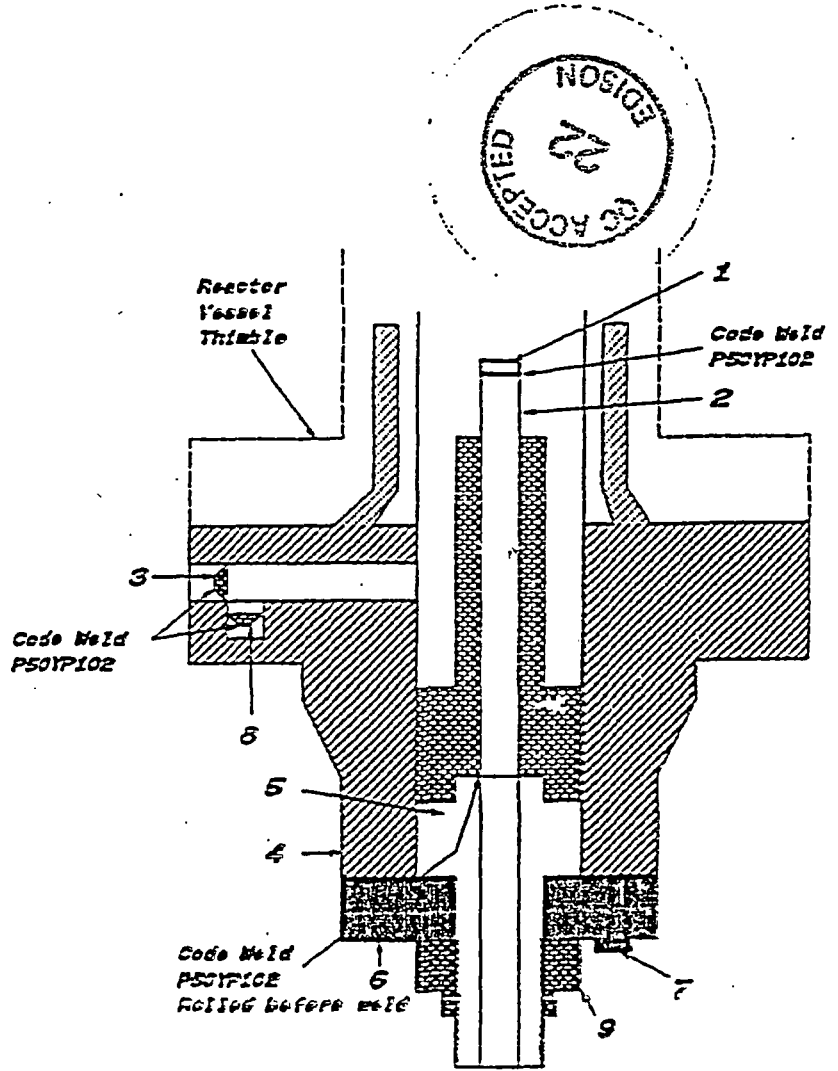
1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
 - (b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part : 0455 Nat'l Bd. No. N/A
 - (a) Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D. L. Paterson
 - (b) Description of Part Inspected: Piston Tube Assembly
 - (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1351-2 Class 1
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

The Piston Tube Assembly consists of the Cap Item 1, the Indicator Pipe Item 2, and the Base Item 5, and the two related Code Welds.

Serial # and tester stamp is an alternate method of marking.

Sheet 2 of 2

1. Cap 165B9274P001
SA182 - F304
3/8" thick x 1 1/16" OD
2. Indicator Tube 155B9313P001
SA312 - TP316
3/4" sch 40 - seamless pipe
0.113" wall thickness
1.055" max. dia.
3. Plug 159A1176P001
SA182 - F304
1/4" thick x 0.812" OD
4. Flange 819DS10P001 (719E474)
SA182 - F304
3.37" thick x 9 5/8" OD
5. Base 137C5311P001
SA182 - F304
7/8" thick x 2.675" dia.
6. Ring Flange 11425122P002, P003
137C6151P001, P002
SA182 - F304
1" thick x 5.0" OD x 1.75" ID
7. Cap Screw 117C4516P002
SA153 - B8
6 ea. 1/2" dia. on 4 1/8" bolt circle
8. Plug 175A7951P001
SA182 - F304
0.38" thick x 1.337" dia.
8. Nut 137C5934P001
XM - 18 SA478
1.39" thick x 2.62" dia.



03-004
9 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

- Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GENF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
 - Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
- Identification - Certificate Holder's S/N of Part : 0489 Nat'l Bd. No. N/A
 - Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D. L. Peterson
 - Description of Part Inspected: Piston Tube Assembly
 - Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1361-2 Class 1
- REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

Sheet 1 of 2

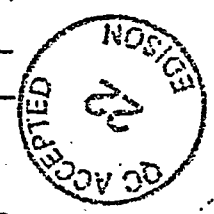
We certify that the statements in this report are correct and this vessel part or appurtenance as defined in the code conforms to the rules of construction of the ASME Code Section III. (The applicable Designed Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report).

Date: 03/27/91 Signed GE-NEBG-NF & CM-OA By [Signature]
(NPT Certificate Holder) (ASME Representative)

Certificate of Authorization Expires: 6/16/93 Certification of Authorization No. : NPTN-1151

Certification of Design for Appurtenance

Design information on file at GE Company, San Jose, California
 Stress analysis report on file at GE Company, San Jose, California
 DC22A6253 Rev. 1
 Design specification certified by Blom Heaberg Prof. Eng. State Calif. Reg. No. 15570
 DC22A6254 Rev 1
 Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. M018545



Certification of Shop Inspection

I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of North Carolina and employed by Department of Labor of State of North Carolina have inspected the part of a pressure vessel described in this Partial Data Report on 2/19, 1991 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in the Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damages or a loss of any kind arising from or connected with this inspection.

3/27, 1991 Date Quinn P. Evers Inspector's Signature NC 1231, Ohio National Board, State, Province And No.

*Supplemental sheets in form of lists, sketches or drawing may be used provided (1) size is 8-1/2" x 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 3. "REMARKS".

FORM N-2 (Back)

Items 4-8 Incl. to be completed for single wall vessels, jackets vessels, or shells of heat exchangers.

4. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

6. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location (Top Bottom, Ends)	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (conv. or conc.)
(a) _____	_____	_____	_____	_____	_____	_____	_____	_____
(b) _____	_____	_____	_____	_____	_____	_____	_____	_____

If removable, bolts used _____ Other fastening _____
(Material, Spec. No., T.S. Size Number) (Describe or attach sketch)

7. Jacket Closure: _____
(Describe as cage and weld, bar, etc. If bar give dimensions, if bolts, describe or sketch)

Drop Weight _____
 Charpy Impact _____ ft-lb

8. Design pressure ² _____ 1250 psi at _____ 575 ° F at temp of _____ ° F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)

Floating. Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes: Material _____ O.D. _____ in. Thickness _____ inches or gage. Number _____ Type _____
(Str. or U)

Items 11 - 14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

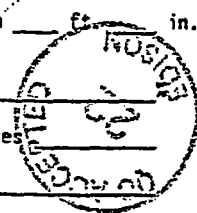
13. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (conv. or conc.)
(a) Top, bottom, ends	_____	_____	_____	_____	_____	_____	_____	_____
(b) Channel	_____	_____	_____	_____	_____	_____	_____	_____

If removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening _____
(Describe or attach sketch)

Drop Weight _____
 Charpy Impact _____ ft-lb

14. Design pressure ² _____ psi at _____ ° F at temp of _____ ° F



Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number _____ Size _____ Location _____

Noz. No.	Purpose (Inlet, Outlet, Drain)	Number	Dia. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

17. Inspection Manholes, No. _____ Size _____ Location _____
 Openings: Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____

18. Supports: Skirt _____ Lugs _____ Legs _____ Other _____ Attached _____
(Yes or No) (Number) (Number) (Describe) (Where & How)

1 - If Postweld Heat-Treated.
 2 - List either internal or external pressure with coincident temperature when applicable.

03004
10 of 24

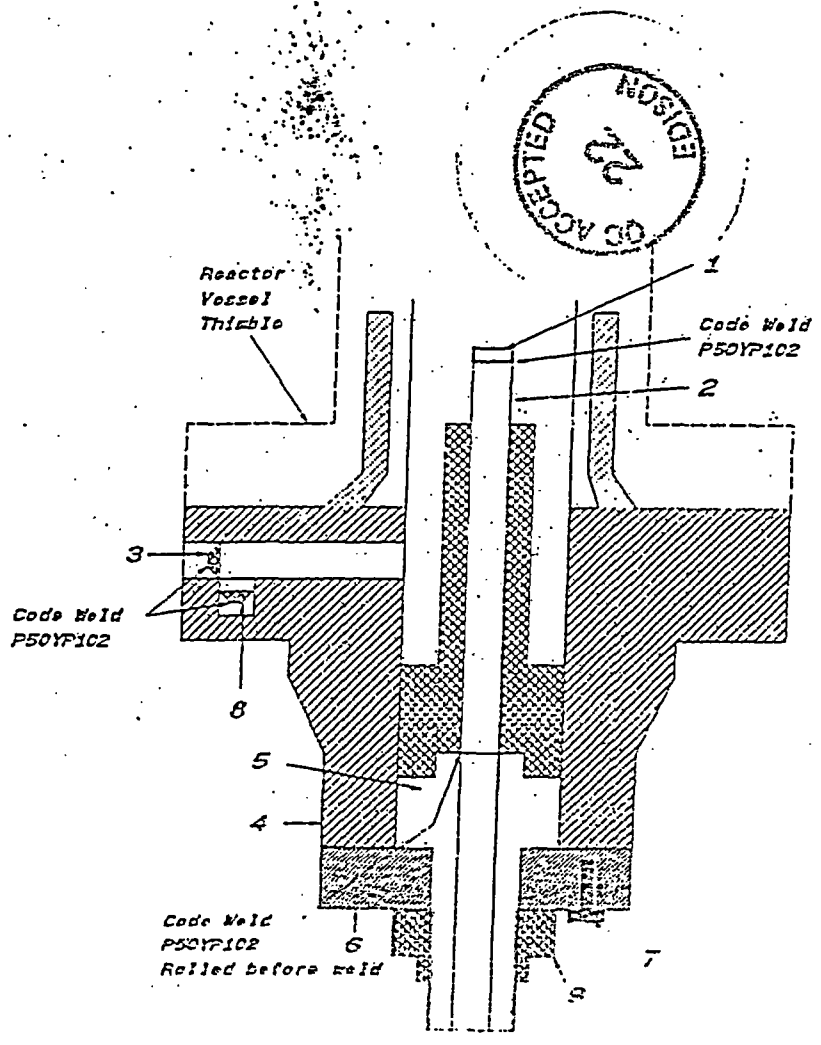
FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part : 0489 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D. L. Peterson
- (b) Description of Part Inspected: Piston Tube Assembly
- (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1361-2 Class 1
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1625 psi. min.
(Brief description of service for which component was designed)

The Piston Tube Assembly consists of the Cap Item 1, the Indicator Pipe Item 2, and the Base Item 5, and the two related Code Welds.

Serial # and tester stamp is an alternate method of marking. Sheet 2 of 2

1. Cap 166B9274P001
SA162 - F304
3/8" thick x 1 1/16" OD
2. Indicator Tube 166B9313P001
SA312 - TP316
3/4" sch 40 - seamless pipe
0.113" wall thickness
1.065" max. dia.
3. Plug 159A1176P001
SA162 - F304
1/4" thick x 0.812" OD
4. Flange 919D610P001 (719E474)
SA162 - F304
3.37" thick x 9 5/8" OD
5. Base 137C5311P001
SA162 - F304
7/8" thick x 2.675" dia.
6. Ring Flange 114B5122P002, P003
137C8151P001, P002
SA162 - F304
1" thick x 5.0" OD x 1.75" ID
7. Cap Screw 117C4516P002
SA193 - B6
6 ez. 1/2" dia. on 4 1/8" bolt circle
8. Plug 175A7961P001
SA162 - F304
0.38" thick x 1.307" dia.
9. Nut 137C5534P001
SA193 - B6
1.30" dia. x 2.62" h



03-004
11 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

- Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
 - Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
- Identification - Certificate Holder's S/N of Part : 0490 Nat'l Bd. No. N/A
 - Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D. L. Peterson
 - Description of Part Inspected: Piston Tube Assembly
 - Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. N207 1361-2 Class 1
- REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

Sheet 1 of 2

We certify that the statements in this report are correct and this vessel part or appurtenance as defined in the code conforms to the rules of construction of the ASME Code Section III. (The applicable Designed Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report).

Date: 03/27/91 Signed GE-NEBG-NF&CM-OA By [Signature]
(NPT Certificate Holder) (SC OR Representative)

Certificate of Authorization Expires: 6/16/93 Certification of Authorization No. : NFTN-1151

Certification of Design for Appurtenance

Design information on file at GE Company, San Jose, California

Stress analysis report on file at GE Company, San Jose, California

DC22A6253 Rev. 1
Design specification certified by Blom Haaberg Prof. Eng. State Calif. Reg. No. 15570

DC22A5254 Rev 1
Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. M018646



Certification of Shop Inspection

I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of North Carolina and employed by Department of Labor of State of North Carolina have inspected the part of a pressure vessel described in this Partial Data Report on 3/27, 1991 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in the Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damages or a loss of any kind arising from or connected with this inspection.

3/27, 1991 [Signature] NC 1231, Ohio
Date Inspector's Signature National Board, State, Province And No.

*Supplemental sheets in form of lists, sketches or drawing may be used provided (1) size is 8-1/2" x 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3. "REMARKS".

(07/82)

FORM N-2 (back)

Items 4-8 incl. to be completed for single wall vessels, jackets vessels, or shells of heat exchangers.

4. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

6. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location (Top Bottom, Ends)	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (conv. or conc.)
(a) _____	_____	_____	_____	_____	_____	_____	_____	_____
(b) _____	_____	_____	_____	_____	_____	_____	_____	_____

If removable, bolts used _____ (Material, Spec. No., T.S. Size Number) Other fastening _____ (Describe or attach sketch)

7. Jacket Closure: _____ (Describe as open and weld, bar, etc. If bar give dimensions, if bolts, describe or sketch)
 Drop Weight _____
 Charpy Impact _____ ft-lb

8. Design pressure ² _____ 1250 _____ psi at _____ 575 _____ ° F at temp of _____ ° F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)

Floating. Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes: Material _____ O.D. _____ in. Thickness _____ inches or gage. Number _____ Type _____
(St. or U)

Items 11 - 14 incl. to be completed for inner chambers of jacketed vessels; or channels of heat exchangers.

11. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

13. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (conv. or conc.)
(a) Top, bottom, ends	_____	_____	_____	_____	_____	_____	_____	_____
(b) Channel	_____	_____	_____	_____	_____	_____	_____	_____

If removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening _____ (Describe or attach sketch)

Drop Weight _____
 Charpy Impact _____ ft-lb

14. Design pressure ² _____ psi at _____ ° F at temp of _____ ° F

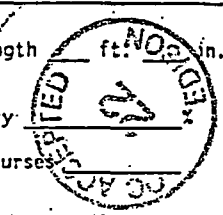
Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number _____ Size _____ Location _____

16. Nozzles: Purpose (Inlet, Outlet, Drain) _____ Number _____ Dia. or Size _____ Type _____ Material _____ Thickness _____ Reinforcement Material _____ How Attached _____

17. Inspection Openings: Manholes, No. _____ Size _____ Location _____
 Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____

18. Supports: Skirt _____ (Yes or No) Lugs _____ (Number) Legs _____ (Number) Other _____ (Describe) Attached _____ (Where & How)



1 - If Postweld Heat-Treated.
 2 - List other internal or external pressure with coincident temperature when applicable.

1 0 1 6 . 2 1 2 0 1 7 2 0

03-001
12 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES
As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)

(b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)

2. Identification - Certificate Holder's S/N of Part : 0490 Nat'l Bd. No. N/A

(a) Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D. L. Peterson

(b) Description of Part Inspected: Piston Tube Assembly

(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1361-2 Class 1

3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

The Piston Tube Assembly consists of the Cap Item 1, the Indicator Pipe Item 2, and the Base Item 5, and the two related Code Welds.

Serial # and tester stamp is an alternate method of marking.

Sheet 2 of 2

1. Cap 166B9274P001
SA182 - F304
3/8" thick x 1 1/16" OD

2. Indicator Tube 166B9313P001
SA312 - TP316
3/4" sch 40 - seamless pipe
0.113" wall thickness
1.055" max. dia.

3. Plug 159A1176P001
SA182 - F304
1/4" thick x 0.812" OD

4. Flange #19D610P001 (719E474)
SA182 - F304
3.37" thick x 9 5/8" OD

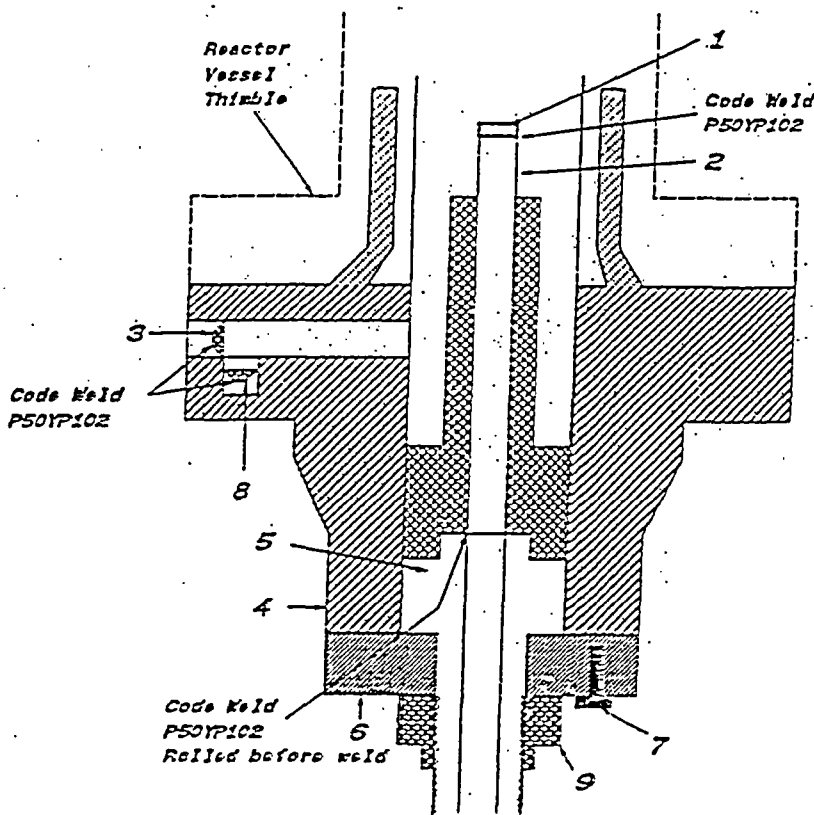
5. Base 137C5311P001
SA182 - F304
7/8" thick x 2.675" dia.

6. Ring Flange 114B5122P002, P003
137C8151P001, P002
SA182 - F304
1" thick x 5.0" OD x 1.75" ID

7. Cap Screw 117C4516P002
SA193 - B5
6 ea. 1/2" dia. on 4 1/8" bolt circle

8. Plug 175A7951P001
SA182 - F304
0.38" thick x 1.307" dia.

9. Nut 137C5934P001
X4 - 19 SA479
1.30" thick x 2.62" dia.



5 0 1 6 8 1 3 0 1 1 7 8 3

13 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES
As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)

(b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of R Certificate Holder for completed nuclear component)

2. Identification - Certificate Holder's S/N of Part : 0505 Nat'l Bd. No. N/A

(a) Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D. L. Peterson

(b) Description of Part Inspected: Piston Tube Assembly

(c) Applicable ASME Code: Section III ; Edition 1974 . Addenda Date W75 , Case No. N207-1361-2 Class 1

3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1625 psi. min.
(Brief description of service for which component was designed)

Sheet 1 of 2

We certify that the statements in this report are correct and this vessel part or appurtenance as defined in the code conforms to the rules of construction of the ASME Code Section III. (The applicable Designed Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report).

Date: 06/28/91 Signed GE-NEBG-NF & CM-OA By [Signature]
(NPT Certificate Holder) (ASME Representative)

Certificate of Authorization Expires: 6/16/93 Certification of Authorization No. : NPTN-1151

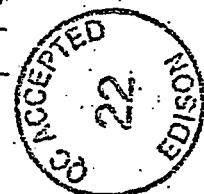
Certification of Design for Appurtenance

Design information on file at GE Company, San Jose, California

Stress analysis report on file at GE Company, San Jose, California

DC22A6253 Rev. 1
Design specification certified by Blom Haaberg Prof. Eng. State Calif. Reg. No. 15570

DC22A6254 Rev 1
Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. M018646



Certification of Shop Inspection

I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of North Carolina and employed by Department of Labor of State of North Carolina have inspected the part of a pressure vessel described in this Partial Data Report on 6/27, 1991 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in the Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damages or a loss of any kind arising from or connected with this inspection.

6/27 1991 [Signature] NC 1231, Ohio
Date Inspector's Signature National Board, State, Province And No.

*Supplemental sheets in form of lists, sketches or drawing may be used provided (1) size is 8-1/2" x 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3. "REMARKS".

(07/80)

FORM N-2 (back)

Items 4-8 Incl. to be completed for single wall vessels, jackets vessels, or shells of heat exchangers.

4. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

6. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location (Top Bottom, Ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (conv. or conc.)

(a) _____
 (b) _____

If removable, bolts used _____ Other fastening _____
(Material, Spec. No., T.S. Size Number) (Describe or attach sketch)

7. Jacket Closure: _____
(Describe as open and weld, bar, etc. If bar give dimensions, if bolts, describe or sketch)

Drop Weight _____
 Charpy Impact _____ ft-lb

8. Design pressure ² _____ 1250 _____ psi at _____ 575 _____ ° F at temp of _____ ° F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)
 Floating. Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes: Material _____ O.D. _____ in. Thickness _____ inches or gage. Number _____ Type _____
(Str. or U)

Items 11 - 14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

13. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (conv. or conc.)

(a) Top, bottom, ends _____
 (b) Channel _____

If removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening _____
(Describe or attach sketch)

Drop Weight _____
 Charpy Impact _____ ft-lb

14. Design pressure ² _____ psi at _____ ° F at temp of _____ ° F

Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number _____ Size _____ Location _____

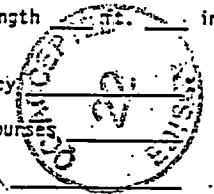
16. Nozzles: Purpose (Inlet, Outlet, Drain) Number Dia. or Size Type Material Thickness Reinforcement Material How Attached

17. Inspection Openings: Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____

18. Supports: Skirt _____ Lugs _____ Logs _____ Other _____ Attached _____
(Yes or No) (Number) (Number) (Describe) (Where & How)

1 - If Postweld Heat-Treated.

2 - List other internal or external pressure with coincident temperature when applicable.



03-004
14-24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES
As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)

(b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)

2. Identification - Certificate Holder's S/N of Part : 0505 Nat'l Bd. No. N/A

(a) Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D. L. Peterson

(b) Description of Part Inspected: Piston Tube Assembly

(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. N207 1361-2 Class 1

3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

The Piston Tube Assembly consists of the Cap Item 1, the Indicator Pipe Item 2, and the Base Item 5, and the two related Code Welds.

Serial # and tester stamp is an alternate method of marking.

Sheet 2 of 2

1. Cap 166B9274P001
SA182 - F304
3/8" thick x 1 1/16" OD

2. Indicator Tube 166B9313P001
SA312 - TP316
3/4" sch 40 - seamless pipe
0.113" wall thickness
1.055" max. dia.

3. Plug 159A1176P001
SA182 - F304
1/4" thick x 0.812" OD

4. Flange 919D610P001 (719E474)
SA182 - F304
3.37" thick x 9 5/8" OD

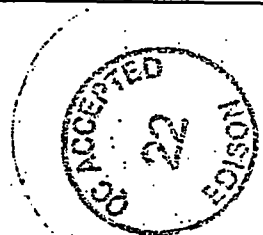
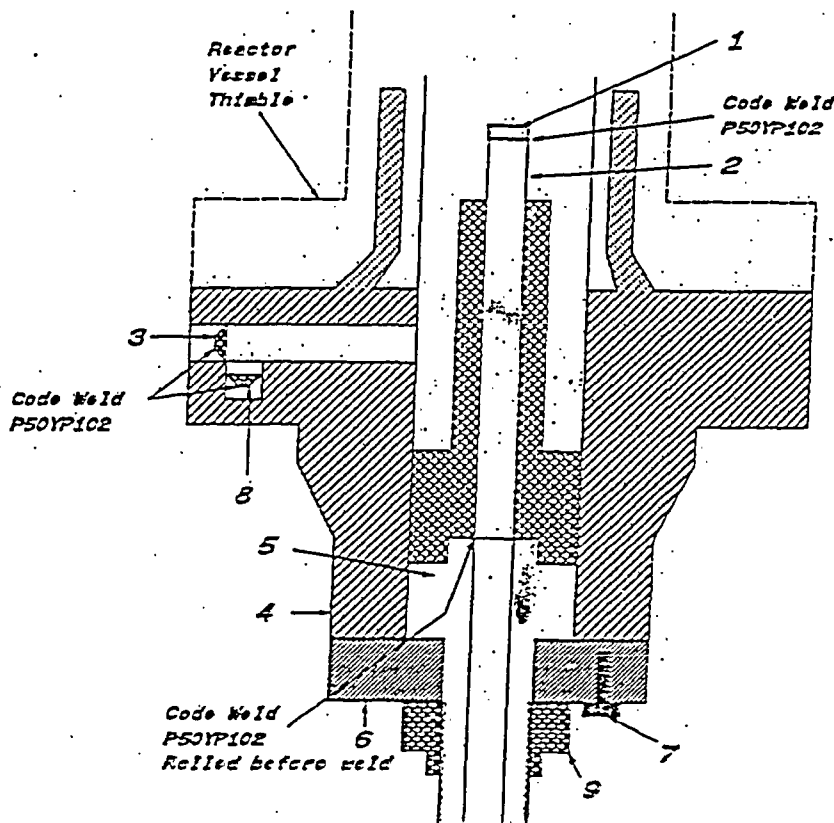
5. Base 137C5311P001
SA182 - F304
7/8" thick x 2.875" dia.

6. Ring Flange 114B5122P002, P003
137C8151P001, P002
SA182 - F304
1" thick x 5.0" OD x 1.75" ID

7. Cap Screw 117C4516P002
SA193 - B5
6 ez. 1/2" dia. on 4 1/8" bolt circle

8. Plug 175A7951P001
SA182 - F304
0.38" thick x 1.307" dia.

9. Nut 137C5934P001
XM - 19 SA479
1.30" thick x 2.62" dia.



03-004
1508 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
 (Name and Address of NPT Certificate Holder)
- (b) Manufactured for : Brunswick Southport, North Carolina 28461
 (Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/R of Part : 0650 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 798D228G012 Rev 36 Dwg. Prepared by D. L. Peterson
- (b) Description of Part Inspected: Piston Tube Assembly
- (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1361-2 Class 1
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
 (Brief description of service for which component was designed)

Sheet 1 of 2

We certify that the statements in this report are correct and this vessel part or appurtenance as defined in the code conforms to the rules of construction of the ASME Code Section III. (The applicable Designed Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report).

Date: 12/18/91 Signed GE-NEBG-NF & CM-OA By [Signature]
 (NPT Certificate Holder) (QC/OA Representative)

Certificate of Authorization Expires: 6/16/93 Certification of Authorization No. : NPT N-1151

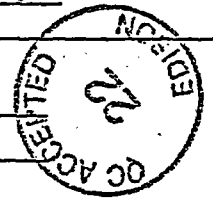
Certification of Design for Appurtenance

Design information on file at GE Company, San Jose, California

Stress analysis report on file at GE Company, San Jose, California

DC22A6253 Re . 1
 Design specification certified by Bjorn Haaberg Prof. Eng. State Calif. Reg. No. 15570

DC22A6254 Rev 1
 Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. M018646



Certification of Shop Inspection

I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of North Carolina and employed by Department of Labor of State of North Carolina have inspected the part of a pressure vessel described in this Partial Data Report on 12/05, 1991 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in the Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damages or a loss of any kind arising from or connected with this inspection.

12/18, 1991 [Signature] NC 1231, Ohio, WC 3686 PA
 Date/ Inspector's Signature National Board, State, Province And No.

*Supplemental sheets in form of lists, sketches or drawing may be used provided (1) size is 8-1/2" x 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in item 3. "REMARKS".

(07/90)

3 018 2 4 20 2 0 9 7

FORM N-2 (back)

Items 4-8 incl. to be completed for single wall vessels, jackets vessels, or shells of heat exchangers.

4. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
 (Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

6. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location (Top Bottom, Ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (conv. or conc.)

(a) _____
 (b) _____

If removable, bolts used _____ Other fastening _____
 (Material, Spec. No., T.S. Size Number) (Describe or attach sketch)

7. Jacket Closure: _____
 (Describe as ogee and weld, bar, etc. If bar give dimensions, if bolts, describe or sketch)

Drop Weight _____
 Charpy Impact _____ ft-lb

8. Design pressure ² _____ 1250 _____ psi at _____ 575 _____ ° F at temp of _____ ° F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material _____ Dia. _____ Thickness _____ in. Attachment _____
 (Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)
 Floating. Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes: Material _____ O.D. _____ in. Thickness _____ inches or gage. Number _____ Type _____
 (Str. or U)

Items 11 - 14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ in.
 (Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

13. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (conv. or conc.)

(a) Top, bottom, ends _____
 (b) Channel _____

If removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening _____
 (Describe or attach sketch)

Drop Weight _____
 Charpy Impact _____ ft-lb

14. Design pressure ² _____ psi at _____ ° F at temp of _____ ° F

Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number _____ Size _____ Location _____

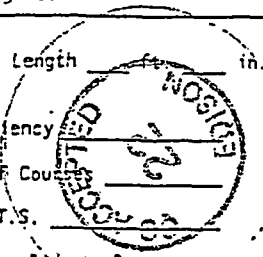
Purpose (Inlet, Outlet, Drain)	Number	Dia. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

17. Inspection Manholes. No. _____ Size _____ Location _____
 Openings: Handholes. No. _____ Size _____ Location _____
 Threaded. No. _____ Size _____ Location _____

18. Supports: Skirt _____ Lugs _____ Legs _____ Other _____ Attached _____
 (Yes or No) (Number) (Number) (Describe) (Where & How)

1 - If Postweld Heat-Treated.

2 - List other internal or external pressure with coincident temperature when applicable.



1016 8-1-54 3-1-54

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules; Section III; Div. I

1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)

(b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)

2. Identification - Certificate Holder's S/N of Part : 0550 Nat'l Bd. No. N/A

(a) Constructed According to Drawing No: 798D228G012 Rev 36 Dwg. Prepared by D. L. Peterson

(b) Description of Part Inspected: Piston Tube Assembly

(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No: N207 1351-2 Class 1

3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psl. min.
(Brief description of service for which component was designed)

The Piston Tube Assembly consists of the Cap Item 1, the Indicator Pipe Item 2, and the Base Item 5, and the two related Code Welds.

Serial # and tester stamp is an alternate method of marking.

Sheet 2 of 2

1. Cap 165B9274P001
SA182 - F304
3/8" thick x 1 1/16" OD

2. Indicator Tube 165B9313P001
SA312 - TP316
3/4" sch 40 - seamless pipe
0.113" wall thickness
1.065" max. dia.

3. Plug 159A1176P001
SA182 - F304
1/4" thick x 0.812" OD

4. Flange 919D610P001 (719E474)
SA182 - F304
3.37" thick x 9 5/8" OD

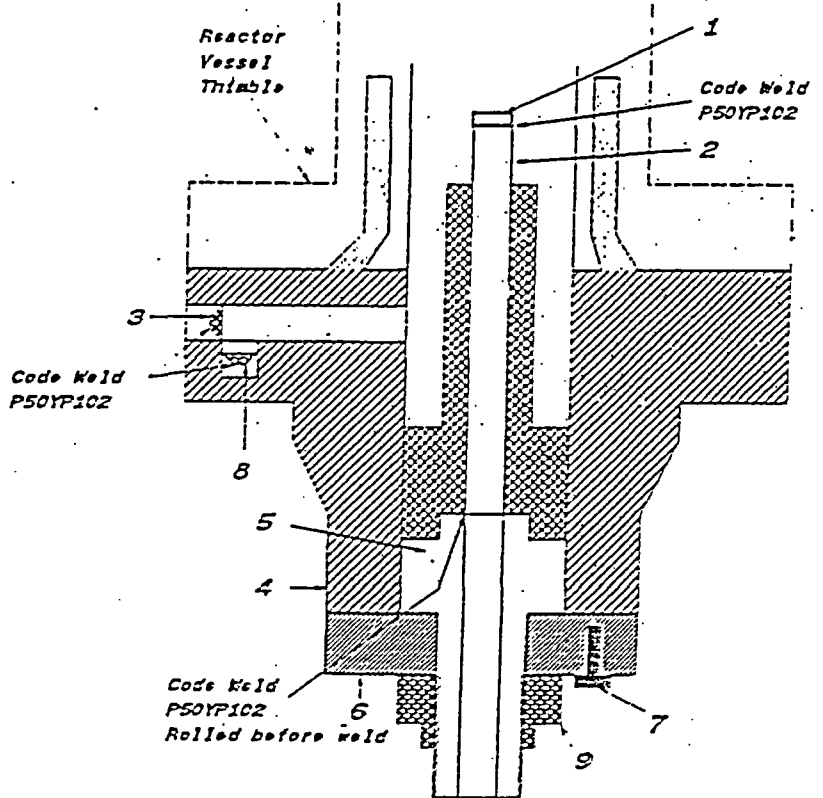
5. Base 137C5311P001
SA182 - F304
7/8" thick x 2.875" dia.

6. Ring Flange 114B5122P002, P003
137C8151P001, P002
SA182 - F304
1" thick x 5.0" OD x 1.75" ID

7. Cap Screw 117C4516P002
SA193 - B6
6 ea. 1/2" dia. on 4 1/8" bolt circle

8. Plug 175A7951P001
SA182 - F304
0.38" thick x 1.307" dia.

9. Nut 137C5934P001
XM - 19 SA479
1.30" thick x 2.62" dia.



03-004 17 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Haven Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)

(b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)

2. Identification - Certificate Holder's S/N of Part : 0654 Nat'l Bd. No. N/A

(a) Constructed According to Drawing No: 798D228G012 Rev 36 Dwg. Prepared by D. L. Peterson

(b) Description of Part Inspected: Piston Tube Assembly

(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1361-2 Class 1

3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

Sheet 1 of 2

We certify that the statements in this report are correct and this vessel part or appurtenance as defined in the code conforms to the rules of construction of the ASME Code Section III. (The applicable Designed Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the Component Design Specification and Stress Report).

Date: 12/18/91 Signed GE-NEBG-NF & CM-OA By [Signature]
(NPT Certificate Holder) (ASME Representative)

Certificate of Authorization Expires: 6/16/93 Certification of Authorization No. : NPTN-1151

Certification of Design for Appurtenance

Design information on file at GE Company, San Jose, California

Stress analysis report on file at GE Company, San Jose, California

DC22A6253 Rev. 1

Design specification certified by Bjorn Haaberg Prof. Eng. State Calif. Reg. No. 15570

DC22A6254 Rev 1

Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. M018646



Certification of Shop Inspection

I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of North Carolina and employed by Department of Labor of State of North Carolina have inspected the part of a pressure vessel described in this Partial Data Report on 12/13, 1991 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in the Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damages or a loss of any kind arising from or connected with this inspection.

12/18, 1991 [Signature]
Date Inspector's Signature

NC 1231, Ohio, WC 3586 PA
National Board, State, Province And No.

*Supplemental sheets in form of lists, sketches or drawing may be used provided (1) size is 8-1/2" x 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3. "REMARKS".

(87/90)

1 0 6 8 4 2 0 1 2 1 7 1 7

FORM N-2 (back)

Items 4-8 incl. to be completed for single wall vessels, jackets vessels, or shells of heat exchangers.

4. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

6. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____
 Location (Top Bottom, Ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (conv. or conc.)
 (a) _____
 (b) _____
 If removable, bolts used _____ Other fastening _____
(Material, Spec. No., T.S. Size Number) (Describe or attach sketch)

7. Jacket Closure: _____
(Describe as ogee and weld, bar, etc. if bar give dimensions, if bolts, describe or sketch)

8. Design pressure ² _____ 1250 _____ psi at _____ 575 _____ ° F at temp of _____ ° F
 Drop Weight _____
 Charpy Impact _____ ft-lb

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)
 Floating. Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes: Material _____ O.D. _____ in. Thickness _____ inches or gage. Number _____ Type _____
(Str. or U)

Items 11 - 14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

13. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____
 Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (conv. or conc.)
 (a) Top, bottom, ends _____
 (b) Channel _____
 if removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening _____
(Describe or attach sketch)

14. Design pressure ² _____ psi at _____ ° F at temp of _____ ° F
 Drop Weight _____
 Charpy Impact _____ ft-lb



Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number _____ Size _____ Location _____

16. Nozzles: Purpose (Inlet, Outlet, Drain) Number Dia. or Size Type Material Thickness Reinforcement Material How Attached

Purpose (Inlet, Outlet, Drain)	Number	Dia. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

17. Inspection Openings: Manholes, No. _____ Size _____ Location _____
 Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____

18. Supports: Skirt _____ Lugs _____ Legs _____ Other _____ Attached _____
(Yes or No) (Number) (Number) (Describe) (Where & How)

1 - If Postweld Heat-Treated.
 2 - List other internal or external pressure with coincident temperatures.

03-004 18 cc 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES
As required by the Provision of the ASME Code Rules, Section III, Div. I

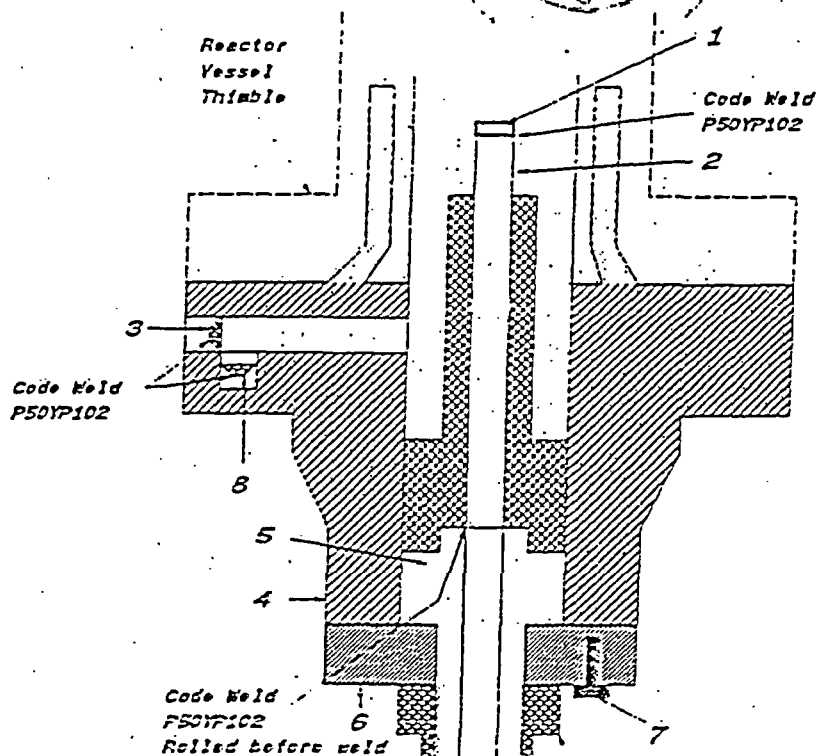
1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part : 0654 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 798D228G012 Rev 36 Dwg. Prepared by D. L. Peterson
- (b) Description of Part Inspected: Piston Tube Assembly
- (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1361-2 Class 1
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

The Piston Tube Assembly consists of the Cap Item 1, the Indicator Pipe Item 2, and the Base Item 5, and the two related Code Welds.

Serial # and tester stamp is an alternate method of marking.

Sheet 2 of 2

1. Cap 166B9274P001
SA182 - F304
3/8" thick x 1 1/16" OD
2. Indicator Tube 166B9313P001
SA312 - TP316
3/4" sch 40 - seamless pipe
0.113" wall thickness
1.065" max. dia.
3. Plug 159A1176P001
SA182 - F304
1/4" thick x 0.812" OD
4. Flange 917510P001 (719E474)
SA182 - F304
3.37" thick x 9 5/8" OD
5. Base 137C5311P001
SA182 - F304
7/8" thick x 2.675" dia.
6. Ring Flange 114B5122P002, P003
137C8151P001, P002
SA182 - F304
1" thick x 5.0" OD x 1.75" ID
7. Cap Screw 117C4516P002
SA193 - B6
6 ez. 1/2" dia. on 4 1/8" bolt circle
8. Plug 175A7951P001
SA182 - F304
0.38" thick x 1.307" dia.
9. Nut 137C5934P001
SA182 - F304
1.30" thick x 2.62" dia.



1 0 8 8 4 2 0 2 1 0 2

03001 19 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

- Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
 - Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
- Identification - Certificate Holder's S/N of Part : 0656 Nat'l Bd. No. N/A
 - Constructed According to Drawing No: 798D228G012 Rev 36 Dwg. Prepared by D.L. Peterson
 - Description of Part Inspected: Piston Tube Assembly
 - Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1361-2 Class 1
- REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psf. min.
(Brief description of service for which component was designed)

Sheet 1 of 2

We certify that the statements in this report are correct and this vessel part or appurtenance as defined in the code conforms to the rules of construction of the ASME Code Section III: (The applicable Designed Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report).

Date: 12/18/91 Signed GE-NEBG-NF & CM-OA By [Signature]
(NPT Certificate Holder) (SC OR Representative)

Certificate of Authorization Expires: 6/16/93 Certification of Authorization No. : NPTN-1151

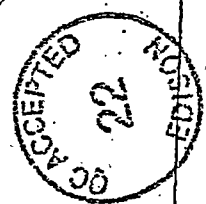
Certification of Design for Appurtenance

Design information on file at: GE Company, San Jose, California

Stress analysis report on file at: GE Company, San Jose, California

DC22A6253 Rev. 1
Design specification certified by Biorn Haaberg Prof. Eng. State Calif. Reg. No. 15570

DC22A6254 Rev. 1
Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. MD18546



Certification of Shop Inspection

I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of North Carolina and employed by Department of Labor of State of North Carolina have inspected the part of a pressure vessel described in this Partial Data Report on 12/12, 1991 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in the Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damages or a loss of any kind arising from or connected with this inspection.

12/18, 1991 [Signature] NC 1231, Ohio, WC 3686 PA
Date Inspector's Signature National Board, State, Province And No.

*Supplemental sheets in form of lists, sketches or drawing may be used provided (1) size is 8-1/2" x 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3. "REMARKS".

(87/M)

1 0 6 8 4 2 0 3 1 8 0

FORM N-2 (back)

Items 4-8 Incl. to be completed for single wall vessels, jackets vessels, or shells of heat exchangers.

4. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

6. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____
 Location (Top Bottom, Ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (conv. or conc.)
 (a) _____
 (b) _____
 If removable, bolts used _____ Other fastening _____
(Material, Spec. No., T.S. Size Number) (Describe or attach sketch)

7. Jacket Closure: _____
(Describe as ogee and weld, bar, etc. If bar give dimensions, if bolts, describe or sketch)

Drop Weight _____ ft-lb
 Charpy Impact _____ ft-lb

8. Design pressure ² _____ 1250 _____ psi at _____ 575 _____ ° F at temp of _____ ° F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to pressure) (Welded, Bonded)
 Floating. Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes: Material _____ O.D. _____ in. Thickness _____ inches or gage. Number _____ Type _____
(Str. or U)

Items 11 - 14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

13. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____
 Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Press. (conv. or conc.)
 (a) Top, bottom, ends _____
 (b) Channel _____
 If removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening _____
(Describe or attach sketch)

Drop Weight _____ ft-lb
 Charpy Impact _____ ft-lb

14. Design pressure ² _____ psi at _____ ° F at temp of _____ ° F

Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number _____ Size _____ Location _____

16. Nozzles: Purpose (Inlet, Outlet, Drain)	Number	Dia. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

17. Inspection Openings: Manholes, No. _____ Size _____ Location _____
 Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____

18. Supports: Skirt _____ Lugs _____ Legs _____ Other _____ Attached _____
(Yes or No) (Number) (Number) (Describe) (Where & How)

1 - R Postweld Heat-Treated.

2 - List other internal or external pressure with coincident temperature when applicable.

03-004 20 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

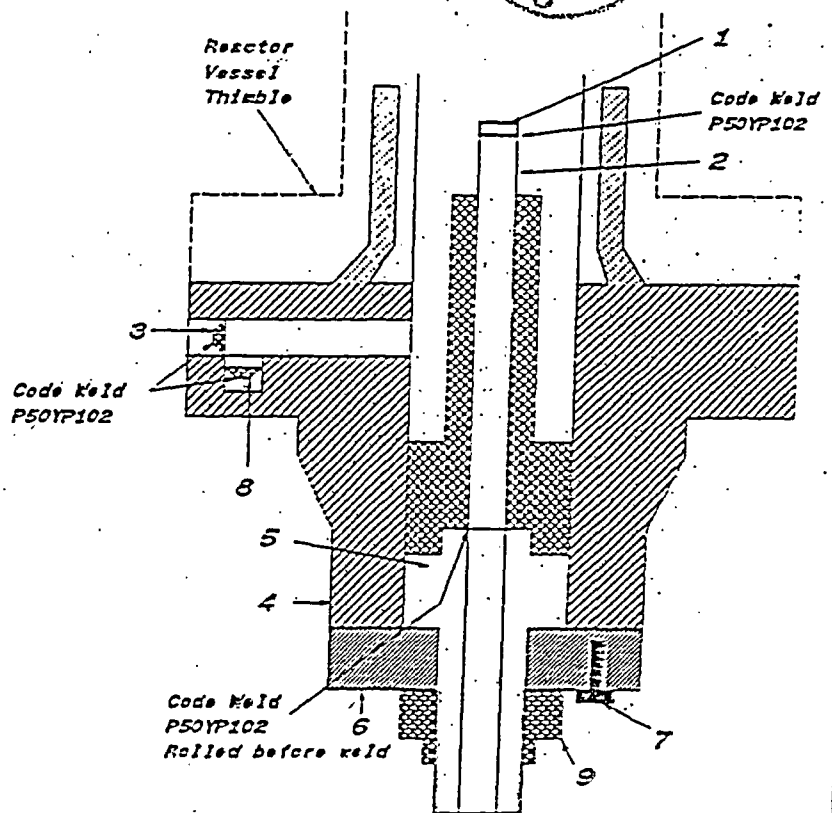
1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part : 0656 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 798D228G012 Rev 36 Dwg. Prepared by D. L. Peterson
- (b) Description of Part Inspected: Piston Tube Assembly
- (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1361-2 Class 1
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

The Piston Tube Assembly consists of the Cap Item 1, the Indicator Pipe Item 2, and the Base Item 5, and the two related Code Welds.

Serial # and tester stamp is an alternate method of marking.

Sheet 2 of 2

1. Cap 166B9274P001
SA182 - F304
3/8" thick x 1 1/16" OD
2. Indicator Tube 166B9313P001
SA312 - TP316
3/4" sch 40 - seamless pipe
0.113" wall thickness
1.055" max. dia.
3. Plug 159A1176P001
SA182 - F304
1/4" thick x 0.812" OD
4. Flange 919D510P001 (719E474)
SA182 - F304
3.37" thick x 9 5/8" OD
5. Base 137C5311P001
SA182 - F304
7/8" thick x 2.875" dia.
6. Ring Flange 114B5122P002, P003
137C8151P001, P002
SA182 - F304
1" thick x 5.0" OD x 1.75" ID
7. Cap Screw 117C4516P002
SA193 - B6
6 ez. 1/2" dia. on 4 1/8" bolt circle
8. Plug 175A7951P001
SA182 - F304
0.38" thick x 1.307" dia.
9. Nut 137C5934P001
XM - 19 SA479
1.30" thick x 2.62" dia.



1 0 8 5 4 2 0 3 1 5 2

03-004 21 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div: I

1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Haven Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part : 0595 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 798D228G012 Rev 36 Dwg. Prepared by D.L. Peterson
- (b) Description of Part Inspected: Piston Tube Assembly
- (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1351-2 Class 1
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1625 psi. min.
(Brief description of service for which component was designed)

Sheet 1 of 2

We certify that the statements in this report are correct and this vessel part or appurtenance as defined in the code conforms to the rules of construction of the ASME Code Section III. (The applicable Designed Specification and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report).

Date: 05/16/92 Signed GE-NEBG-NF & CM-OA By M. G. O'Hara
(NPT Certificate Holder) (SC or Representative)

Certificate of Authorization Expires: 6/16/93 Certification of Authorization No. : NPTN-1151

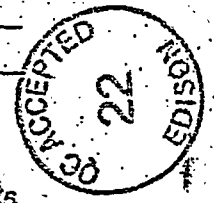
Certification of Design for Appurtenance

Design information on file at GE Company, San Jose, California

Stress analysis report on file at GE Company, San Jose, California

DC22A6253 Rev. 1
Design specification certified by Blom Haaberg Prof. Eng. State Calif. Reg. No. 15570

DC22A5254 Rev 1
Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. M018545



Certification of Shop Inspection

I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of North Carolina and employed by Department of Labor of State of North Carolina have inspected the part of a pressure vessel described in this Partial Data Report on 2128, 1992 and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in the Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damages or a loss of any kind arising from or connected with this inspection.

6/17, 1992 James P. Emery NC 1231, Ohio, WC 3686 PA
Date Inspector's Signature National Board, State, Province And No.

*Supplemental sheets in form of lists, sketches or drawing may be used provided (1) size is 8-1/2" x 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3. "REMARKS".

(07/88)

1 0 5 5 4 2 0 2 0 2 4

FORM N-2 (back)

Items 4-8 Incl. to be completed for single wall vessels, jackets vessels, or shells of heat exchangers.

4. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

5. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____ %
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

6. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location (Top Bottom, Ends)	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (conv. or conc.)
(a) _____	_____	_____	_____	_____	_____	_____	_____	_____
(b) _____	_____	_____	_____	_____	_____	_____	_____	_____

If removable, bolts used _____ Other fastening _____
(Material, Spec. No., T.S. Size Number) (Describe or attach sketch)

7. Jacket Closure: _____
(Describe as open and weld, bar, etc. If bar give dimensions, if bolts, describe or sketch)

Drop Weight _____
 Charpy Impact _____ ft-lb

8. Design pressure ² _____ psi at _____ ° F at temp of _____ ° F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material _____ Dia. _____ Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to pressure) (Welded, Bolted)
 Floating. Material _____ Dia. _____ Thickness _____ in. Attachment _____

10. Tubes: Material _____ O.D. _____ in. Thickness _____ inches or gage. Number _____ Type _____
(Str. or U)

Items 11 - 14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Dia. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of Range Specified)

12. Seams: Long _____ H.T. _____ R.T. _____ Efficiency _____
 Girth _____ H.T. _____ R.T. _____ No. of Courses _____

13. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____

Location	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (conv. or conc.)
(a) Top, bottom, ends	_____	_____	_____	_____	_____	_____	_____	_____
(b) Channel	_____	_____	_____	_____	_____	_____	_____	_____

If removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening _____
(Describe or attach sketch)

Drop Weight _____
 Charpy Impact _____ ft-lb

14. Design pressure ² _____ psi at _____ ° F at temp of _____ ° F

Items below to be completed for all vessels where applicable.

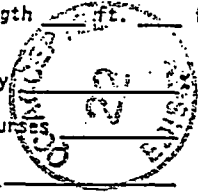
15. Safety Valve Outlets: Number _____ Size _____ Location _____

16. Nozzles: Purpose (Inlet, Outlet, Drain)	Number	Dia. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

17. Inspection Openings: Manholes, No. _____ Size _____ Location _____
 Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____

18. Supports: Skirt _____ Lugs _____ Logs _____ Other _____ Attached _____
(Yes or No) (Number) (Number) (Describe) (Where & How)

1 - E Postweld Heat-Treated.
 2 - List other internal or external pressure with coincident temperature when applicable.



03-004 22 of 24

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provision of the ASME Code Rules, Section III, Div. I

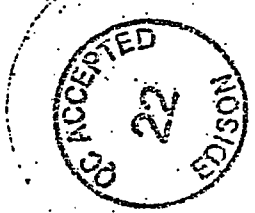
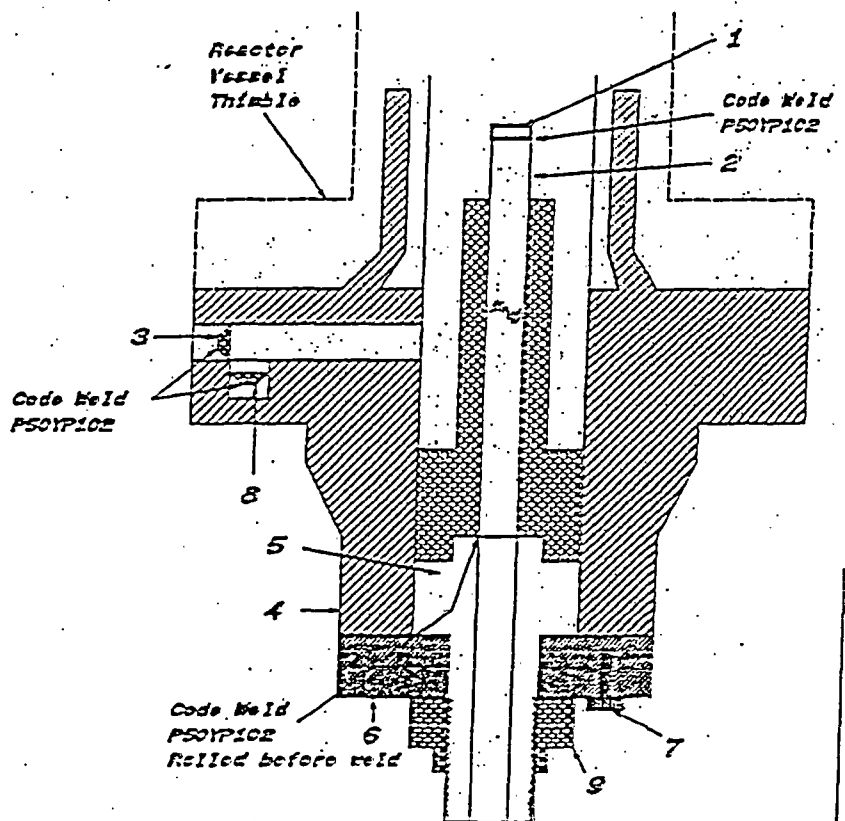
1. Manufactured & Certified by : General Electric Company Nuclear Fuel & Components Manufacturing (GE NF & CM)
2117 Castle Hayne Road, Wilmington, North Carolina 28401
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for : Brunswick Southport, North Carolina 28461
(Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/K of Part : 0595 Nat'l Bd. No. N/A
 - (a) Constructed According to Drawing No: 798D228G012 Rev 35 Dwg. Prepared by D. L. Peterson
 - (b) Description of Part Inspected: Piston Tube Assembly
 - (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1361-2 Class 1
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)

The Piston Tube Assembly consists of the Cap Item 1, the Indicator Pipe Item 2, and the Base Item 5, and the two related Code Welds.

Serial # and tester stamp is an alternate method of marking.

Sheet 2 of 2

1. Cap 165B9274P001
SA182 - F304
3/8" thick x 1 1/16" OD
2. Indicator Tube 165B9313P001
SA312 - TP316
3/4" sch 40 - seamless pipe
0.113" wall thickness
1.055" max. dia.
3. Plug 155A1176P001
SA182 - F304
1/4" thick x 0.612" OD
4. Flange 919D510P001 (719E474)
SA182 - F304
3.37" thick x 9 5/8" OD
5. Base 137C5311P001
SA182 - F304
7/8" thick x 2.675" dia.
6. Ring Flange 114B5122P002, P003
137C8151P001, P002
SA182 - F304
1" thick x 5.0" OD x 1.75" ID
7. Cap Screw 117C4516P002
SA183 - B5
6 ea. 1/2" dia. on 4 1/8" bolt circle
8. Plug 175A7951P001
SA182 - F304
0.38" thick x 1.357" dia.
9. Nut 137C5934P001
XX-19 SA479
1.30" thick x 2.62" dia.



106 5420 2025

FORM NO. 107 CERTIFICATE INCLUDING DATA REPORT FOR NUCLEAR PART AND APPURTENANCES
As required by the Provisions of the ASME Code Rules, Section III, Div. 1

1. (a) Manufacturer of General Electric Co., Canby Works Bldg., Milwaukee, Wisc.
 (b) Manufacturer of General Electric Co., San Jose, California (175)

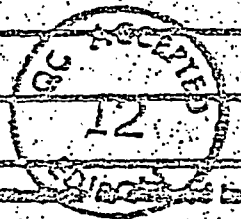
2. Manufacturer-Inspector Name: 1005 Dept. No. _____

(a) Government Agency to Which Made: 7852225 010 Drawing Prepared by: G. J. Johnson

(b) Name and Title of Firm Inspected: General Electric Company

(c) Applicable ASME Code Section: 107, Article: NAME, Division: 2

3. Number of Serials Made for use with Section: Indefinitely used as 1000 psi



The undersigned, Inspector, certifies that in this report and drawing and this record part or appendices thereon is the true and correct data as furnished to him by the manufacturer of the ASME Code Section III. The undersigned further certifies that the drawings and report are the responsibility of the party mentioned herein for whom this report is prepared. It is understood that the undersigned is responsible for handling a special design construction and these reports of the construction is not intended to be substituted for the construction and these reports.

1005 is the name of the Inspector. Date: June 16, 1958. Signature: [Signature]

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design of member as to General Electric Co., Canby Works Bldg., Milwaukee

Design of member as to General Electric Co., San Jose, Cal., Canby Works Bldg., Milwaukee

Design specifications certified by: Verdon H. Jones Pres. Dept. No. 65116 Div. No. 2450

Design analysis report certified by: Verdon H. Jones Pres. Dept. No. 65116 Div. No. 2450

CERTIFICATE OF INSPECTION

I, the undersigned, Inspector, certify that I have inspected the part of a pressure vessel described in this report and drawing and this record part or appendices thereon and that the same are in accordance with the ASME Code Section III. By signing this certificate, and by the foregoing my signature and name, or printed or typed name, for the part described in this report and drawing, I certify that the inspection was made in accordance with the ASME Code Section III. I am not responsible for any part of the design or for any property damage or a loss of any kind resulting from the use of the part described in this report and drawing.

Date: 10/3 1958

[Signature] Inspector

NO 723. IN VEHICLE CHGR.

FORM N-1 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND AFFURTENANCES
As required by the Provision of the ASME Code Rules, Section III, Div. 1

1. (a) Manufactured by General Electric Company, Castle Hayne Rd., Wilmington, N.C.
 (b) Manufactured for General Electric Company, San Jose, California (NEBC)

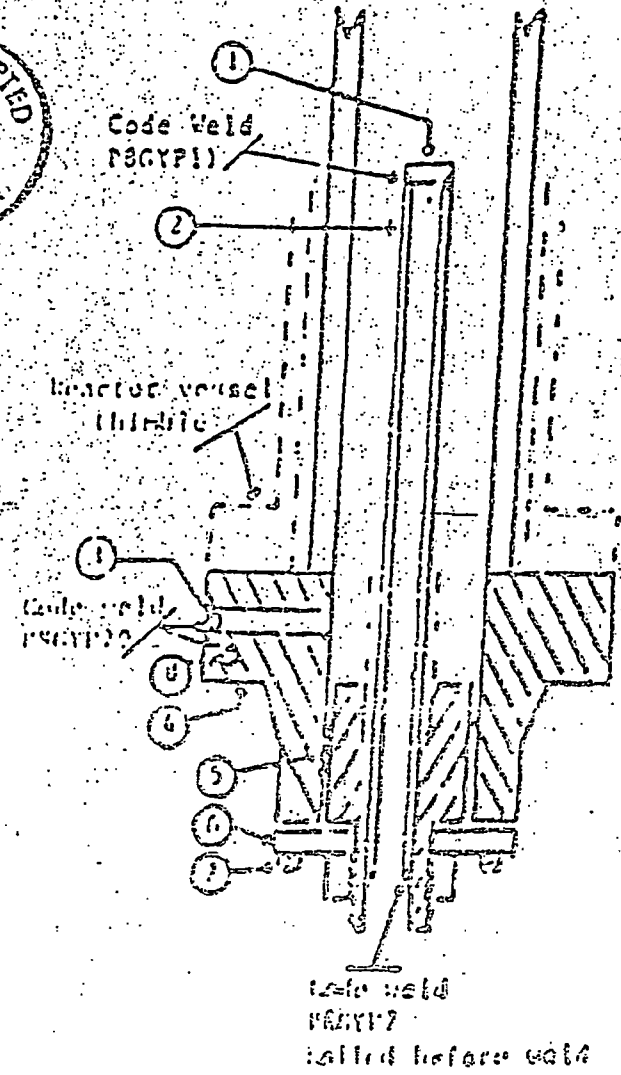
2. Manufacturer's Certificate No. of Part 1983 Part No. _____
 (a) Constructed according to Drawing No. 795D228G010 Drawing Prepared by J. L. Peterson
 (b) Description of Part Inspected Piston Tube Assembly
 (c) Applicable ASME Code Section III, Edition 1977, Article None, Case No. _____ Class 2

3. Remarks Standard part for use with Reactor. Hydrostatically tested at 1920 psi
(List description of service for which component was designed)

* Number of sheets - 2

U
S
D
O
I
7
9
1

1. Cap 157A2343P1
(157A2343)
SA182-F304
3/8 thick x 1 1/16 OD
2. Indicator Tube 104B1336P1
SA312-TP316
3/4 sch 40-unsless pipe
0.113 wall thickness
1.065 OD dia.
3. Plug 159A1126P1
SA182-F304
1/4 thick x 0.312 OD
4. Flange 9120610P1 (71)E-74
SA197-F304
3.37 thick x 9 5/8 OD
neck 1 1/8 thick x 9.0 OD
2.875 ID
5. Head 154B3330P1
SA182-F304
7/8 thick x 2.875 ID
6. Ring Flange 116B5122P2
SA182-F304
1" thick x 9.0 OD x 1.75 ID
7. Cap Screw 117C4516P2
SA193-B8
6 ea. 7/8 dia. on 4 1/8 bolt circle
8. Plug 159A1126P1
SA182-F304



INSPECTED PART REPORT FOR NUCLEAR PART AND APPURTENANCES

Controlled by the Atomic Energy Control Board, Section III, Div. I

General Electric Company, Castle Hayne Rd., Wilmington, N.C.

STUCK

Code and number of part conditions

Control and address of X Certificate Ref. for controlled condition

2984

D. L. Peterson

7501220010

Piston Tube Assembly

1971

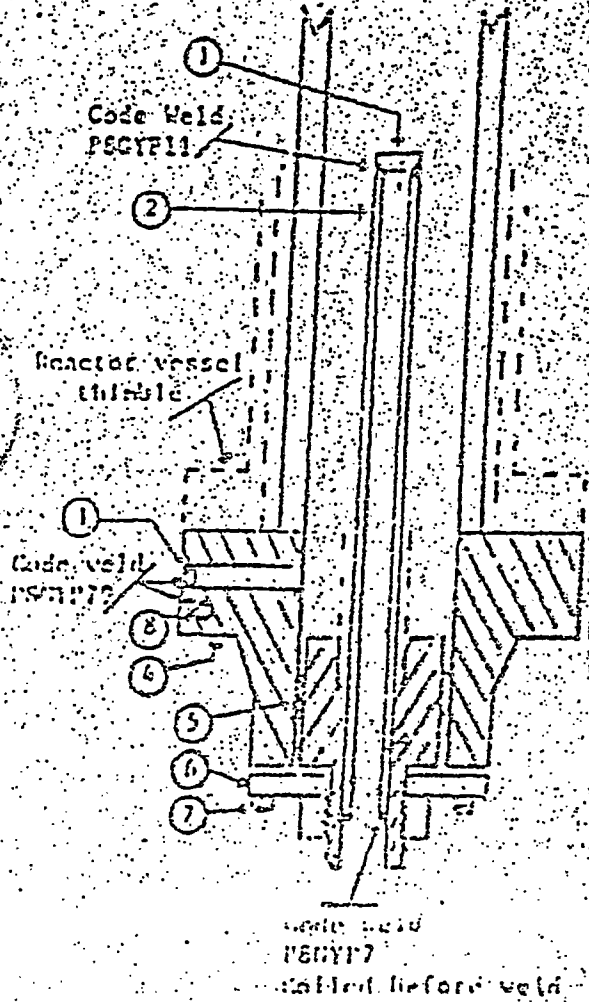
S'73

Class 1

Standard part for use with Reactor. Hydrostatically tested at 1825 psi.

Code description of service for which component was designed

- 1. Cap 167A2243F1
(167A2243)
SA182-F304
3/8 thick = 1 1/16 OD
- 2. Indicator Tube 104E1136P1
SA512-T7316
3/4 sch 40-steel pipe
0.113 wall thickness
1.065 max. dia.
- 3. Plug 159A1176P1
SA182-F304
1/4 thick = 0.512 OD
- 4. Flange 9190610F1 (7190674)
SA182-F304
3.37 thick = 9 5/8 OD
each 1 1/16 thick = 5.0 OD
2.875 ID
- 5. Head 159E1519F1
SA182-F304
7/8 thick = 2.875 Dia.
- 6. Ring Flange 11-85122F1
SA182-F304
3.0 thick = 5.0 OD = 1.75 ID



Ind. dia. ca 6 1/8 ball circle

SA512-T7316

CONSTRUCTION CERTIFICATE ENGINEER DATA REPORT FOR NUCLEAR PART AND APPURTENANCES*
As required by the Provisions of the ASME Code Rules, Section III, Div. 1

Designed by General Electric Co., Castle-Santa Rd., Wilmington, N.C.
Holder must have an NPT Certificate Holder

Designed for STOCK
Circle and address of NPT Certificate Holder for component systems construction

1. ~~ASME Section III Subsection B~~ Edition's Serial No. of Part: 2984 Part No.

(a) Constructed According to Drawing No. 79SD229G 010 Drawing Prepared by: D. J. Patterson

(b) Description of Part Intended: Flange Tube Assembly

(c) Applicable ASME Code Section III, Edition 1971, Addenda 1, 2, 3, Case No. Class 1

2. Remarks: Standard part for use with Reactor. Hydrostatically tested at 1825 psi.
(List description of service for which component was designed)



We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III.
(The applicable Design Specifications and Stress Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certificate Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is not included in the component Design Specification and Stress Report.)

Date 12/13 1983 Signed GE, NPT-RED By [Signature]
NPT Certificate Holder

Certificate of Authorization Expires June 15, 1984 Certificate of Authorization No. NPT-X-1151

CERTIFICATION OF DESIGN FOR APPURTENANCE (where applicable)

Design Information on file at GENERAL ELECTRIC CO., SAN JOSE, CALIF.

Stress analysis report on file at GENERAL ELECTRIC CO., SAN JOSE, CALIF.

Design specifications certified by Vernon W. Fence Prof. Eng. State Calif. Reg. No. 14483

Stress analysis report certified by Vernon W. Fence Prof. Eng. State Calif. Reg. No. 14483

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and in the State or Province of North Carolina and employed by Department of Labor of State of North Carolina have inspected the part of a pressure vessel described in this Partial Data Report on 12/13 at 83 and state that to the best of my knowledge and belief the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage to a loss of any kind arising from or connected with the use of this certificate.

Date 12/13 83
[Signature] Inspector
NO 779, PA, W02150, OHIO Commission
National Board, State, Province and No.

*This report shall be issued only if the holder of the certificate is a duly qualified engineer as defined in the ASME Code, Section III, Div. 1, and is not a member of the National Board of Boiler and Pressure Vessel Inspectors.

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner <u>Detroit Edison Company</u> Name	Date <u>May 14, 2004</u>
<u>6400 North Dixie Highway, Newport MI 48166</u> Address	Sheet <u>1 of 2</u>
2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name	Unit <u>2</u>
<u>6400 North Dixie Highway, Newport MI 48166</u> Address	<u>Deco Maintenance</u> Repair Organization P.O. No., Job No., etc.
3. Work Performed by <u>Detroit Edison Company</u> Name	Type Code Symbol Stamp <u>N/A</u>
<u>6400 North Dixie Highway, Newport, MI 48166</u> Address	Authorization No. <u>N/A</u>
	Expiration Date <u>N/A</u>

4. Identification of System (T & B N5-06, Emergency Diesel Generator 12 Fuel Oil System)

5. (a) Applicable Construction Code ASME III, Winter Class 3 19 71 Edition 1971 Addenda, N/A Code Case

(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
R3000F083C	Rockwell Edwards	MA-157	N/A	V14-2037	1974	Replaced	Y
R3000F083C	FlowServe Corp.	65AXL	N/A	V30-1492	2003	Replacement	Y

7. Description of Work Install replacement valve and 1-1/2" pipe in system.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks The replacement valve was procured per PO# 385682 (Report Attached). The replacement 1-1/2" pipe was procured per PO #385819. Schedule 80, SA-106, Grade B, Ht Code 2M33358.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code Data reports to be supplemented by Owners Section XI Program #03-027

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton, Lead ISI Engineer Date May 14 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 2-23-04 to 5-24-04, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions MI 010
Inspector's Signature National Board, State, Province, and Endorsements

Date May 24 2004

(10/94)

For complete work package, see Work Requests 003Z032283

FORM NPV-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*

As Required by the Provisions of the ASME Code, Section III, Div. 1

03-027 20FZ
Pg. 1 of 1

1. Manufactured by FLOWERVE CORPORATION. 1900 S. Saunders St., Raleigh, NC 27603
(Name and Address of N Certificate Holder)

2. Manufactured for DTE ENERGY, DETROIT MICHIGAN, 48226
(Name and Address of Purchaser or Owner)

3. Location of Installation DETROIT EDISON, FERMI, NEWPORT MI, 48166
(Name and Address)

4. Pump or Valve Valve Nominal Inlet Size 1.5" Outlet Size 1.5"
(inch) (inch)

	(a) Model No. Series No. or Type	(b) N Certificate Holder's Serial No.	(c) Canadian Registration No.	(d) Drawing No.	(e) Class	(f) Nat'l Bd. No.	(g) Year Built
(1)	A838YT3	62AXL J	N/A	03-24990-01 / 0	3	N/A	2003
(2)		63AXL J					
(3)		64AXL J					
(4)		65AXL J					
(5)		66AXL J					
(6)	A838YT3	67AXL J	N/A	03-24990-01 / 0	3	N/A	2003
(7)							
(8)							
(9)							
(10)							

5. 1.5" CHECK VALVE

(Brief description of service for which equipment was designed)

BODY & COVER MATERIAL MEET ASME III, 1977ED., S'77 ADD.

24990

6. Design Conditions 940 psi 700 °F or Valve Pressure Class 600 (1)
(Pressure) (Temperature)

7. Cold Working Pressure 1440 psi at 100 °F.

8. Pressure Retaining Pieces

Mark No.	Material Spec. No.	Manufacturer	Remarks
(a) Castings			
(b) Forgings			
J 9QAA	SA105	TRINITY FORGE	BODY
J 9OAB	SA105	TRINITY FORGE	BODY
J UPY	SA105	TRINITY FORGE	COVER
J 16872-2-2470	A565 GR616	DUBOSE	DISK
J 16872-3-2374	A565 GR616	DUBOSE	DISK

(1) For manually operated valves only

*Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

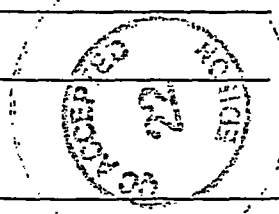
3

Valve S/N 62AXL through 67AXL

Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting			
Q314 ✓	SA193 GR B7	MACKSON	FLGD HEX HD SCREW
(d) Other Parts			

9. Hydrostatic test 2175 psi. Disk Differential test pressure 1440 psi.

CERTIFICATE OF COMPLIANCE			
We certify that the statements made in this report are correct and that this pump, or valve,		to the rules of construction	
conforms		1971	
of the ASME Code for Nuclear Power Plant Components. Section III, Div. 1.,		Edition	
Addenda	<u>SUMMER'73</u>	Code Case No.	<u>N62.4</u>
Signed	<u>Flowserve Corporation.</u>	by	<u>[Signature]</u>
	(N Certificate Holder)		
Our ASME Certificate of Authorization No.	<u>N-1562</u>	to use the	<u>N</u> symbol expires
		(N)	<u>11-26-03</u>
			(Date)
CERTIFICATION OF DESIGN			
Design information on file at	<u>FLOWSERVE CORP</u>		
Stress analysis report (Class 1 only) on file at			
Design specifications certified by (1)	<u>LAWRENCE D BURR</u>		
PE State	<u>MI</u>	Reg. No.	<u>33999</u>
Stress analysis certified by (1)			
PE State		Reg. No.	
(1) Signature not required. List name only.			
CERTIFICATE OF SHOP INSPECTION			
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of			
<u>North Carolina</u> and employed by <u>HSB CT</u> of <u>Hartford Connecticut</u>			
have inspected the pump, or valve, described in this Data Report on <u>10/8/03</u> , and state that, to the best of my knowledge and belief, the N Certificate Holder has constructed this pump, or valve, in accordance with ASME Code, Section III.			
By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this s Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this Inspection.			
Date	<u>10/8/03</u>		
Signed	<u>[Signature]</u>	Commissions	<u>NC 1421</u>
	(Inspector)		(Nat'l Bd., State, Prov. and No.)



FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date 6-29-2004
 Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 1
 Address
2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166
 Address
3. Work Performed by Detroit Edison Company Deco Maintenance
 Name Repair Organization P.O. No., Job No., etc.
6400 North Dixie Highway, Newport, MI 48166 Address
 Type Code Symbol N/A
 Stamp
 Authorization No. N/A
 Expiration Date N/A
4. Identification of System N5-013 (T&B) Emergency Diesel Generator # 11
5. (a) Applicable Construction Code ASME III, Class 3 19 71 Edition 71 Addenda N/A Code Case
 (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
R3000B025	American Strnd.	5-20002-02-4	26207	N/A	1974	Replacement	Y

7. Description of Work Install replacement cover studs and selected nuts as not all originally supplied studs provided for full thread engagement.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks: 18 replacement studs (5/8"x5") were cut from all thread procured per PO# 955769, SA193 Grade B7, Heat Code # C232. 18 replacement studs (5/8"x5") were cut from all thread procured per PO# 892856, SA193 Grade B7, Heat Code # H480. 12 replacement nuts were installed that were procured per PO# 897889, SA-194 Grade 2H, Heat Codes M489.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report N5-013 to be supplemented by Owners Section XI Program 03-031

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer Date JUNE 29 20 04
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 05-28-03 to 07-08-04, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions NE610
Inspector's Signature National Board, State, Province, and Endorsements

Date July 8 20 04

(10/94)

For complete work package, see Work Request 003Z030995

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Date <u>August 14,, 2003</u> Sheet <u>1 of 1</u>
2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Unit <u>2</u>
3. Work Performed by <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport, MI 48166</u> Address	Deco Maintenance Repair Organization P.O. No., Job No., etc. Type Code Symbol Stamp <u>N/A</u> Authorization No. <u>N/A</u> Expiration Date <u>N/A</u>
4. Identification of System <u>N5-015 (T&B) Emergency Diesel Generator #13</u>	

5. (a) Applicable Construction Code ASME III, Class 3 19 71 Edition 71 Addenda N/A Code Case

(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
R3000B026	American Std.	5-20002-02-2	26205	N/A	1974	Replacement	Y

7. Description of Work Install replacement cover studs and nuts as not all original studs provided for full thread engagement.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp. _____

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks: Replacement studs (5/8" x 5") were cut from all thread procured per PO# 955769, SA 193 Grade B7, Heat # C232. 30 replacement nuts were procured per PO# 863302, SA194 Grade 2H, Heat #SAG and 34 replacement nuts procured per PO# 892857, SA194 Grade 2H, Heat # J269


Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report N5-D15 to be supplemented by Owners Section XI Program 03-032

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer  Date August 14 20 03
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 5-28-03 to 8-14-03, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions NI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date Aug. 14 20 03

(10/94)

For complete work package, see Work Request 000Z030832

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner <u>Detroit Edison Company</u>	Date <u>August 14, 2003</u>
Name	
<u>6400 North Dixie Highway, Newport MI 48166</u>	Sheet <u>1 of 2 pages</u>
Address	
2. Plant <u>Fermi 2 Nuclear Power Plant</u>	Unit <u>2</u>
Name	
<u>6400 North Dixie Highway, Newport MI 48166</u>	
Address	
3. Work Performed by <u>Detroit Edison Company</u>	<u>Deco Maintenance</u>
Name	Repair Organization P.O. No., Job No., etc.
<u>6400 North Dixie Highway, Newport, MI 48166</u>	Type Code Symbol <u>N/A</u>
Address	Stamp _____
	Authorization No. <u>N/A</u>
	Expiration Date <u>N/A</u>
4. Identification of System <u>N5-012 (T&B) Emergency Diesel Generator # 12</u>	
5. (a) Applicable Construction Code <u>ASME III, Class 3</u> 19 <u>71</u> Edition <u>71</u> Addenda <u>N/A</u> Code Case	
(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements <u>1992-92 Addenda</u>	

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
R3000B027	American Std.	5-20002-02-1	25204	N/A	1974	Replacement	Y

7. Description of Work Install replacement cover studs and nuts as not all originally supplied studs provided for full thread engagement.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp. _____

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks: Replacement studs (5/8"x5") were cut from all thread procured per PO# 955769, SA193 Grade B7, Heat Code # C232. 64 replacement nuts were installed that were procured per PO# 955785 and #965260, SA-194 Grade 2H, Heat Codes C240 and F554.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report N5-012 to be supplemented by Owners Section XI Program 03-033

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer R.M. Hambleton Date August 14, 2003
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 5-28-03 to 8-15-03, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Mariusz Commissions NI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date August 15, 2003

(10/94)

For complete work package, see Work Request 00Z030833

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date August 14, 2003
Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 218
Address

2. Plant Fermi 2 Nuclear Power Plant Unit 2
Name
6400 North Dixie Highway, Newport MI 48166
Address

3. Work Performed by Detroit Edison Company Type Code Symbol N/A
Name
6400 North Dixie Highway, Newport, MI 48166 Authorization No. N/A
Address Expiration Date N/A

Deco Maintenance
Repair Organization P.O. No., Job No., etc.

4. Identification of System N5-014 (T&B) Emergency Diesel Generator #14

5. (a) Applicable Construction Code ASME III, Class 3 19 71 Edition 71 Addenda N/A Code Case

(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
R3000B028	American Std.	5-20002-02-3	26206	N/A	1974	Replacement	Y

7. Description of Work Install replacement cover studs and nuts as originally supplied bolting material did not provide for full thread engagement.

8. Tests Conducted: Hydrostaticic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp. _____

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks: Replacement studs (5/8"x5") were cut from all thread procured per PO# 955769, SA193 Grade B7, Heat Code C232. 64 replacement nuts (5/8"-11 UNC-2B) were procured per PO# 892857, SA194 Grade 2H, Heat Code J269.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report N5-014 to be supplemented by Owners Section XI Program 03-034

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer  Date SEPTEMBER 16 2003
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 5-28-03 to 9-16-03, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions NB610
Inspector's Signature National Board, State, Province, and Endorsements

Date Sept. 16 2003

(10/94)

For complete work package, see Work Request 000Z030837

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

<p>1. Owner <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address</p> <p>2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address</p> <p>3. Work Performed by <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport, MI 48166</u> Address</p> <p>4. Identification of System <u>N5-0214 Feedwater Loop B, RWCU Return to Vessel</u></p> <p>5. (a) Applicable Construction Code <u>ASME III, Class 1</u> 19 <u>71</u> Edition <u>Winter 1971</u> Addenda, <u>N/A</u> Code Case</p> <p>(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements <u>1992-92 Addenda</u></p>	<p>Date <u>September 17, 2003</u></p> <p>Sheet <u>1 of 1</u></p> <p>Unit <u>2</u></p> <p><u>Deco Maintenance</u> Repair Organization P.O. No., Job No., etc.</p> <p>Type Code Symbol Stamp <u>N/A</u></p> <p>Authorization No. <u>N/A</u></p> <p>Expiration Date <u>N/A</u></p>
--	---

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
G3300F120	Anchor Darling	E 3062-2-1	N/A	V8-4615	1983	Repair	Y

7. Description of Work Seal weld body to bonnet per RID 72424 to stop leakage. Seal welds were completed between valve body and segment rings and between segment rings and valve bonnet.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure 1090 psi Test Temp. 92 °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks The pressure seal gasket was degraded and to avoid additional seal work and potential leakage a decision was made to seal weld this connection. Weld installed per WPCS 000Z0033202-1 & -1 -R1. Liquid Penetrant examination performed on final weld. Pressure test performed prior to return to service per procedures 43.000.005/43.000.007.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Repair conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code Data report N5-0214 to be supplemented by Owners Section XI Program #03-035


Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton, Lead ISI Engineer  Date SEPTEMBER 17, 2003
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 8-28-03 to 09-26-03, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions MI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date Sept. 26 2003

(10/94)

For complete work package, see Work Requests 000Z033202

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date October 30, 2003
 Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 2
 Address

2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166 Address
Deco Maintenance
 Repair Organization P.O. No., Job No., etc.

3. Work Performed by Detroit Edison Company Type Code Symbol
 Name Stamp N/A
 Authorization No. N/A
6400 North Dixie Highway, Newport, MI 48166 Address Expiration Date N/A

4. Identification of System T & B N5-4 Emergency Equipment Service Water (Div. 1)

5. (a) Applicable Construction Code ASME III, Class 3 19 71 Edition Winter 1971 Addenda, N/A Code Case
 (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
P4500F002A	Wm. Powell	64305-7	N/A	V15-2092	1975	Replacement	Y

7. Description of Work Install replacement Stainless Steel Alloy Disc in valve as approved by PDC 13010 to minimize corrosion.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks The replacement Disc was procured per P.O. #571510. ASME SA217 CA 15. Serial Number CM 9060B.

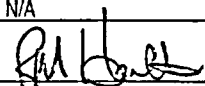
Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code Data report T&B N5-4 to be supplemented by Owners Section XI Program #03-036

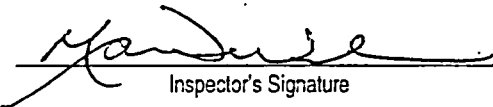
Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton, Lead ISI Engineer  Date OCTOBER 30 2003
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 8-28-03 to 11-04-03, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions MT610
Inspector's Signature National Board, State, Province, and Endorsements

Date Nov. 4 2003

(10/94)

For complete work package, see Work Requests P522060100

NIS-2 03-036
 SHEET 2 OF 2 ①

FORM N-2 CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
 NUCLEAR PARTS AND APPURTENANCES*
 As Required by the Provisions of the ASME Code, Section III
 Not to Exceed One Day's Production

1. Manufactured and certified by The Wm. Powell Company, 3233 Colerain Avenue, Cincinnati, OH 45225
(name and address of NPT Certificate Holder)
2. Manufactured for Detroit Edison, P.O. Box 1659, Detroit, MI 48231
(name and address of purchaser)
3. Location of installation EF 2 Site, 6400 Dixie Highway, Newport, MI 48166
(name and address)
4. Type 26-089865-15002-00 ASME SA217 CA15 114.6 N/A 2003
(drawing no.) (mat'l spec. no.) (tensile strength) (CRN) (year built)
5. ASME Code, Section III, Division 1: 1971 Winter 1971 3 N/A
(edition) (addenda date) (class) (Code Case no.)
6. Fabricated in accordance with Const. Spec. (Div. 2 only) _____ Revision _____ Date _____
(no.)
7. Remarks: Valve Tag V15-2067
8. Nom. thickness (in.) _____ Min. design thickness (in.) _____ Dia. ID (ft & in.) _____ Length overall (ft & in.) _____
9. When applicable, Certificate Holders' Data Reports are attached for each item of this report:

Part or Appurtenance Serial Number	National Board No. In Numerical Order
(1) <u>CM 9060B</u> ✓	<u>N/A</u>
(2)	
(3)	
(4)	
(5)	
(6)	
(7)	
(8)	
(9)	
(10)	
(11)	
(12)	
(13)	
(14)	
(15)	
(16)	
(17)	
(18)	
(19)	
(20)	
(21)	
(22)	
(23)	
(24)	
(25)	

Part or Appurtenance Serial Number	National Board No. In Numerical Order
(26)	
(27)	
(28)	
(29)	
(30)	
(31)	
(32)	
(33)	
(34)	
(35)	
(36)	
(37)	
(38)	
(39)	
(40)	
(41)	
(42)	
(43)	
(44)	
(45)	
(46)	
(47)	
(48)	
(49)	
(50)	

10. Design pressure _____ psi. Temp. _____ °F. Hydro. test pressure _____ at temp. °F
(when applicable)

* Supplemental information in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 x 11, (2) information in items 2 and 3 on this Data Report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

②

Certificate Holder's Serial Nos. _____ through _____

CERTIFICATION OF DESIGN

Design specifications certified by _____ (when applicable) P.E. State _____ Reg. no. _____
 Design report* certified by _____ (when applicable) P.E. State _____ Reg. no. _____

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this (these) Disc conforms to the rules of construction of the ASME Code, Section III, Division 1.

NPT Certificate of Authorization No. N1579 Expires 12/13/03

Date 5/20/03 Name The Wm. Powell Co., Plant 2 Signed Sered Stone
(NPT Certificate Holder) (authorized representative)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Ohio and employed by H.S.B. CT of Hartford, CT have inspected these items described in this Data Report on May 23, 2003, and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III, Division 1. Each part listed has been authorized for stamping on the date shown above.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.

Date 5-23-03 Signed [Signature] Commissions NB10941N; OH
(Authorized Nuclear Inspector) [Nat'l. Bd. (incl. endorsements) and state or prov. and no.]

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date February 18, 2005
 Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 1
 Address

2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166
 Address

3. Work Performed by Detroit Edison Company Deco Maintenance
 Name
6400 North Dixie Highway, Newport, MI 48166 Repair Organization P.O. No., Job No., etc.
 Address
 Type Code Symbol N/A
 Stamp
 Authorization No. N/A
 Expiration Date N/A

4. Identification of System (N5-4 T & B) Emergency Equipment Service Water

5. (a) Applicable Construction Code ASME III, Class 3 19 71 Edition 71 Addenda N/A Code Case
 (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
P45F401	Target Rock	2	N/A	V30-1034	2000	Replaced	Y
P45F401	Target Rock	1	N/A	V30-1033	2000	Replacement	Y

7. Description of Work Replace existing back-pressure control valve P45F401 with a refurbished and tested spare valve that was previously installed. Replacement valve was refurbished and tested per PO# 332113

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks Refurbishment and testing performed by NWS per PO# 332113. Tack welding of cover performed by Deco Maintenance.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report (T & B N5-4) to be supplemented by Owners Section XI Program 03-038

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer Date February 18 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 02-08-03 to 02-22-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions MEG10
Inspector's Signature National Board, State, Province, and Endorsements

Date February 22 2005

(10/94)

For complete work package, see Work Request A473010100

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date 08/25/04
 Name
6400 North Dixie Highway, Newport MI 48166 Address
 Sheet 1 of 2
2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166 Address
 Repair: Target Rock Corp, P.O. NS-325856
 Testing: NWS Technologies, P.O. NS-394576
 Repair Organization P.O. No., Job No., etc.
3. Work Performed by Detroit Edison Company Type Code Symbol N/A
 Name
6400 North Dixie Highway, Newport, MI 48166 Address
 Stamp
 Authorization No. N/A
 Expiration Date N/A
4. Identification of System B21 Nuclear Boiler, Main Steam Safety Relief Valve Pilot Assemblies, and Main Bodies.
5. (a) Applicable Construction Code ASME III
Class 1 19 71 Edition S'1970 Addenda, NA Code Case
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992, 92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
SRV Pilot Assemblies	Target Rock	Various, See attached list	N/A	B2104F013A-R	N/A	Replacement	Yes
SRV Main Body Assemblies	Target Rock	Various, See attached list	N/A	B2104F013A-R	N/A	Replacement	Yes

7. Description of Work Rebuild & Test 15 SRV Pilot Assemblies, and 4 SRV Main Bodies as required.
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure []
 Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks Applicable Manufacturer's Data Reports to be attached where required.

All 15 SRV Pilot Assemblies, and 4 main Bodies were rebuilt and tested as necessary under Target Rock P.O. NS-394576, and NWS P.O. NS-332113. All Parts used are recorded in Work Request B273030100, as well as the Target Rock final document package from refurbishment activities. See attachment (1) list of SRV Main Body Serial Numbers that Pressure Retaining Parts were used on. No welding repairs were performed.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement

Type Code Symbol Stamp Original Code Data Report to be supplemented by Section XI Program 04-001 and TR field Service report 02Z-010

Certificate of Authorization No. N/A Expiration Date N/A

Signed [Signature] LEAD ISV ONLY Date AUGUST 31, 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by H. S. B. /CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 02-09-2004 to 08-31-2004, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions ME610
Inspector's Signature National Board, State, Province, and Endorsements

Date August 31, 2004

Pressure Retaining Parts Installed in SRV Main Bodies

Main Valve Body S/N#	Pilot Base to body Nut 1-1/8-12 unf. Stock#252- 0565	P.O. # , Lot#, or HT#
337	12ea.	P.O.# 362415, HT#D230
392	8ea.	P.O.# 362415, HT#D230
392	4ea.	P.O.# 389242, HT#K519
373	12ea.	P.O.# 389242, HT#K519
340	12ea.	P.O.# 389242, HT#K519

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Date <u>12/10/2004</u> Sheet <u>1</u> of <u>2</u>
2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Unit <u>2</u> <u>DECo Maintenance</u> Repair Organization P.O. No., Job No., etc.
3. Work Performed by <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport, MI 48166</u> Address	Type Code Symbol <u>N/A</u> Stamp Authorization No. <u>N/A</u> Expiration Date <u>N/A</u>
4. Identification of System <u>B21Nuclear Boiler, Main Steam Safety Relief Valve Pilot Assemblies, and Base Assemblies</u>	
5. (a) Applicable Construction Code <u>ASME III</u> Class <u>1</u> <u>19</u> <u>71</u> Edition <u>W71</u> Addenda, <u>NA</u> Code Case (b) Applicable Edition of Section XI Utilized for Repairs or Replacements <u>1992, 92 Addenda</u>	

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
SRV Pilot Assemblies	Target Rock	Various (See attached list)	N/A	B2104F013A-R Various	N/A	Replacement	Yes
SRV Main Body Assemblies	Target Rock	Various (See attached list)	N/A	B2104F013A-R Various	N/A	Replacement	Yes

7. Description of Work During RF10, Replaced all 15 SRV Pilot Assemblies. Replaced Main Bodies on B2104F013B, E, A, & R.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F

VT-2 Per 43.000.005 and 24.137.21, Operability Test per 24.137.11

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

9. Remarks

Applicable Manufacturer's Data Reports to be attached

All 15 SRV Pilots, and 4 Main Bodies were replaced using Work Requests B350040100 thru B364040100. See attached listing for SRV exchange matrix. Bolting material was changed out on SRV B2103F013E (4) Nuts -1"-8 UNC-2B, SA 194, Grade 2H, ASME III Class 1, PO. #974214, Heat Code P120 & (1) Stud 1"-8 UNC-2A, SA 193, Grade B7, ASME Class1, PO. #891599, Trace Code J137. Bolting for SRV B2103F013R (1) Nut 1-3/8" x 6UNC-2B, SA-194 Grade B7, PO#806420, (2) 1-3/8" nuts, SA-194, Grade B7, PO# 806420. (2) Studs 1"-8 UNC-2A, SA 193, Grade B7, ASME Class1, PO. #891599, Trace Code J137. (4) Nuts -1"-8 UNC-2B, SA 194, Grade 2H, ASME III Class 1, PO. #974214, Heat Code P120. SRV Pilots were refurbished per Section XI Program 04-001 and Work Request B273030100.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement

Type Code Symbol Stamp Original Code Data Reports to be supplemented by Section XI Program 04-002

Certificate of Authorization No. N/A Expiration Date N/A

Signed R. M. Hambleton; ISI Engineer Date December 10, 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period Feb. 9, 2004 to Dec. 13, 2004, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Inspector's Signature Commissions MI 610
National Board, State, Province, and Endorsements

Date Dec. 13 2004

2004 Refueling Outage SRV Replacement Matrix RF10

<ul style="list-style-type: none"> The "Positions" listed with (*) have had the Main Disc Spring Inspection already performed. The "Main Body" SN#s listed with (+) have had the Main Disc/Piston Modification Performed. <p>Note that the "A" Position SRV is being replaced due to high amount of actuations.</p>					<p><u>REMOVE</u></p> <p>SRV Pilots & Main Bodies listed below are to be <u>Removed</u> during RF10. (Shaded Areas)</p> <p>(Note that these SRVs were installed during RF09)</p>		<p><u>INSTALL</u></p> <p>SRV Pilots & Main Bodies To be <u>Installed</u> During RF10 Refuel Outage. (Shaded Areas)</p> <p>Note that 4 Main Bodies listed below that are shaded, will be complete Valves with Pilots already installed.</p>			
Steam Line	Low Set Funct.	N-5 Code Data report	Required Set Point Psig-	PIS Number <u>B2104F013-</u> Position	Valve/Body S/N	Pilot S/N	Solenoid S/N	Valve/Body S/N	Pilot S/N	Solenoid S/N
D	(LSS)	N5-0265	1135	*A	389	342	310	337+	331	310
C		N5-0301	1135	B	331	197	311	392+	340	311
B		N5-0291	1135	*C	391	184	317	391	391	317
B		N5-0278	1145	*D	328	327	318	328	371	318
C		N5-0309	1155	E	339	336	312	373+	334	312
B		N5-0290	1145	*F	327	339	319	327	338	319
B	(LSS)	N5-0321	1135	*G	338	200	326	338+	341	326
C		N5-0266	1155	*H	336	199	313	336+	333	313
C		N5-0308	1155	*J	332	328	314	332	182	314
B		N5-0311	1135	*K	330	332	321	330	373	321
A		N5-0313	1145	*L	319	319	320	319+	388	320
A		N5-0268	1145	*M	342	198	325	342	178	325
A		N5-0310	1145	*N	341	330	324	341	337	324
D		N5-0322	1155	*P	318	318	315	318+	390	315
C		N5-0288	1155	R	371	180	316	340+	335	316

NISC 04-002 2004

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date March 5, 2004
 Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 2
 Address

2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166 Address
Deco Maintenance
 Repair Organization P.O. No., Job No., etc.

3. Work Performed by Detroit Edison Company Type Code Symbol
 Name Stamp N/A
 Authorization No. N/A
6400 North Dixie Highway, Newport, MI 48166 Expiration Date N/A
 Address

4. Identification of System N5-204, N5-205, N5-384, and N5-0211 Reactor Core Isolation Cooling System (RCIC)

5. (a) Applicable Construction Code ASME III, Class 2 19 71 Edition Winter 1971 Addenda, N/A Code Case
 (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
E51F015	Fisher Controls	5595340	634	V8-2240	1974	Replaced	Y
E51F015	Target Rock	03M-001 s/n 1	N/A	V30-1501	2003	Replacement	Y

7. Description of Work Remove existing Air Operated Pressure Control Valve with self contained Pressure Control Valve per EDP-32161.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure (Ref Code Case N-416-1)
 Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks The replacement Valve was procured per PO # 385716 (Data report Attached) Replacemnet fittings installed - 2" pipe, sch 160, SA106 Gr.B, Ht # 151234, PO# 368778, 2" elbow, SA 105, Ht# R118N, PO # 303722, 2" coupling, SA 105, Ht# 9132, PO# 394582.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code Data reports to be supplemented by Owners Section XI Program #04-003

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton, Lead ISI Engineer Date March 5, 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 2-13-04 to 3-12-04, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Inspector's Signature Commissions NB9486 ABZNHS MI612
National Board, State, Province, and Endorsements

Date March 12, 2004

(10/94)

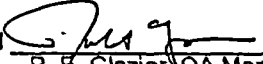
For complete work package, see Work Requests 000Z022442


FORM NPV-1 (BACK - Pg. 2 of 2)

Certificate Holder's Serial No. 03M-001 s/n 1

8. Design conditions 1280 psi 170 °F or valve pressure class N/A (1)
 (pressure) (temperature)
9. Cold working pressure 1800 psi at 100 °F
10. Hydrostatic test 2700 psi. Disc differential test pressure N/A psi
11. Remarks: Spring Housing Flange SA479 316 s/n 13
Sleeve SA479 316 s/n 12

CERTIFICATION OF DESIGN			
Design Specification certified by	<u>Lawrence D. Burr</u>	P.E. State	<u>MI</u> Reg. No. <u>33999</u>
Design Report certified by	<u>Not Applicable</u>	P.E. State	<u>-</u> Reg. No. <u>-</u>

CERTIFICATE OF COMPLIANCE			
We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.			
N Certificate of Authorization No.	<u>N-1947</u>	Expires	<u>12/12/2004</u>
Date	<u>12/23/2003</u>	Name	<u>Target Rock</u> (N Certificate Holder)
		Signed	 <u>R. E. Glazier, QA Manager</u> (authorized representative)

CERTIFICATE OF INSPECTION			
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of <u>New York</u> and employed by <u>OneBeacon Americal Insurance Co.</u> of <u>Boston, MA</u> have inspected the pump, or valve, described in this Data Report on <u>12/23/2003</u> and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.			
By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.			
Date	<u>12/23/2003</u>	Signed	 (Authorized Inspector)
		Commissions	<u>N.Y. 5102</u> (Nat'l. Bd. (incl. endorsements) and state or prov. and no.)

(1) For manually operated valves only.

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner <u>Detroit Edison Company</u> Name	Date <u>April 19, 2004</u>
<u>6400 North Dixie Highway, Newport MI 48166</u> Address	Sheet <u>1 of 2</u>
2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name	Unit <u>2</u>
<u>6400 North Dixie Highway, Newport MI 48166</u> Address	<u>Deco Maintenance</u> Repair Organization P.O. No., Job No., etc.
3. Work Performed by <u>Detroit Edison Company</u> Name	Type Code Symbol Stamp <u>N/A</u>
<u>6400 North Dixie Highway, Newport, MI 48166</u> Address	Authorization No. <u>N/A</u>
	Expiration Date <u>N/A</u>
4. Identification of System <u>N5-0336, N5-0359, N5-0475, and N5-0645 - High Pressure Coolant Injection System (HPCI)</u>	
5. (a) Applicable Construction Code <u>ASME III, Class 2</u> 19 <u>71</u> Edition <u>Winter 1971</u> Addenda, <u>N/A</u> Code Case	
(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements <u>1992-92 Addenda</u>	

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
E41F035	Fisher Controls	5596096	N/A	V8-2209	1974	Replaced	Y
E41F035	Target Rock	03M-002 s/n 2	N/A	V30-1500	2004	Replacement	Y

7. Description of Work Remove existing Air Operated Pressure Control Valve with self contained Pressure Control Valve per EDP-32036.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure (Ref Code Case N-416-1)
Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks The replacement Valve was procured per PO # 385717 (Data report Attached)


Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code Data reports to be supplemented by Owners Section XI Program #04-005

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton, Lead ISI Engineer  Date April 19, 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 2-27-04 to 04-22-04, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions MI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date April 22 2004

(10/94)

For complete work package, see Work Requests 000Z032413

FORM NPV-1 CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section III, Division 1

1. Manufactured and certified by Target Rock; 1966E Broadhollow Road; E. Farmingdale, NY 11735
(name and address of N Certificate Holder)
2. Manufactured for Detroit Edison; 6400 North Dixie Hwy.; Newport, MI
(name and address of Purchaser)
3. Location of installation Enrico Fermi 2; 6400 North Dixie Hwy.; Newport, MI
(name and address)
4. Model No., Series No., or Type 03M-002 Drawing 03M-002 Rev. C CRN N/A
5. ASME Code, Section III, Division 1: 1995 1996 2 None
(edition) (addenda date) (class) (Code Case no.)
6. Pump or valve Valve Nominal Inlet size 1 1/2 Outlet size 1 1/2
(in.) (in.)
7. Material: Body SA182 F316L Bonnet n/a Disc n/a Bolting SA193 B8

(a) Cert. Holder's Serial No.	(b) Nat'l Board No.	(c) Body Serial No.	(d) Bonnet Serial No.	(e) Disc Serial No.
<u>2</u>	<u>n/a</u>	<u>44</u>	<u>n/a</u>	<u>n/a</u>
<u>n/a</u>				

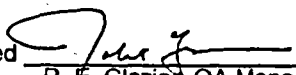
* Supplemental information in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 x 11, (2) information in items 1 through 4 on this Data Report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.


FORM NPV-1 (BACK - Pg. 2 of 2)

Certificate Holder's Serial No. 03M-002 s/n 2

8. Design conditions 460 psi 170 °F or valve pressure class N/A (1)
 (pressure) (temperature)
9. Cold working pressure 1800 psi at 100 °F
10. Hydrostatic test 2700 psi. Disc differential test pressure N/A psi
11. Remarks: Spring Housing Flange SA479 316 s/n 1
Sleeve SA479 316 s/n 4

CERTIFICATION OF DESIGN			
Design Specification certified by	<u>Lawrence D. Burr</u>	P.E. State	<u>MI</u> Reg. No. <u>33999</u>
Design Report certified by	<u>Not Applicable</u>	P.E. State	<u>-</u> Reg. No. <u>-</u>

CERTIFICATE OF COMPLIANCE			
We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.			
N Certificate of Authorization No.	<u>N-1947</u>	Expires	<u>12/12/2004</u>
Date	<u>1/15/2004</u>	Name	<u>Target Rock</u> (N Certificate Holder)
		Signed	 <u>R. E. Glazier QA Manager</u> (authorized representative)

CERTIFICATE OF INSPECTION			
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of <u>New York</u> and employed by <u>OneBeacon American Insurance Co.</u> of <u>Boston, MA</u> have inspected the pump, or valve, described in this Data Report on <u>01/15/2004</u> and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.			
By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.			
Date	<u>01/15/04</u>	Signed	 (Authorized Inspector)
		Commissions	<u>NY 5102</u> (Nat'l. Bd. (incl. endorsements) and state or prov. and no.)

(1) For manually operated valves only.

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner <u>Detroit Edison Company</u> Name	Date <u>March 5, 2004</u>
<u>6400 North Dixie Highway, Newport MI 48166</u> Address	Sheet <u>1 of 1</u>
2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name	Unit <u>2</u>
<u>6400 North Dixie Highway, Newport MI 48166</u> Address	<u>Deco Maintenance</u> Repair Organization P.O. No., Job No., etc.
3. Work Performed by <u>Detroit Edison Company</u> Name	Type Code Symbol Stamp <u>N/A</u>
<u>6400 North Dixie Highway, Newport, MI 48166</u> Address	Authorization No. <u>N/A</u>
	Expiration Date <u>N/A</u>
4. Identification of System	<u>(N5-204, N5-764 Reactor Core Isolation Cooling, RCIC)</u>

5. (a) Applicable Construction Code ASME III, Class 2 19 71 Edition Winter 1971 Addenda, N/A Code Case

(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
E5100F018	Crosby	N65627-00-0001	N/A	V22-2587	1982	Replacement	Y

7. Description of Work Install replacement nozzle, disc, and bushing assembly in relief valve.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks The replacement nozzle, disc and bushing assembly were procured per PO # 149503. Nozzle Heat Code /Trace # N90635-36-0027. Disc and bushing assembly Heat Code /Trace # 40-0013.

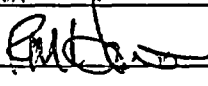
Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code Data reports to be supplemented by Owners Section XI Program #04-007

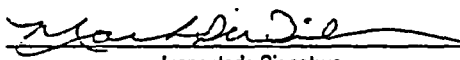
Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton, Lead ISI Engineer  Date MARCH 5 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 3-2-04 to 3-12-04, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.


Inspector's Signature

Commissions NB 9486 ASINNS MI2010
National Board, State, Province, and Endorsements

Date March 12 2004

(10/94)

For complete work package, see Work Requests C261040100

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As required by the Provisions of the ASME Code Section XI

1. Owner <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Date <u>February 17, 2005</u> Sheet <u>1 of 5</u> Unit <u>2</u>
2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Deco Maintenance Repair Organization P.O. No., Job No., etc.
3. Work Performed by <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport, MI 48166</u> Address	Type Code Symbol <u>N/A</u> Stamp Authorization No. <u>N/A</u> Expiration Date <u>N/A</u>
4. Identification of System <u>T & B N5 - 5 (Emergency Equipment Service Water (DGSW) Pump R3001C006</u>	

5. (a) Applicable Construction Code ASME III, Class 3 19 74 Edition (Pumps) 19 71 Edition 71 Addenda N/A Code Case

(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
R3001C006	Goulds Pumps	TCN N0007-1	N/A	N/A	1977	Replaced	Y
R3001C006	Enertech	11341	N/A	N/A	2004	Replacement	Y

7. Description of Work Replace existing DGSW Pump with a new pump manufactured to the original design requirements per ERE 32781. Components replaced included all pump columns, column bolting, and pump assembly with stuffing box. The discharge head/flange portion was not replaced.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks

Replacement components / materials installed included the following: Pump Assembly Serial No. #11341 procured per PO# 384406, Pump Column Assemblies, Serial No. 918, 919, 920, 921, 922, 923, 924, and 925, SA106 Grade B / SA516 Grade 70, were procured per PO# 384310, Pump Bolting Material, SA193 Grade B7, Procured per PO# 304309

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report T&B -5 to be supplemented by Owners Section XI Program 04-008

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer Date FEBRUARY 17, 20 05
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102, have inspected the components described in this Owner's Report during the period 02-21-05 to 02-21-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Inspector's Signature Commissions MI 610
National Board, State, Province, and Endorsements

Date February 21 20 05

(10/94)

For complete work package, see Work Request I130050100

Certificate Holder's Serial No. 11341

8. Design conditions 75 (pressure) psi 100 (temperature) °F or valve pressure class N/A (1)

9. Cold working pressure N/A psi at 100°F

10. Hydrostatic test **125 / ***110 psi. Disk differential test pressure N/A psi

11. Remarks: Qty. 1, Enertech Project Number 840025 Tag Number 6678 (Serial No. 11341)

- /* ** Stuffing Box; (S/N 6681) SA479 Tp. 410
- /* ** Top Intern. Bowl, Intern. Bowl; (S/N 5507, 5505) SA216 Gr. WCB
- /* *** Top Column Assy, Intern. Column, Bott. Column Assy. (S/N 918 thru 925) SA106 Gr. B/SA516 Gr. 70

CERTIFICATION OF DESIGN

Design Specification certified by Michael S. Williams P.E. State MI Reg. no. 31686
 Design Report certified by N/A P.E. State N/A Reg. no. N/A

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.

N Certificate of Authorization No. N-2826 Expires 10/11/05

Date 9/9/04 Name Enertech Signed *Luetta Gray*
 (N Certificate Holder) (authorized representative)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of California and employed by HSB, CT of Connecticut have inspected the pump, or valve, described in this Data Report on 9.9.04, and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 9.9.04 Signed *Timothy Reys* Commissions NB 9435N CA-1520
 (Authorized Inspector) (Nat'l. Bd. (incl. endorsements) and state or prov. and no.)

(1) For manually operated valves only.



**FORM N-2 N OR NPT CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
NUCLEAR PARTS AND APPURTENANCES***

04-008
30FS

As Required by the Provisions of the ASME Code, Section III, Division 1
Not To Exceed One Day's Production

Pg 1 of 2

1. Manufactured and certified by Enertech, A Div. of Curtiss-Wright Flow Control Corp.; 2950 Birch St.; Brea, CA 92821
(name and address of certificate holder)

2. Manufactured for Detroit Edison; 2000 2nd Avenue; Detroit, MI 48226-1279
(name and address of purchaser)

3. Location of installation Detroit Edison; Fermi EF2; 6400 Dixie Hwy.; Newport, MI 48166
(name and address)

4. Type D1700 Rev. G SA-106-B/SA-516-70 60,000 / 70,000 PSI N/A 2003
(drawing no.) (mat'l. spec. no.) (tensile strength) (CRN) (year built)

5. ASME Code, Section III: 1974 No 3 None
(edition) (addenda) (class) (Code Case no.)

6. Fabricated in accordance with Const. Spec. (Div. 2 only) N/A Revision N/A Date N/A
(No.)

7. Remarks: Qty. 2 Column, Top (P/N: 641) for Goulds Model VIT 8x12JMC 2-Stage Pump -
Enertech Item No.: C9173N, Project No.: 840009

8. Nom. thickness (in.) 0.281 Min. design thickness (in.) 0.162 Dia. ID (ft. & in.) 7.981" Length overall (ft. & in.) 5'-0"

9. When applicable, Certificate Holders' data reports are attached for each item of this report:

Part or Appurtenance Serial Number	National Board No. In Numerical Order	Part or Appurtenance Serial Number	National Board Number In Numerical Order
(1) 918	N/A	(26)	
(2) 919	N/A	(27)	
(3)		(28)	
(4)		(29)	
(5)		(30)	
(6)		(31)	
(7)		(32)	
(8)		(33)	
(9)		(34)	
(10)		(35)	
(11)		(36)	
(12)		(37)	
(13)		(38)	
(14)		(39)	
(15)		(40)	
(16)		(41)	
(17)		(42)	
(18)		(43)	
(19)		(44)	
(20)		(45)	
(21)		(46)	
(22)		(47)	
(23)		(48)	
(24)		(49)	
(25)		(50)	

10. Design pressure 75 psi Temp. 100 °F. Hydro. test pressure 110 at temp. °F.
(when applicable)

*Supplemental information in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 X 11, (2) information in items 2 and 3 on this data report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

CERTIFICATE OF DESIGN

Design specifications certified by Michael S. Williams P. E. state MI Reg. no. 31686
 (when applicable)
 Design report* certified by N/A P. E. state _____ Reg. no. _____
 (when applicable)

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that this (these) Top Column
 conform to the rules of construction of the ASME Code, Section III.

NPT Certificate of Authorization no. N-2827 Expires October 11, 2005
 Date 12/10/03 Name Enertech, A Div. of Curtiss-Wright Flow Control Corp. Signed [Signature]
 (NPT Certificate Holder) (authorized representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or province of California and employed by HSB CT
 of Connecticut have inspected these items described in this data report on 12-10-03 and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III. Each part listed has been authorized for stamping on the date shown above.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this data report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.

Date 12-10-03 Signed [Signature] Commissions CA1520 NB 94052
 (Authorized Inspector) (Nat'l. Bd. (incl. endorsements) state or prov. and no.)



**FORM N-2 N OR NPT CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
NUCLEAR PARTS AND APPURTENANCES***

04-008
4 of 5

As Required by the Provisions of the ASME Code, Section III, Division 1
Not To Exceed One Day's Production

Pg 1 of 2

1. Manufactured and certified by Enertech, A Div. of Curtiss-Wright Flow Control Corp.; 2950 Birch St.; Brea, CA 92821
(name and address of certificate holder)

2. Manufactured for Detroit Edison; 2000 2nd Avenue; Detroit, MI 48226-1279
(name and address of purchaser)

3. Location of installation Detroit Edison; Fermi EF2; 6400 Dixie Hwy.; Newport, MI 48166
(name and address)

4. Type D1700 Rev. G SA-106-B/SA-516-70 60,000 / 70,000 PSI N/A 2003
(drawing no.) (mat'l. spec. no.) (tensile strength) (CRN) (year built)

5. ASME Code, Section III: 1974 No 3 None
(edition) (addenda) (class) (Code Case no.)

6. Fabricated in accordance with Const. Spec. (Div. 2 only) N/A Revision N/A Date N/A
(No.)

7. Remarks: Qty. 5 Column, Intermediate (P/N: 642) for Goulds Model VIT 8x12JMC 2-Stage Pump -
Enertech Item No.: C9174N, Project No.: B40009

8. Nom. thickness (in.) 0.281 Min. design thickness (in.) 0.162 Dia. ID (ft. & in.) 7.981" Length overall (ft. & in.) 5'-0"

9. When applicable, Certificate Holders' data reports are attached for each item of this report:

Part or Appurtenance Serial Number	National Board No. In Numerical Order	Part or Appurtenance Serial Number	National Board Number In Numerical Order
(1) 920	N/A	(26)	
(2) 921	N/A	(27)	
(3) 922	N/A	(28)	
(4) 923	N/A	(29)	
(5) 924	N/A	(30)	
(6)		(31)	
(7)		(32)	
(8)		(33)	
(9)		(34)	
(10)		(35)	
(11)		(36)	
(12)		(37)	
(13)		(38)	
(14)		(39)	
(15)		(40)	
(16)		(41)	
(17)		(42)	
(18)		(43)	
(19)		(44)	
(20)		(45)	
(21)		(46)	
(22)		(47)	
(23)		(48)	
(24)		(49)	
(25)		(50)	

10. Design pressure 75 psi Temp. 100 °F. Hydro. test pressure 110 at temp. °F.
(when applicable)

*Supplemental information in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 X 11, (2) information in items 2 and 3 on this data report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

FORM N-2 (back)

Mfr. Serial No. 920 thru 924

CERTIFICATE OF DESIGN

Design specifications certified by Michael S. Williams, P. E. state MI Reg. no. 31686 (when applicable)

Design report* certified by N/A, P. E. state Reg. no. (when applicable)

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that this (these) Intermediate Column conform to the rules of construction of the ASME Code, Section III.

NPT Certificate of Authorization no. N-2827 Expires October 11, 2005

Date 12/10/03 Name Enertech, A Div. of Curtiss-Wright Flow Control Corp. Signed Geritta Araya (NPT Certificate Holder) (authorized representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or province of California and employed by HSB CT

of Connecticut have inspected these items described in this data report on 12-10-03 and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III. Each part listed has been authorized for stamping on the date shown above.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this data report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.

Date 12-10-03 Signed Charles F. Reys Commissions CA1526 NB 94351 (Authorized Inspector) (Nat'l. Bd. (incl. endorsements) state or prov. and no.)



**FORM N-2 N OR NPT CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
NUCLEAR PARTS AND APPURTENANCES***

04008
5 of 5

As Required by the Provisions of the ASME Code, Section III, Division 1

Not To Exceed One Day's Production

Pg 1 of 2

1. Manufactured and certified by Enertech, A Div. of Curtiss-Wright Flow Control Corp.; 2950 Birch St.; Brea, CA 92821
(name and address of certificate holder)

2. Manufactured for Detroit Edison; 2000 2nd Avenue; Detroit, MI 48226-1279
(name and address of purchaser)

3. Location of installation Detroit Edison; Fermi EF2; 6400 Dixie Hwy.; Newport, MI 48166
(name and address)

4. Type D1700 Rev. G SA-106-B/SA-516-70 60,000 / 70,000 PSI N/A 2003
(drawing no.) (mat'l. spec. no.) (tensile strength) (CRN) (year built)

5. ASME Code, Section III: 1974 No 3 None
(edition) (addenda) (class) (Code Case no.)

6. Fabricated in accordance with Const. Spec. (Div. 2 only) N/A Revision N/A Date N/A
(No.)

7. Remarks: Qty. 1 Column. Bottom (P/N: 644) for Goulds Model VIT 8x12JMC 2-Stage Pump -
Enertech Item No.: C9175N, Project No.: 840009

8. Nom. thickness (in.) 0.281 Min. design thickness (in.) 0.162 Dia. ID (ft. & in.) 7.981" Length overall (ft. & in.) 5'-0"

9. When applicable, Certificate Holders' data reports are attached for each item of this report:

Part or Appurtenance Serial Number	National Board No. in Numerical Order	Part or Appurtenance Serial Number	National Board Number in Numerical Order
(1) 925	N/A	(26)	
(2)		(27)	
(3)		(28)	
(4)		(29)	
(5)		(30)	
(6)		(31)	
(7)		(32)	
(8)		(33)	
(9)		(34)	
(10)		(35)	
(11)		(36)	
(12)		(37)	
(13)		(38)	
(14)		(39)	
(15)		(40)	
(16)		(41)	
(17)		(42)	
(18)		(43)	
(19)		(44)	
(20)		(45)	
(21)		(46)	
(22)		(47)	
(23)		(48)	
(24)		(49)	
(25)		(50)	

10. Design pressure 75 psi Temp. 100 °F. Hydro. test pressure 110 at temp. °F.
(when applicable)

*Supplemental information in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 X 11, (2) information in items 2 and 3 on this data report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

CERTIFICATE OF DESIGN

Design specifications certified by Michael S. Williams P. E. state MI Reg. no. 31686
(when applicable)

Design report* certified by N/A P. E. state _____ Reg. no. _____
(when applicable)

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that this (these) Intermediate Column
 conform to the rules of construction of the ASME Code, Section III.

NPT Certificate of Authorization no. N-2827 Expires October 11, 2005

Date 12/10/03 Name Enertech, A Div. of Curtiss-Wright Flow Control Corp. Signed Loretta Anaya
(NPT Certificate Holder) (authorized representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or province of California and employed by HSB CT
 of Connecticut have inspected these items described in this data report on 12-10-03, and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III. Each part listed has been authorized for stamping on the date shown above.
 By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.

Date 12-10-03 Signed Civelo F. Reys Commissions CA 1526 PB9435N
(Authorized Inspector) (Nat'l. Bd. (incl. endorsements) state or prov. and no.)

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date February 17, 2005
 Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 6
 Address
2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166
 Address
3. Work Performed by Detroit Edison Company Type Code Symbol N/A
 Name
6400 North Dixie Highway, Newport, MI 48166 Authorization No. N/A
 Address Expiration Date N/A
4. Identification of System T & B N5 - 4 (Emergency Equipment Service Water (EESW) Pump P4500C002A)
5. (a) Applicable Construction Code ASME III, 19 74 Edition (Pumps)
Class 3 19 71 Edition 71 Addenda N/A Code Case
 (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
P4500C002A	Goulds Pumps	TCN N0006-1	N/A	N/A	1977	Replaced	Y
P4500C002A	Enertech	11342	N/A	N/A	2004	Replacement	Y

7. Description of Work Replace existing EESW Pump with a new pump manufactured to the original design requirements per ERE 32781. Components replaced included all pump columns, column bolting, and pump assembly with stuffing box. The discharge head/flange portion was not replaced.
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks

Replacement components / materials installed included the following: Pump Assembly Serial No. #11342 procured per PO# 384408, Pump Column Assemblies, Serial No. 926, 927, 930, 931, 932, 933, 934, and 935, SA106 Grade B/ SA516 Grade 70, were procured per PO# 384313, Pump Boltino Material, SA 193 Grade B7, Procured per PO# 304309


Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report T&B -4 to be supplemented by Owners Section XI Program 04-039

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer  Date FEBRUARY 17, 20 05
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 09-27-04 to 02-22-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions NI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date February 22 20 05

(10/94)

For complete work package, see Work Request I461040100

FORM NPV-1 (Back — Pg. 2 of 2)

Certificate Holder's Serial No. 11342

8. Design conditions 125 (pressure) psi 100 (temperature) °F or valve pressure class N/A (1)
9. Cold working pressure N/A psi at 100°F
10. Hydrostatic test **200 / ***175 psi. Disk differential test pressure N/A psi
11. Remarks: Qty. 1, Enertech Project Number 840026 Tag Number 6579 (Serial No. 11342)

- * / ** Stuffing Box (S/N 6682) SA479 Tp. 410
- * / ** Top Intern. Bowl, Intern. Bowl: (S/N 6460, 5997) SA216 Gr. WCB
- * / *** Top Column Assy, Intern. Column, Bott. Column Assy. (S/N 926, 927, 930 thru 935) SA106 Gr. B/SA516 Gr. 70

CERTIFICATION OF DESIGN

Design Specification certified by Michael S. Williams P.E. State MI Reg. no. 31686
 Design Report certified by N/A P.E. State N/A Reg. no. N/A

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump or valve conforms to the rules for construction of the ASME Code, Section III, Division 1.

N Certificate of Authorization No. N-2826 Expires 10/11/05
 Date 9/9/04 Name Enertech Signed Arletta Gray
 (N Certificate Holder) (authorized representative)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of California and employed by HSB, CT of Connecticut have inspected the pump, or valve, described in this Data Report on 9904, and state that to the best of my knowledge and belief, the Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III, Division 1.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the component described in this Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 9.9.04 Signed Clint Reyes Commissions NB9435P C#1526
 (Authorized Inspector) (Nat'l. Bd. (incl. endorsements) and state or prov. and no.)

(1) For manually operated valves only.



04-009
3 of 6

FORM N-2 N OR NPT CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
NUCLEAR PARTS AND APPURTENANCES*

As Required by the Provisions of the ASME Code, Section III, Division 1
Not To Exceed One Day's Production

1. Manufactured and certified by EnerTech, A Div. of Curtiss-Wright Flow Control Corp.; 2950 Birch St.; Brea, CA 92821
(name and address of certificate holder)

2. Manufactured for Detroit Edison; 2000 2nd Avenue; Detroit, MI 48226-1279
(name and address of purchaser)

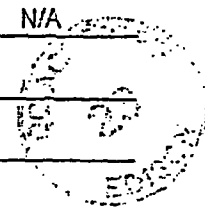
3. Location of installation Detroit Edison; Fermi EF2; 6400 Dixie Hwy.; Newport, MI 48166
(name and address)

4. Type D1691 Rev. H SA-106-B/SA-516-70 50,000 / 70,000 PSI N/A 2003
(drawing no.) (mat'l. spec. no.) (tensile strength) (CRN) (year built)

5. ASME Code, Section III: 1974 No 3 None
(edition) (addenda) (class) (Code Case no.)

6. Fabricated in accordance with Const. Spec. (Div. 2 only) N/A Revision N/A Date N/A
(No.)

7. Remarks: Qty. 1 Column, Top (P/N: *641A) for Goulds Model VIT 8x14JMC 2-Stage Pump -
EnerTech Item No.: C9179N, Project No.: 840012



8. Nom. thickness (in.) 0.281 Min. design thickness (in.) 0.162 Dia. ID (ft. & in.) 7.981" Length overall (ft. & in.) 5'-0"
9. When applicable, Certificate Holders' data reports are attached for each item of this report:

Part or Appurtenance Serial Number	National Board No. In Numerical Order	Part or Appurtenance Serial Number	National Board Number In Numerical Order
(1) 926	N/A	(26)	
(2)		(27)	
(3)		(28)	
(4)		(29)	
(5)		(30)	
(6)		(31)	
(7)		(32)	
(8)		(33)	
(9)		(34)	
(10)		(35)	
(11)		(36)	
(12)		(37)	
(13)		(38)	
(14)		(39)	
(15)		(40)	
(16)		(41)	
(17)		(42)	
(18)		(43)	
(19)		(44)	
(20)		(45)	
(21)		(45)	
(22)		(47)	
(23)		(48)	
(24)		(49)	
(25)		(50)	

10. Design pressure 125 psi Temp. 100 °F. Hydro. test pressure 175 at temp. °F.
(when applicable)

*Supplemental information in the form of lists, sketches, or drawings may be used provided (1) size is EX X 1, (2) information in items 2 and 3 on this data report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

FORM N-2 (back)

Mfr. Serial No. 926

CERTIFICATE OF DESIGN

Design specifications certified by Michael S. Williams P. E. state MI Reg. no. 31686 (when applicable)
Design report* certified by N/A P. E. state Reg. no. (when applicable)

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that this (these) Top Column conform to the rules of construction of the ASME Code, Section III.

NPT Certificate of Authorization no. N-2827 Expires October 11, 2005
Date 11/23/04 Name Enertech, A Div. of Curtiss-Wright Flow Control Corp. Signed [Signature] (NPT Certificate Holder) (authorized representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or province of California and employed by HSB CT of Connecticut have inspected these items described in this data report on 12-10-03 and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III. Each part listed has been authorized for stamping on the date shown above. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this data report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.

Date 11-23-04 Signed [Signature] Commissions NB 9435N CA1526 (Authorized Inspector) (Nat'l. Bd. (incl. endorsements) state or prov. and no.)



FORM N-2 N OR NPT CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
NUCLEAR PARTS AND APPURTENANCES*

04-009
4 of 6

As Required by the Provisions of the ASME Code, Section III, Division 1
Not To Exceed One Day's Production

1. Manufactured and certified by Enertech, A Div. of Curtiss-Wright Flow Control Corp.; 2950 Birch St.; Brea, CA 92821
(name and address of certificate holder)

2. Manufactured for Detroit Edison; 2000 2nd Avenue; Detroit, MI 48225-1279
(name and address of purchaser)

3. Location of installation Detroit Edison; Fermi EF2; 6400 Dixie Hwy.; Newport, MI 48166
(name and address)

4. Type D1691 Rev. H SA-106-B/SA-516-70 60,000 / 70,000 PSI N/A 2003
(drawing no.) (mat'l. spec. no.) (tensile strength) (CRN) (year built)

5. ASME Code, Section III: 1974 No 3 None
(edition) (addenda) (class) (Code Case no.)

6. Fabricated in accordance with Const. Spec. (Div. 2 only) N/A Revision N/A Date N/A
(No.)

7. Remarks: Qty: 1 Column, Top Intermediate (P/N: *641B) for Goulds Model VIT 8x14JMC 2-Stage Pump -
Enertech Item No.: C9180N, Project No.: 840012

8. Nom. thickness (in.) 0.281 Min. design thickness (in.) 0.162 Dia. ID (ft. & in.) 7.981" Length overall (ft. & in.) 5'-0"

9. When applicable, Certificate Holders' data reports are attached for each item of this report:

Part or Appurtenance Serial Number	National Board No. In Numerical Order	Part or Appurtenance Serial Number	National Board Number In Numerical Order
(1) 927	N/A	(25)	
(2)		(27)	
(3)		(28)	
(4)		(29)	
(5)		(30)	
(6)		(31)	
(7)		(32)	
(8)		(33)	
(9)		(34)	
(10)		(35)	
(11)		(36)	
(12)		(37)	
(13)		(38)	
(14)		(39)	
(15)		(40)	
(16)		(41)	
(17)		(42)	
(18)		(43)	
(19)		(44)	
(20)		(45)	
(21)		(46)	
(22)		(47)	
(23)		(48)	
(24)		(49)	
(25)		(50)	

10. Design pressure 125 psi Temp. 100 °F. Hydro. test pressure 175 at temp. °F.
(when applicable)

*Supplemental information in the form of lists, sketches, or drawings may be used provided (1) size is EX X 1, (2) information in items 2 and 3 on this data report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

FORM N-2 (back)

Mfr. Serial No. 927

CERTIFICATE OF DESIGN

Design specifications certified by Michael S. Williams P. E. state MI Reg. no. 31686
Design report certified by N/A P. E. state Reg. no.

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that this (these) Top Column conform to the rules of construction of the ASME Code, Section III.

NPT Certificate of Authorization no. N-2827 Expires October 11, 2005

Date 11/23/04 Name Enertech, A Div. of Curtiss-Wright Flow Control Corp. Signed Lorette Oraya

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or province of California and employed by HSB CT

of Connecticut have inspected these items described in this data report on 12.10.03 and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III. Each part listed has been authorized for stamping on the date shown above.

By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this data report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.

Date 11.23.04 Signed Cindy Reiss Commissions NB9405N CH1526



**FORM N-2 N OR NPT CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
NUCLEAR PARTS AND APPURTENANCES***

04-009
5060

As Required by the Provisions of the ASME Code, Section III, Division 1
Not To Exceed One Day's Production

Pg 1 of 2

1. Manufactured and certified by Enertech, A Div. of Curtiss-Wright Flow Control Corp.; 2950 Birch St.; Brea, CA 92821
(name and address of certificate holder)

2. Manufactured for Detroit Edison; 2000 2nd Avenue; Detroit, MI 48226-1279
(name and address of purchaser)

3. Location of installation Detroit Edison; Fermi EF2; 6400 Dixie Hwy.; Newport, MI 48166
(name and address)

4. Type D1691 Rev. H SA-106-B/SA-516-70 60,000 / 70,000-PSI N/A 2003
(drawing no.) (mat'l. spec. no.) (tensile strength) (CRN) (year built)

5. ASME Code, Section III: 1974 No 3 None
(edition) (addenda) (class) (Code Case no.)

6. Fabricated in accordance with Const. Spec. (Div. 2 only) N/A Revision N/A Date N/A
(No.)

7. Remarks: Qty. 5 Column, Intermediate (P/N: 642) for Goulds Model VIT 8x14JMC 2-Stage Pump -
Enertech Item No.: C9174N, Project No.: 840012

8. Nom. thickness (in.) 0.281 Min. design thickness (in.) 0.162 Dia. ID (ft. & in.) 7.981⁺ Length overall (ft. & in.) 5'-0"

9. When applicable, Certificate Holders' data reports are attached for each item of this report:

Part or Appurtenance Serial Number	National Board No. In Numerical Order	Part or Appurtenance Serial Number	National Board Number In Numerical Order
(1) 930	N/A	(26)	
(2) 931	N/A	(27)	
(3) 932	N/A	(28)	
(4) 933	N/A	(29)	
(5) 934	N/A	(30)	
(6)		(31)	
(7)		(32)	
(8)		(33)	
(9)		(34)	
(10)		(35)	
(11)		(36)	
(12)		(37)	
(13)		(38)	
(14)		(39)	
(15)		(40)	
(16)		(41)	
(17)		(42)	
(18)		(43)	
(19)		(44)	
(20)		(45)	
(21)		(46)	
(22)		(47)	
(23)		(48)	
(24)		(49)	
(25)		(50)	

10. Design pressure 125 psi Temp. 100 °F. Hydro-test pressure 175 at temp. °F. (when applicable)

*Supplemental information in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 X 11, (2) information in items 2 and 3 on this data report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

FORM N-2 (back)

Mfr. Serial No. 930 thru 934

CERTIFICATE OF DESIGN

Design specifications certified by Michael S. Williams P. E. state MI Reg. no. 31686
(when applicable)

Design report* certified by N/A P. E. state _____ Reg. no. _____
(when applicable)

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that this (these) Intermediate Column conform to the rules of construction of the ASME Code, Section III.

NPT Certificate of Authorization no. N-2827 Expires October 11, 2005

Date 12/10/03 Name Enatech, A Div. of Curtis-Wright Flow Control Corp. Signed [Signature]
(NPT Certificate Holder) (authorized representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or province of California and employed by HSB CT of Connecticut have inspected these items described in this data report on 12.10.03 and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III. Each part listed has been authorized for stamping on the date shown above.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.

Date 12.10.03 Signed [Signature] Commissions CA1520 NB 2435N
(Authorized Inspector) (N.B.I. Bd. (incl. endorsements) state or prov. and no.)

**FORM N-2 N OR NPT CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL
NUCLEAR PARTS AND APPURTENANCES***
As Required by the Provisions of the ASME Code, Section III, Division 1
Not To Exceed One Day's Production

04-009
6 of 6

1. Manufactured and certified by Enertech, A Div. of Curtiss-Wright Flow Control Corp.; 2950 Birch St.; Brea, CA 92821
(name and address of certificate holder)

2. Manufactured for Detroit Edison; 2000 2nd Avenue; Detroit, MI 48226-1279
(name and address of purchaser)

3. Location of installation Detroit Edison; Fermi EF2; 6400 Dixie Hwy.; Newport, MI 48165
(name and address)

4. Type D1691 Rev. H SA-105-B/SA-516-70 60,000 / 70,000 PSI N/A 2003
(drawing no.) (mat'l. spec. no.) (tensile strength) (CRN) (year built)

5. ASME Code, Section III: 1974 No 3 None
(edition) (addenda) (class) (Code Case no.)

6. Fabricated in accordance with Const. Spec. (Div. 2 only) N/A Revision N/A Date N/A
(No.)

7. Remarks: Qty. 1 Column, Bottom (P/N: 644) for Goulds Model VIT 8x14JMC 2-Stage Pump -
Enertech Item No.: C9181N, Project No.: 840012

8. Nom. thickness (in.) 0.281 Min. design thickness (in.) 0.162 Dia. ID (ft. & in.) 7.981" Length overall (ft. & in.) 5'-0"

9. When applicable, Certificate Holders' data reports are attached for each item of this report:

Part or Appurtenance Serial Number	National Board No. In Numerical Order	Part or Appurtenance Serial Number	National Board Number In Numerical Order
(1) 935	N/A	(25)	
(2)		(27)	
(3)		(28)	
(4)		(29)	
(5)		(30)	
(6)		(31)	
(7)		(32)	
(8)		(33)	
(9)		(34)	
(10)		(35)	
(11)		(36)	
(12)		(37)	
(13)		(38)	
(14)		(39)	
(15)		(40)	
(16)		(41)	
(17)		(42)	
(18)		(43)	
(19)		(44)	
(20)		(45)	
(21)		(46)	
(22)		(47)	
(23)		(48)	
(24)		(49)	
(25)		(50)	

10. Design pressure 125 psi Temp. 100 °F. Hydro. test pressure 175 at temp. °F.
(when applicable)

*Supplemental information in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 X 11, (2) information in items 2 and 3 on this data report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(6/B5)-1 This form (E00040) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10017.

CERTIFICATE OF DESIGN

Design specifications certified by Michael S. Williams P. E. state MI Reg. no. 31686
Design report* certified by N/A P. E. state Reg. no.

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that this (these) Intermediate Column conform to the rules of construction of the ASME Code, Section III.

NPT Certificate of Authorization no. N-2827 Expires October 11, 2005
Date 12/10/03 Name Enertech, A Div. of Curtiss-Wright Flow Control Corp. Signed Sherette Araya

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or province of California and employed by HSB CT of Connecticut have inspected these items described in this data report on 12.10.03 and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III. Each part listed has been authorized for stamping on the date shown above. By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this data report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.

Date 12.10.03 Signed [Signature] F-Reyes Commissions CA 1520 NB 94351

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

<p>1. Owner <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address</p> <p>2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address</p> <p>3. Work Performed by <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport, MI 48166</u> Address</p> <p>4. Identification of System <u>(N5-J120-N5-1) Control Rod Drive System</u></p> <p>5. (a) Applicable Construction Code <u>ASME III, Class 1</u> 19 <u>71</u> Edition <u>71</u> Addenda <u>N/A</u> Code Case</p> <p>(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements <u>1992-92 Addenda</u></p>	<p>Date <u>December 06, 2004</u></p> <p>Sheet <u>1 of 2</u></p> <p>Unit <u>2</u></p> <p><u>Deco Maintenance</u> Repair Organization P.O. No., Job No., etc.</p> <p>Type Code Symbol <u>N/A</u> Stamp</p> <p>Authorization No. <u>N/A</u></p> <p>Expiration Date <u>N/A</u></p>
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6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
CRD Housing Bolting	RCI	N5-J120-N5-1	N/A	See Matrix	1975	Replacement	N
Control Rod Drive Mechanisms	General Electric	See Matrix	N/A	See Matrix	1975	Replacement	Y

7. Description of Work Replaced Control Rod Drive Mechanisms at various locations and installed replacement Cap Screws on each mechanism to facilitate drive installation. All removed bolting was inspected and stored for future installation.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Replacement bolting (Cap Screws procured per PO # 384015 , 362633, and 389120.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report N5-J120-N5-1 to be supplemented by Owners Section XI Program 04-013

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer Date December 6, 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 2-29-04 to 12-9-2004 and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions ME610
Inspector's Signature National Board, State, Province, and Endorsements

Date Dec. 9 2004

(10/94)

For complete work packages, see Work Requests listed on attached matrix.

Nis-2 Attachment for Section XI Program No. 04-013 – RF10 CRDM Exchange

- Replacement bolting (Cap Screws) were replaced on each drive mechanism installed (8 per drive). Bolting material consisted of previously removed and inspected Cap Screws and new Cap Screws. Replacement Cap Screws were procured per PO # 384015 or #362633, HT Code F280, PO # 389120, HT Code H947 ASME III - Class 1, SA193 Grade B7, 1”-8UNC-2A x 5-1/2”
- New Serial are based on the locations requested prior to the outage and were verified during installation.

CRDM	Serial No.	New Serial No.	Exchange WR	NewCap Screws HT# - PO # - (Qty)
30-55	3698	6541	000Z033860	8 – From Location 34-15
18-35	4565	5866	000Z041313	8 – From Location 06-27
02-27	3160	3999	000Z041314	8 – From Location 54-43
26-19	3950	4584	000Z041315	8 – From Location 58-19
26-43	4585	3623	000Z041316	8 – From Location 34-47
26-51	4594	7019	000Z041317	7 – From Location 14-51 1-HT Code F280, PO# 384015
22-19	6556	6017	000Z041318	7 – From Location 30-59 1-HT Code H947, PO# 389120
34-23	3345	4436	000Z041319	8 – From Location 30-39
30-15	4498	4526	000Z041320	6 – From Location 14-11 2-HT Code F280, PO# 384015
22-35	5222	4309	000Z041321	8 – From Location 54-27
42-23	4047	4312	000Z041322	7 – From Location 42-35 1-HT Code H947, PO# 389120
38-03	3320	4286	000Z041324	8 – From Location 50-19
58-27	4544	4459	000Z041325	7 – From Location 10-27 1-HT Code F280, PO# 362633
42-43	3972	4330	000Z041327	8 – From Location 58-23
42-47	4354	3608	000Z041328	8-HT Code F280, PO# 362633
34-43	3177	5655	000Z041329	8 – From Location 14-55
50-51	4377	6277	000Z041330	8 – From Location 38-47
50-23	6314	3521	000Z041331	8 – From Location 42-55
46-07	4287	6417	000Z041332	8 – From Location 22-15
46-35	3960	4340	000Z041333	8 – From Location 38-07
42-31	4540	3918	000Z041334	8 – From Location 26-11
50-15	4281	6035	000Z041335	8 – From Location 58-35
38-15	3969	6397	000Z041336	8 – From Location 30-31

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

<p>1. Owner <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address</p> <p>2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address</p> <p>3. Work Performed by <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport, MI 48166</u> Address</p> <p>4. Identification of System <u>N5-005 (T&B) Emergency Diesel Generator # 11</u></p> <p>5. (a) Applicable Construction Code <u>ASME III, Class 3</u> 19 <u>71</u> Edition <u>71</u> Addenda <u>N/A</u> Code Case</p> <p>(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements <u>1992-92 Addenda</u></p>	<p>Date <u>6-29-2004</u></p> <p>Sheet <u>1 of 2</u></p> <p>Unit <u>2</u></p> <p><u>Deco Maintenance</u> Repair Organization P.O. No., Job No., etc.</p> <p>Type Code Symbol <u>N/A</u> Stamp</p> <p>Authorization No. <u>N/A</u></p> <p>Expiration Date <u>N/A</u></p>
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6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
R3000F140A	William Powell	66500-5	N/A	V15-2098	1977	Replacement	Y

7. Description of Work Install replacement disc due to wear on the disc guide pin. The valve continued to function properly.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp. _____

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks: The replacement disc was procured per PO# 269746, SA216 Grade WCB, Serial No. CM5336B.


Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report N5-013 to be supplemented by Owners Section XI Program 04-015


Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer  Date JUNE 29 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 06-21-04 to 07-08-04, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions NI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date July 8 2004

(10/94)

For complete work package, see Work Request 000Z034791

FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PARTS AND APPURTENANCES
As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

NIS-2 04-0
Sheet 2 of 2
04-015

1. (a) Manufactured by: The Wm. Powell Co., 3233 Colerain Avenue, Cincinnati, Ohio 45225
(Name and address of NPT Certificate Holder)
(b) Manufactured for: Detroit Edison Co., 2000 Second Avenue, Detroit, Michigan 48226
(Name and address of NPT Certificate Holder for completed nuclear component)
2. Identification-Certificate Holder's Serial No. Part G1 5336B Nat'l Bd. No. N/A CRN No. N/A
(a) Constructed According to Drawing No. P/N 6-060098-200-00-17 Drawing Prepared by The Wm. Powell Co.
(b) Description of Part Inspected 1 - Disc for 8" Figure 3031W Globe Valve
(c) Applicable ASME Code: Section III, Edition 1977 Addenda date Winter 71 Case No. N/A Class 2
3. Remarks: _____
(Brief description of service for which component was designed.)

S/N 66500 Item 21

Items 4-8 inclusive to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell: Material _____ T.S. _____ Nom. Thk. _____ in. Corr. Allow. _____ in. Diam. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of range specified)
5. Seams: Long _____ H.T.¹ _____ R.T. _____ Efficiency _____ %
Girth _____ H.T.¹ _____ R.T. _____ No. of Courses _____
6. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____
Location (top, bottom, ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diam. Side to Pressure (convex or concave)
- (a) _____
(b) _____
If removable, bolts used _____ Other fastening _____
(Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)
7. Jacket Closure: _____
(Describe as gage and weld, bar, etc. If bar, give dimensions, if bolted, describe or sketch)
8. (a) Design Pressure² _____ psi at _____ ° F (b) Min. Pressure-Test Temp. _____ ° F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary: Material _____ Diam. _____ in. Thk. _____ in. Attachment _____
(Kind & Spec. No.) (Subject to pres.) (Welded, bolted)
Floating: Material _____ Diam. _____ in. Thk. _____ in. Attachment _____
10. Tubes: Material _____ O.D. _____ in. Thk. _____ in. or gage Number _____ Type _____
(Straight or U)

Items 11-14 inclusive to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

11. Shell: Material _____ T.S. _____ Nom. Thk. _____ in. Corr. Allow. _____ in. Diam. _____ ft. _____ in. Length _____ ft. _____ in.
(Kind & Spec. No.) (Min. of range specified)
12. Seams: Long _____ H.T.¹ _____ R.T. _____ Efficiency _____ %
Girth _____ H.T.¹ _____ R.T. _____ No. of Courses _____
13. Heads: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diam. Side to Pressure (convex or concave)
- (a) Top, bottom, ends _____
(b) Channel _____
If removable, bolts used (a) _____ (b) _____ (c) _____ Other fastening _____
(Describe or attach sketch)
14. (a) Design Pressure² _____ psi at _____ ° F (b) Min. Pressure-Test Temp. _____ ° F

¹ If postweld heat-treated. ² List other internal or external pressures with coincident temperature when applicable.
*Supplemental sheets in form of lists, sketches, or drawings may be used provided: (1) size is 8 1/2 in. x 11 in.; (2) information in items 1 and 2 of this Data Report is included on each sheet and (3) each sheet is numbered and number of sheets is recorded in item 3, Remarks.

Items below to be completed for all vessels where applicable.

15. Safety Valve Outlets: Number _____ Size _____ Location DISC CM5 3 3 6 B

16. Nozzles:

Purpose (inlet, outlet, drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached

17. Inspection Manholes: No. _____ Size _____ Location _____
Openings: Handholes: No. _____ Size _____ Location _____
Threaded: No. _____ Size _____ Location _____

18. Supports: Skirt _____ Lugs _____ Legs _____ Other _____ Attached _____
(Yes or no) (Number) (Number) (Description) (Where & how)

We certify that the statements made in this report are correct and this vessel part or appurtenance as defined in the Code conforms to the rules of construction of the ASME Code Section III

(The applicable Design Specification and Design Report are not the responsibility of the NPT Certificate Holder for parts. An NPT Certificate Holder for appurtenances is responsible for furnishing a separate Design Specification and Design Report if the appurtenance is not included in the component Design Specification and Design Report.)

Date August 11, 19 86 Signed Wm. Powell Co. By [Signature]
(NPT Certificate Holder)

Certificate of Authorization Expires 12/23/88 Certificate of Authorization No. N-1579

CERTIFICATION OF DESIGN FOR APPURTENANCE (when applicable)

Design information on file at _____

Stress analysis report on file at _____

Design specifications certified by _____ Prof. Eng. State _____ Reg. No. _____

Stress analysis report certified by _____ Prof. Eng. State _____ Reg. No. _____

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Ohio and employed by H.S.B.I & I Co. or Hartford, Conn. have inspected the part of a pressure vessel described in this Partial Data Report on 8-11, 19 86, and state that, to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Partial Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 8-11, 19 86

[Signature]
Inspector's Signature

Commissions Ohio Conn
National Board, State, Province and No.

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date February 16, 2005
 Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 2
 Address

2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166

3. Work Performed by Detroit Edison Company Deco Maintenance
 Name Repair Organization P.O. No., Job No., etc.
6400 North Dixie Highway, Newport, MI 48166 Type Code Symbol N/A
 Address Stamp
 Authorization No. N/A
 Expiration Date N/A

4. Identification of System (N5-5 T & B) Deisel Generator Service Water System for EDG # 11

5. (a) Applicable Construction Code ASME III, Class 3 19 71 Edition 71 Addenda N/A Code Case
 (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
R3000F140A	William Powell	66500-5 Disc CM 7423	N/A	V15-2098	1977	Repaired	Y

7. Description of Work Repair Disc removed from valve R3000F140A by machining guide pin on disc to sound metal and performing a base metal build-up of disc guide pin, with final machining to original thickness. Repaired disc will be returned to stock. Disc Mark No. CM 7423, Heat No. 2085, ASME SA216 Gr. WCB.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks Repaired Disc by welding.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Repair conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report (T & B N5-5) for Disc to be supplemented by Owners Section XI Program 04-017

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer Date FEBRUARY 17, 20 05
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 1-12-05 to 2-21-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions MI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date February 21 20 05

(10/94)

For complete work package, see Work Request 000Z042049

VIS-6070
 50175
 20519
 NLSZ-04-07
 66500-34
 H1

FORM NPS-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
 (As Required by the Provisions of the ASME Code, Section III, Div. 1)

1. Manufactured by The Wm. Powell Co., Cincinnati, Ohio Plant #2
(Name and Address of Manufacturer)
2. Manufactured for Detroit Edison Co., 2000 2nd Ave., Detroit, Michigan
(Name and Address of Purchaser or Owner)
3. Location of Installation 400 N. Dixie Highway, Stoney Creek, Monroe County, Michigan
(Name and Address)
4. Pump or Valve 300# Globe Valve Nominal Inlet Size 8 Outlet Size 8
(inch)

(a) Model No., Series No. or Type	(b) Manufacturers' Serial No.	(c) Canadian Registration No.	(d) Drawing No.	(e) Class	(f) Nat'l. Bd. No.	(g) Year Built
(1) <u>Fig. 3031 WE</u>	<u>66500-54</u>	<u>N/A</u>	<u>043474</u>	<u>3</u>	<u>N/A</u>	<u>1977</u>
(2)						
(3)						
(4)						
(5)						
(6) ILLEGIBLE						
(7) DOCUMENT						
(8)						
(9)						
(10)						

5. DIESEL GENERATOR SERVICE WATER SYSTEM

(Brief description of service for which equipment was designed)
DECO MARK V15 209B

6. Design Conditions 125 psi 125 °F or Valve Pressure Class N/A (1)
(Pressure) (Temperature)
7. Cold Working Pressure 720 psi at 100°F.
8. Pressure Retaining Pieces

Mark No.	Material Spec. No.	Manufacturer	Remarks
(a) Castings			
<u>Body CM 1725A</u>	<u>ASME SA 216 Gr. WCB</u>	<u>Howmet Corp.</u>	
<u>Heat 1473</u>		<u>Milwaukee, Wisc.</u>	
<u>Bonnet CM 1805A</u>	<u>ASME SA 216 Gr. WCB</u>	<u>Howmet Corp.</u>	
<u>Heat 1684</u>		<u>Milwaukee, Wisc.</u>	
<u>Disc CM 7423</u>	<u>ASME SA 216 Gr. WCB</u>	<u>Electric Steel Casting Co.</u>	
<u>Heat 2085</u>		<u>Speedway-Indianapolis, Ind.</u>	
(b) Forgings			
<u>N/A</u>			

INFORMATION ONLY

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this data report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

(1/78) This form (E00037) may be obtained from the Order Dept., ASME, 345 E. 47 St., New York, N.Y. 10017

ea

Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting			
Stud Lot #CM 466B Code P29 Heat 8067903	ASME SA 193 Gr. B7	Texas Bolt Co. Houston, Texas	
Nut Lot #CM 467B Code P51 Heat KM2593	ASME SA 194 Gr. 2H	Texas Bolt Co. Houston, Texas	
(d) Other Parts			
Bonnet Drain Nipple CM 9381 HEAT K44375 DOCUMENT	ASME SA 106 Gr. B	U.S. Steel Corp. Gary, Ind.	

9. Hydrostatic test 1100 psi.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. 1, Edition 1971
Addenda Winter, 1971, Code Case No. 1507, Date April 26, 1977
(Date)

Signed The Wm. Powell Co., Plant #2 by [Signature]
(Manufacturer)

Our ASME Certificate of Authorization No. N1578 to use the N symbol expires 12/23/79
(N) (NFV) (Date)

CERTIFICATION OF DESIGN

Design information on file at The Wm. Powell Co., Cincinnati, Ohio Plant #2
Stress analysis report (Class 1 only) on file at N/A

Design specifications certified by (1) Sylvester H. Noetzel
PE State Mich. Reg. No. 14386-
Stress analysis certified by (1) N/A
PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Ohio and employed by H.S.B. I. & I. CO.
of Hartford, Conn. have inspected the pump, or valve, described in this Data Report on 4/26 1977 and state that to the best of my knowledge and belief, the Manufacturer has constructed this pump, or valve, in accordance with the ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, express or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 4/26 1977
[Signature] (Inspector) Commissions Ohio 5-22-77
(Natl. Bd. State, Prov. and No.)

69

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Date <u>February 15, 2005</u> Sheet <u>1</u> of <u>5</u>
2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Unit <u>2</u> <u>DECo Maintenance</u> Repair Organization P.O. No., Job No., etc.
3. Work Performed by <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport, MI 48166</u> Address	Type Code Symbol Stamp <u>N/A</u> Authorization No. <u>N/A</u> Expiration Date <u>N/A</u>

4. Identification of System Various Component Supports (Mechanical Snubbers)

5. (a) Applicable Construction Code ANSI B31.7 19 69 Article 1-720 & 1-721
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements ANSI B31.1 19 67 Article 121
1992-W'92

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
PLANT MECHANICAL SNUBBERS	Pacific Scientific	Various	NA	NONE	Various	REPLACEMENTS	N

7. Description of Work Refurbish Mechanical Snubbers for future installation

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F Functional test & visual inspection

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks Attached are listings of Mechanical Snubbers that were refurbished and changed out during testing activities during RF10 and Applicable Manufacturer's Data Reports to be attached

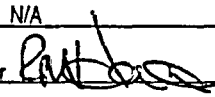
During forced outage 05-01. Note: The listing of the Mechanical Snubbers that were refurbished prior to and during RF10 includes a listing of load bearing parts installed. Documentation satisfies requirements of Code Case N-508-1 as allowed by Relief Request RR-C4.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI. repair or replacement

Type Code Symbol Stamp Original Code Data Reports to be supplemented by owners Section XI Program No. 04-018 and 05-001

Certificate of Authorization No. N/A Expiration Date N/A

Signed R. M. Hambleton, Lead ISI Engineer  Date FEBRUARY 15, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period Aug. 6, 2004 to Feb. 23, 2005, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions MI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date Feb. 23 20 05

(12/82)

For complete work package, see Work Request A498040100
A519040100
000Z050273

Mechanical Snubbers Rebuilt with New Load Bearing Parts

NIS-2 for 04-018 an.
Page 20 of 25 05-001

Serial	Snubber Location	Size	Description	PO	Work Package
12810	Spare	10	Bearing Retainer Nut	402520	A519040100
18649	G33-3245-G49A	1	Thrust Bearing Kit	362146	A519040100
8340	N21-3536-G35	10	Capstan Spring	217421	A519040100
10330	E11-3164-G22	10	Capstan Spring	217421	A519040100
11282	B21-E216-SSA1	35	Thrust Bearing Kit	402519	A519040100
8738	N21-3536-G30	35	Ball Screw Assembly Thrust Bearing Kit	318965 402519	A519040100
9873	N21-3537-G26B	35	Ball Screw Assembly Thrust Bearing Kit	318965 402519	A519040100
22368	Spare	¼	Rod and Bearing Assembly	389195	A498040100
22369	T23-I2837-42-G03	¼	Rod and Bearing Assembly	389195	A498040100
13142	N30-2186-G09	½	Carrier and Shaft Assembly	317957	A498040100
13130	T23-I2837-45-G02A	½	Rod and Bearing Assembly	362730	A498040100
22387	T23-I2837-42-G36	¼	Rod and Bearing Assembly Carrier and Shaft Assembly	362730 362145	A498040100
13144	T48-5314-G04	½	Carrier and Shaft Assembly	335317	A498040100
	N30-2186-G13	1	Load Pin Stock Code 482-5680	245777	0963041022
	E41-3162-G25	10	PSA 10 Load Pin machined from PSA 35 Load Pin	215027	0963041022

Does not include non-load bearing parts (retaining rings, washers). Note that these parts are ASME parts.

Mechanical Snubbers Replaced with Rebuilt Spares in RF10

NIS-2 for 04-018
and 05-001

Page 3 of 5

HANGER NO#	OLD SERIAL NO	NEW SERIAL NO
B21-2174-G25B	8496	13183
B21-2187-G81	12710	22456
B21-2297-G08	9024	8978
B21-2297-G09	20966	20959
B21-2297-G11	12770	8960
B21-2586-G06	10335	9016
B21-2592-G10	8955	8994
B21-2593-G13	9008	8357
B21-2596-G11	9883	9900
B21-4093-G13	8341	6185
B21-4094-G05	8986	9026
B21-4096-G08	8963	10352
B21-4096-G11	6182	9012
B21-E213-SSA1	9861	11282
B21-E213-SSB1	6186	8993
B21-E213-SSB3	6174	12816
B31-5239-G02A	12681	11466
B31-E215-SSA1	11284	4718
C41-2340-G15	13149	13111
E11-2299-G02	22437	22405
E11-2299-G05	22363	22440
E11-3146-G25	20975	20973
E11-3146-G35A	12789	12810
E11-3146-G37A	8339	10357
E11-3151-G18	12802	10332
E11-3151-G23A	8718	9855
E11-3152-G22	8337	10335
E11-3152-G31A	15289	12436
E11-3152-G34	20976	12437
E11-3154-G12	8952	8355
E11-3154-G21A	12454	20972
E11-3154-G21B	12441	12448
E11-3154-G23	8366	9025
E11-3158-G24	8348	8950
E11-3160-G09	20969	12444
E11-3161-G14	8950	9003
E11-3161-G18	20959	15287
E11-3164-G19	20971	15292
E11-3164-G22	8960	10330
E11-3164-G27	20981	12450
E11-3185-G36	20987	20975
E11-4011-G04	22423	22344
E21-3052-G08	12449	20957
E41-3162-G25	8336	9024
E41-3163-G17	8958	8341
E41-3163-G19	15283	20971
E41-3172-G19	10357	8345
E51-3166-G44	9857	18641
E51-3174-G30	23164	18652
G11-3658-G47	23171	18656
G33-3245-G37	18657	18655

Mechanical Snubbers Replaced with Rebuilt Spares in RF10

NIS-2 for 04-018
and 05-001

Page 4 of 5

HANGER NO#	OLD SERIAL NO	NEW SERIAL NO
G33-3245-G45	21947	21949
G33-3245-G49A	9856	18649
G33-3245-G49B	23172	23171
G33-3245-G67	23167	19577
G51-4055-G08	12437	20984
G51-4055-G23	8362	8984
G51-4059-G17B	21948	23166
N21-3131-G33	9017	6186
N21-3131-G38	9011	8362
N21-3536-G28	9026	12821
N21-3536-G30	11267	8738
N21-3536-G31	10346	8339
N21-3536-G35	10337	8340
N21-3537-G26B	7021	9873
N21-3537-G28	9015	8329
N21-3537-G34	8708	9875
N21-3537-G37	8978	12792
N30-2186-G09	8501	13142
N30-2186-G13	18647	9859
N30-2186-G14	18645	19579
N30-2186-G17	27916	12988
N30-3259-G21	8719	4720
N30-3259-G31	9865	7013
N30-3259-G35	9887	9896
N30-3259-G38	1581	1579
N30-3259-G50	8725	11267
N30-3378-G27A	8954	9014
N30-3526-G51	19929	12690
P50-2163-G15B	22450	19940
P50-2163-G18	19910	22418
P50-3308-G35	23162	18654
T23-I2837-36-G32	22499	12739
T23-I2837-36-G43	13205	8480
T23-I2837-36-G81	18643	23169
T23-I2837-40-G02B	22455	22345
T23-I2837-40-G15	22427	22401
T23-I2837-41-G01	18655	18651
T23-I2837-41-G02A	23165	23162
T23-I2837-41-G07B	8477	13143
T23-I2837-41-G25	13160	8492
T23-I2837-42-G01	12726	22358
T23-I2837-42-G03	12733	22369
T23-I2837-42-G14A	12745	12758
T23-I2837-42-G20	12718	12687
T23-I2837-42-G21A	12978	22374
T23-I2837-42-G21B	27915	22399
T23-I2837-42-G26	13162	8481
T23-I2837-42-G30	13136	13201
T23-I2837-42-G36	19924	22387
T23-I2837-42-G53	22425	22355
T23-I2837-42-G62	22378	22445

Mechanical Snubbers Replaced with Rebuilt Spares in RF10

NIS-2 for 04-018
and 05-001

Page 5 of 5

HANGER NO#	OLD SERIAL NO	NEW SERIAL NO
T23-I2837-45-G02A	13150	13130
T23-I2837-45-G03	9859	21953
T23-I2837-45-G07	21949	18645
T23-I2837-45-G12B	13188	8489
T23-I2837-46-G101	22339	22385
T23-I2837-46-G17B	12700	12684
T23-I2837-46-G17D	18649	19580
T23-I2837-46-G93	13200	13129
T23-I2837-46-G94A	12686	22384
T23-I2837-46-G94B	12732	12749
T23-I2837-46-G94C	12765	22426
T23-I2837-46-G94D	12764	12676
T23-I2837-46-G94E	19920	22442
T23-I2837-46-G94F	12729	12748
T23-I2837-51-G43	19915	12697
T23-I2837-53-G22	19916	22368
T23-I2837-53-G31	12762	22415
T23-I2837-53-G35	22336	22367
T46-3092-G05	8967	12811
T48-2366-G25	20957	12454
T48-4061-G06	9858	23172
T48-5314-G04	13174	13144
T71-I2837-62-G39	22420	22386
T71-I2837-63-G25	19922	12714

Mechanical Snubbers Replaced with Rebuilt Spares during Forced Outage 05-01

HANGER NO#	OLD SERIAL NO	NEW SERIAL NO
N30-3526-G51	12690	22403
N30-3526-G55	13157	13150
N30-3526-G57	8486	13188

Serial Number 13150 and 13188 rebuilt and tested under A519040100
Serial Number 22403 rebuilt and tested under A498040100

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date December 8, 2004
 Name _____
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 1
 Address _____
2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name _____
6400 North Dixie Highway, Newport MI 48166 DECo Maintenance
 Address _____ Repair Organization P.O. No., Job No., etc. _____
3. Work Performed by Detroit Edison Company Type Code Symbol Stamp N/A
 Name _____ Authorization No. N/A
6400 North Dixie Highway, Newport, MI 48166 Expiration Date N/A
 Address _____
4. Identification of System Various Component Supports (Hydraulic Snubbers)
5. (a) Applicable Construction Code ANSI B31.7 19 69 Articles 1-720 & 1-721
ANSI B31.1 19 67 Article 121
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-W'92

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
PLANT HYDRAULIC SNUBBERS	Power Piping	Various	NA	NONE	Various	REPLACEMENTS	N

7. Description of Work Refurbish Hydraulic Snubbers during testing activities and for future installation
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F Functional test & visual inspection

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks Attached are listings of Hydraulic Snubbers that were refurbished and changed out during testing activities during RF10.
Applicable Manufacturer's Data Reports to be attached

Note: The listing of the Hydraulic Snubbers that were refurbished prior to and during RF10 includes a listing of load bearing parts installed.


Documentation satisfies requirements of Code Case N-508-1 as allowed by Relief Request RR-C4.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the
ASME Code, Section XI. repair or replacement

Type Code Symbol Stamp Original Code Data Reports to be supplemented by owners Section XI Program No. 04-019.


Certificate of Authorization No. N/A Expiration Date N/A

Signed R. M. Hambleton, Lead ISI Engineer  Date January 24, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State
or Province of Michigan and employed by HSB CT of
One State Street, Hartford, CT 06102 have inspected the components described
in this Owner's Report during the period Sept. 17, 2004 to Feb. 23, 2005, and state that
to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described
in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the
examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer
shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this
inspection.

 Commissions NI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date February 23, 2005

(12/82)

For complete work package, see Work Request A497040100
A514040100

Hydraulic Snubbers Rebuilt with New Load Bearing Parts

NIS-2 for 04-019

Page 2 of 4

Serial	Snubber Number	Size	Description	PO	Work Package
810227	Spare	2 ½ x 5	Cylinder Tube	245695	A514040100
810126	N30-3619-G16	4 x 5	Cylinder Tube	277341	A514040100
810151	E11-3185-G22	2 x 5	Rod End Bearing (snubber 810142)		A497040100
820251	E11-3151-G07	4 x 5	Cylinder Tube	277341	A497040100

This list does not include non-load bearing parts (o-rings, piston rings, seal kits, reservoir brackets, tubing). Note that these parts are non-ASME.

Hydraulic Snubbers Replaced with Rebuilt Spares

NIS-2 for 04-019

Page 3 of 4

HANGER NO#	OLD SERIAL NO	NEW SERIAL NO
E11-3035-G25	810066	810044
E11-3151-G07	820209	820251
E11-3151-G15	810132	820249
E11-3151-G26	810182	820077
E11-3152-G18	810208	810053
E11-3154-G11	820205	820209
E11-3154-G16	810023	820117
E11-3158-G08	820201	830035
E11-3159-G03	810076	810037
E11-3159-G05	820172	810030
E11-3159-G07	820160	820123
E11-3177-G10	810207	820250
E11-3184-G07A	810212	810150
E11-3184-G15B	810139	810097
E11-3185-G22	810148	810151
E11-3185-G37	810137	810156
E11-3185-G41	810086	810157
E11-3185-G51	810087	810087
E11-3185-G56	810221	810215
E11-3185-G57	810219	820008
E21-2199-G10	810105	820124
E21-2199-G11	820128	820129
E21-3144-G26	820007	820174
E21-3147-G34	820178	810197
E21-3150-G08	810072	810209
E51-3174-G34	820159	830017
E51-3174-G36	810181	820088
E51-3175-G06	810029	810210
E51-3175-G27	810193	810194
G33-3244-G37	810227	820187
G33-3244-G38	810205	820106
N21-3109-G68	830032	810207
N21-3109-G71A	820198	830037
N21-3109-G71B	820199	820201
N30-3618-G08	810009	810048

Hydraulic Snubbers Rebuilt and Re-installed

NIS-2 for 04-019

Page 4 of 4

HANGER NO#	OLD SERIAL NO	NEW SERIAL NO
E11-3151-G08	810026	810026
E11-3158-G12	820208	820208
E11-3161-G09	820125	820125
E11-3184-G25	810128	810128
E21-3145-G12	810098	810098
N21-3103-G20E	820133	820133
N21-3109-G64A	830044	830044
N21-3109-G64E	830045	830045
N21-3109-G70A	820058	820058
N21-3109-G70E	820096	820096
N21-3109-G72E	810159	810159
N21-3109-G76	810056	810056
N30-3619-G15	810127	810127
N30-3619-G16	810126	810126
N30-3619-G17	820101	820101

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date February 16, 2005
 Name
6400 North Dixie Highway, Newport MI 48166 Address
 Sheet 1 of 2
2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166 Address
3. Work Performed by Detroit Edison Company Deco Maintenance
 Name
6400 North Dixie Highway, Newport, MI 48166 Address
 Repair Organization P.O. No., Job No., etc.
 Type Code Symbol N/A
 Stamp
 Authorization No. N/A
 Expiration Date N/A
4. Identification of System (N5-0260) Residual Heat Removal System – Shutdown Cooling Piping From Drywell
5. (a) Applicable Construction Code ASME III, Class 2 19 71 Edition 71 Addenda N/A Code Case
 (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
E1100F029	Crosby	N55804-00-0001	N/A	V22-2033	1981	Replaced	Y
E1100F029	Crosby	N56804-00-0007	N/A	V30-1577	2003	Replacement	Y

7. Description of Work Replace relief valve and associated inlet and outlet piping with a replacement valve with attached piping to expedite testing and restoration of the system and to shorten the outage duration.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F Lift Test per Procedure 43.000.020

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks

Replacement components / materials installed included the following: Relief Valve procured per PO# 394732, Crosby, SN# N56804-00-0007, 2" ASME III Class 2 pipe, Schedule 80, SA106, Grade B, Heat Code # A42571, PO# 394730, Reducer 2" x 2-1/2", ASME III Class 2, Schedule 80, SA 234, Gr. WPB, Heat Code # LZEC-1, PO # 394730, 2-1/2" Flange, 150#, SA105, ASME III, Class 2, Heat Code AMEP, PO# 349730. All other material installed were 1" or smaller and were ASME III, Class 2 material.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report N5-0260 to be supplemented by Owners Section XI Program 04-020

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer Date FEBRUARY 17, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 11-14-04 to 02-21-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Mark Durie Commissions MI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date February 21, 2005

(10/94)

For complete work package, see Work Request B937040100



NIS-2 FOR E1100FOZ9 #04-020 2 of 2
Q.C. 44C-1 Sheet 1 of 2

FORM NV-1 FOR SAFETY AND SAFETY RELIEF VALVES
As required by the Provisions of the ASME Code Rules

DATA REPORT

1. Manufactured By Anderson Greenwood Crosby, 43 Kendrick St., Wrentham, MA 02093
Name and Address

Model No. JMB-WR-C Order No. U832660000 Contract Date 6/02/04 National Board No. --

2. Manufactured For DTE ENERGY Order No. NR-394732
Name and Address

3. Owner DTE ENERGY
Name and Address

4. Location of Plant ENRICO FERMI UNIT 2

5. Valve Identification V30-1577 Serial No. N56804-00-0007 Drawing No. DS-C-56804REV. A

Type SAFETY RELIEF Orifice Size .374 Pipe Size -- Inlet 1 Outlet 2
Safety, Safety Relief, Pilot, Power Actuated Inch Inch Inch

6. Set Pressure (PSIG) 140 +/- 1.4 335 ° F
Rated Temperature

Stamped Capacity 20 GPM WATER @ 70°F @ -10 % Overpressure -- Blowdown (psig) 10% OF S.P.

Hydrostatic Test (PSIG) Inlet 210 Complete Valve 225

7. The material, design, construction and workmanship comply with ASME Code, Section III.

Class 2 Edition 1971 Addenda Date Summer 1972 Case No. n/a

Pressure Containing or Pressure Retaining Components

	Serial No. Identification	Material Specification Including Type or Grade
a. Castings		
Body	_____	_____
Bonnet	_____	_____
b. Bar Stock and Forgings		
Support Rods	_____	_____
Nozzle	_____	_____
Disc	<u>N90386-81-0282</u> ✓	<u>ASTM A479 TYPE 304</u> ✓
	<u>N89056-64-0238</u> ✓	
Spring Washers	<u>N89056-65-0255</u> ✓	<u>ASTM A193 GR. B6</u> ✓
Adjusting Bolt	<u>N89057-59-1337</u> ✓	<u>ASTM A193 GR. B6</u> ✓
Spindle	<u>N90221-89-1028</u> ✓	<u>ASTM A193 GR. B6</u> ✓



	Serial No. Identification	Material Specification Including Type or Grade
c. Spring	<u>NX2797-1169 ✓</u>	<u>ASTM A229 CL. I ✓</u>
d. Bolting	<u>---</u>	<u>---</u>
e. Other Parts such as Pilot Components		
Base	<u>N90584-39-0024 ✓</u>	<u>ASTM A479 TYPE 304 ✓</u>
Adapter	<u>N90585-60-0105 ✓</u>	<u>ASTM A105 GR. II ✓</u>
Cylinder	<u>N92045-36-0014 ✓</u>	<u>ASTM A216 GR. WCB ✓</u>

We certify that the statements made in this report are correct.

Date 11-AUG-04 20 Signed Anderson Greenwood Crosby
Wrentham, MA By D. F. T...
Manufacturer

Certificate of Authorization No. N-1878 Expires Sep. 30, 2004
Date

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Texas and employed by

ABS Group Inc., Houston, Texas

have inspected the equipment described in this Data Report on

8-12-20 04 and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 8-12-2004

[Signature] Commissions Tex. 1060
(Inspector) (National Board, State, Province and No.)

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Date <u>December 16, 2004</u> Sheet <u>1 of 2</u>
2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Unit <u>2</u>
3. Work Performed by <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport, MI 48166</u> Address	Deco Maintenance Repair Organization P.O. No., Job No., etc. Type Code Symbol <u>N/A</u> Stamp Authorization No. <u>N/A</u> Expiration Date <u>N/A</u>
4. Identification of System <u>Main Steam Line Drains System, B31.1 Class D+ Piping System (B2100F080D / V10-2009)</u>	
5. (a) Applicable Construction Code <u>ANSI B31.1,</u> <u>Class D+</u> 19 <u>73</u> Edition <u>No</u> Addenda <u>N/A</u> Code Case	
(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements <u>1992-92 Addenda</u>	

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
B2100F080D	Fisher Controls	6488863	N/A	V10-2009	1976	Replacement	N

7. Description of Work Install replacement stem and plug assembly as well as seat ring and cage.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks

Replaced stem and plug assembly, seat ring and cage in control valve. Replace parts procured per PO# 394592. Heat Code for stem is #AF0711, plug Ht# AG0711-1, Cage Ht. # 040928-8, and Seat Ring Ht # 040928-10. Valve was built to ASME III, Class2 requirements but was not 'N' stamped due to system design. Piping system is classified as ASME Section XI, Class 2.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Valve records to be supplemented by Owners Section XI Program 04-021

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer Date December 16, 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 11-11-04 to 02-22-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions MI610
Inspector's Signature National Board, State, Province, and Endorsements

Date February 22 20 05

(10/94)

For complete work package, see Work Request # H606040100

FORM N-2 (back)

Mfr. Serial No. AG0711-1,2 &3

CERTIFICATION OF DESIGN

Design specifications certified by SYLVESTER H. NOETZEL P.E. State ML Reg. no. 14386
 (when applicable)

Design report certified by N/A P.E. State N/A Reg. no. N/A
 (when applicable)

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that this (these) PLUG/STEMS
 conforms to the rules of construction of the ASME Code, Section III

NPT Certificate of Authorization No. 1930 Expires 11-11-2004

Date 11-5-04 Name FISHER CONTROLS INT'L LLC Signed [Signature]
 (NPT Certificate Holder) (authorized representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or Province of Iowa
 and employed by Hartford Steam Boiler of CT
 of Hartford, CT have inspected these items described in this Data Report on 11-5-04 and state that to the
 best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III. Each part listed has
 been authorized for stamping on the date shown above.
 By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this Data Report.
 Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected
 with this inspection.

Date 11-05-04 Signed [Signature] Commissions 822 I.A.
 (Authorized Inspector) (Nat'l. Bd. (incl. endorsements) state or prov. and no.)



FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date December 13, 2004
 Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 2
 Address

2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166

3. Work Performed by Detroit Edison Company Deco Maintenance
 Address Detroit Edison Company Repair Organization P.O. No., Job No., etc.
 Name 6400 North Dixie Highway, Newport, MI 48166 Type Code Symbol N/A
 Address Stamp
 Authorization No. N/A
 Expiration Date N/A

4. Identification of System (N5-0260) Residual Heat Removal - Relief lines from RHR supply

5. (a) Applicable Construction Code ASME III, Class 2 19 71 Edition 71 Addenda N/A Code Case
 (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
E1100 F030D	Crosby	N56804-00-0003	N/A	V22-2035	1975	Replacement	Y

7. Description of Work Install replacement disc assembly and lap seats to provide for acceptable set-point testing and seat leakage.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks

Replacement disc procured per PO# 301308, Heat Code N90386-71-0250 Set-point testing and seat leakage performed per procedure 43.000.020. Relief valve was built to ASME III, Class2, 1971 Edition, 72 Addenda.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report N5-0260 to be supplemented by Owners Section XI Program 04-022

Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer R.M. Hambleton Date DECEMBER 14, 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 11-13-04 to 01-04-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

M. J. J. J. Commissions NI610
Inspector's Signature National Board, State, Province, and Endorsements

Date Jan. 04 20 05

(10/94)

For complete work package, see Work Request # B940090100

CROSBY

CROSBY VALVE & GAGE COMPANY

WRENTHAM, MA

**D.C.-392
SHEET 1 OF 2**

FORM N-2, N OR NPT CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL NUCLEAR PARTS AND APPURTENANCES
As Required by the Provisions of the ASME Code, Section III, Division 1 - Not to Exceed One Day's Production

1. Manufactured and certified by Crosby Valve & Gage Company 43 Kendrick St. Wrentham, MA 02093
(Name and Address of N Certificate Holder)
2. Manufactured for DETROIT EDISON COMPANY DETROIT, MI 48231
(Name and Address of Purchaser or Owner)
3. Location of Installation NOS-FMM-PPSD-EF2 SITE, 6400 DIXIE HIGHWAY, NEWPORT, MI
(Name and Address)
4. SEE REMARKS 1994
(CRN) (Drawing No.) (Year Built)
5. ASME SA479 TYPE 304 82.0 KSI
(Material Spc No.) (Tensile Strength)
6. --- --- --- ---
Dia. ID Length Overall Norm. Thickness(in.) Min. Design Thickness
Inch Inch
7. --- ---
Design Pressure(PSI) Temperature °F
8. Hydrostatic Test (psig) --- at --- °F
(When applicable)
9. Fabricated in accordance with Const. Spec.(Div. 2 only) --- Revision --- Date ---
(No.)
10. ASME Code, Section III, Division 1: 1971 SUMMER 1972 2 ---
(Edition) (Addenda Date) (Class) (Code Case No.)
11. Remarks DS-C-56800 REV.0 DS-C-56804 REV.A
DS-C-56806 REV.A DS-C-57868 REV.B



11. When applicable, Certificate Holders' data reports are attached for each item of this report:

Part or Appurtenance Serial Number	National Board No. Numerical Order	Part or Appurtenance Serial Number	National Board No. Numerical Order
(1) <u>N90386-71-0250</u>	<u>---</u>	(11) <u>---</u>	<u>---</u>
(2) <u>N90386-71-0252</u>	<u>---</u>	(12) <u>---</u>	<u>---</u>
(3) <u>---</u>	<u>---</u>	(13) <u>---</u>	<u>---</u>
(4) <u>---</u>	<u>---</u>	(14) <u>---</u>	<u>---</u>
(5) <u>---</u>	<u>---</u>	(15) <u>---</u>	<u>---</u>
(6) <u>---</u>	<u>---</u>	(16) <u>---</u>	<u>---</u>
(7) <u>---</u>	<u>---</u>	(17) <u>---</u>	<u>---</u>
(8) <u>---</u>	<u>---</u>	(18) <u>---</u>	<u>---</u>
(9) <u>---</u>	<u>---</u>	(19) <u>---</u>	<u>---</u>
(10) <u>---</u>	<u>---</u>	(20) <u>---</u>	<u>---</u>

Manufacturer Serial No. N90386-71-0250

Q.C. 392
SHEET 2 OF 2

CERTIFICATE OF SHOP COMPLIANCE

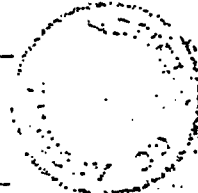
We certify that the statements made in this report are correct and that this(these) DISC
conform to the rules of construction of the ASME Code, Section III.

Date 11 Oct 94 Signed Crosby Valve & Gage Company by [Signature]
(Not Certificate Holder) (Authorized Representative)

NV Certificate of Authorization No. N-1877 Expires 30 SEP 95
(Date)

CERTIFICATE OF DESIGN

Design specification certified by* SYLVESTER NAITZET
PE State MI Reg No. 14386
Design Repoi. Certified by* _____
PE State _____ Reg No. _____



*Signature not required - list name only.

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Massachusetts and employed by * Arkwright Mutual Insurance Co. of Norwood, Massachusetts

have inspected these items described in this Data Report on Oct 11, 1994 and state that to the best of my knowledge and belief, the Certificate Holder has fabricated these parts or appurtenances in accordance with the ASME Code, Section III. Each part listed has been authorized for stamping on the date shown above.

By signing this certificate, neither the Inspector nor his employer makes any warrant, expressed or implied, concerning the component described in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Factory Mutual Systems

Date 10/11, 1994
Signed [Signature]
(Inspector)

Commissions 143155
(Nat'l. Bd., State, Prov. and No.)

*Factory Mutual System

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date December 13, 2004
 Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 1
 Address

2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166

3. Work Performed by Detroit Edison Company Deco Maintenance
 Name Repair Organization P.O. No., Job No., etc.
6400 North Dixie Highway, Newport, MI 48166 Type Code Symbol N/A
 Address Stamp
 Authorization No. N/A
 Expiration Date N/A

4. Identification of System (N5-0214) Reactor Feedwater System - North Side

5. (a) Applicable Construction Code ASME III, Class 1 19 71 Edition 71 Addenda N/A Code Case
 (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
B2100F010B	Atwood & Morrill	I-763	N/A	V12-2007	1974	Repaired	Y

7. Description of Work Repaired Actuator side stuffing, by performing weld repair to restore an interference fit for the hardened bushing.

8. Tests Conducted: Hydrostatic [] Pneumatic [] Nominal Operating Pressure []
 Other [] Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks

Stuffing box was weld repaired and machined to provide for an interference fit of the integral hardened bushing. Final machined surface was examined by the liquid penetrant method.


Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Repair conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report N5-0214 to be supplemented by Owners Section XI Program 04-023

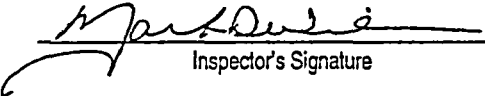
Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer  Date DECEMBER 14 20 04
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 11-15-04 to 02-22-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions MSI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date February 22 20 05

(10/94)

For complete work package, see Work Request 000Z032755

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date 12/14/04
 Name _____
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 1
 Address _____
2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name _____
6400 North Dixie Highway, Newport MI 48166 _____
 Address _____ DECo Maintenance
 Repair Organization P.O. No., Job No., etc. _____
3. Work Performed by Detroit Edison Company Type Code Symbol Stamp N/A
 Name _____ Authorization No. N/A
6400 North Dixie Highway, Newport, MI 48166 Expiration Date N/A
 Address _____
4. Identification of System N5-0214, Feedwater Line "B Outboard Containment Isolation Check Valve
5. (a) Applicable Construction Code ASME III, Class 1 19 71 Edition W71 Addenda, N/A Code Case
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-W'92

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
B2100F076B	Anchor Darling	IN-062	N/A	V12-2001	1972	Replacementair	Y

7. Description of Work Replaced retainer stud and nuts (pieces 10A and 10B on P1-13620) Replaced cover retainer stud and nut that had damaged threads. Threads damaged during valve disassembly.
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks Replacements due to minor galling which occurred during disassembly phase. Replacement stud (1) 5/8"-11 x 3" UNC-2A, SA 193 Grade B7, PO # 898850, Trace # P123, (4) Replacement Nuts 5/8"-11 UNC-2B, SA 194 Grade 2H, PO # 975830, Trace # P217. Replacement Cover Bolting (1) 1-1/4" - 8 UNC-2A, SA-193 Grade B7, PO # 965330, Ht Trace #F556, (1) 1-1/4"-8 UNC-2B, SA-194 Grade 7, PO # 974800, Heat Trace #A201

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI. repair or replacement

Type Code Symbol Stamp: Original Code Data Report (N5-0214) to be supplemented by owners Section XI Programs, No. 04-024 & 026

Certificate of Authorization No. N/A Expiration Date N/A

Signed [Signature] Date December 14, 20 04
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSBCT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 11-16-04 to 02-22-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions MI010
Inspector's Signature National Board, State, Province, and Endorsements
Date February 22 20 05

(12/82)

For complete work package, see Work Request T211040100

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date 02/22/05
 Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 1
 Address
2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166 DECo Maintenance
 Address Repair Organization P.O. No., Job No., etc.
3. Work Performed by Detroit Edison Company Type Code Symbol Stamp N/A
 Name Authorization No. N/A
6400 North Dixie Highway, Newport, MI 48166 Expiration Date N/A
 Address
4. Identification of System N5-0187, Feedwater Line "A" Outboard Isolation Check Valve
5. (a) Applicable Construction Code ASME III, Class 1 19 71 Edition W71 Addenda, N/A Code Case
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-W92

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
B2100F032A	Anchor Darling	IN-080	N/A	V12-2004	1974	Repair	Y

7. Description of Work Replaced 5 retainer studs and nuts

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks Replacement bolting installed due to minor galling which occurred during disassembly phase. Replace bolting material installed included (5) 1-1/4" - 8 UNC-2A Studs, SA-193 Grade B7, PO# 965330, Heat Trace #F556 and (5) 1-1/4" - 8 Nuts, SA-194 Grade 7, PO # 974800, Heat Trace 201

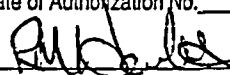
Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI. repair or replacement

Type Code Symbol Stamp: Original Code Data Report (N5-0187) to be supplemented by owners Section XI Program, No. 04-025

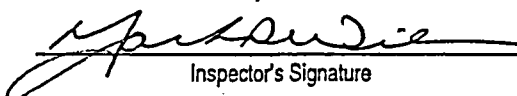
Certificate of Authorization No. N/A Expiration Date N/A

Signed  LEAD ISC ENGINEER Date December 14, 20 04
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 11-17-04 to 02-22-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions NI 610
Inspector's Signature National Board, State, Province, and Endorsements

Date February 22 20 05

(12/82)

For complete work package, see Work Request T250040100

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

- | | |
|---|---|
| 1. Owner <u>Detroit Edison Company</u>
Name
<u>6400 North Dixie Highway, Newport MI 48166</u>
Address | Date <u>12/14/04</u>
Sheet <u>1</u> of <u>1</u> |
| 2. Plant <u>Fermi 2 Nuclear Power Plant</u>
Name
<u>6400 North Dixie Highway, Newport MI 48166</u>
Address | Unit <u>2</u>
<u>DECo Maintenance</u>
Repair Organization P.O. No., Job No., etc. |
| 3. Work Performed by <u>Detroit Edison Company</u>
Name
<u>6400 North Dixie Highway, Newport, MI 48166</u>
Address | Type Code Symbol Stamp <u>N/A</u>
Authorization No. <u>N/A</u>
Expiration Date <u>N/A</u> |
| 4. Identification of System <u>N5-0214, Feedwater Line "B" Outboard Isolation Check Valve</u> | |
| 5. (a) Applicable Construction Code <u>ASME III, Class 1 19 71</u> Edition <u>W71</u> Addenda, <u>N/A</u> Code Case
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements <u>1992-W'92</u> | |

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
B2100F032B	Anchor Darling	IN-081	N/A	V12-2003	1974	Replacement	Y

7. Description of Work Replaced retainer studs and nuts
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure Other Pressure _____ psi Test Temp. _____ °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks Replacement due to minor galling which occurred during disassembly phase Replacement Boltino (6) 1-1/4" - 8 UNC-2A, studs, SA-193 Grade B7, PO# 965330, Hi Trace #F556, (6) 1-1/4"-8-UNC-2B nuts, SA-194 Grade 7, PO# 974800, Heat Trace #201. ASME III, Class 1 material.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement conforms to the rules of the ASME Code, Section XI. repair or replacement

Type Code Symbol Stamp: Original Code Data Report (N5-0214) to be supplemented by owners Section XI Program, No. 04-027

Certificate of Authorization No. N/A Expiration Date N/A
Signed [Signature] Lead ISI Inspector Date December 14, 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by H.S.B CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 11-17-04 to 02-22-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions NI 610
Inspector's Signature National Board, State, Province, and Endorsements
Date February 22, 2005

(12/82)

For complete work package, see Work Request T251040100

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI**

1. Owner <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Date <u>December 13, 2004</u> Sheet <u>1 of 1</u>
2. Plant <u>Fermi 2 Nuclear Power Plant</u> Name <u>6400 North Dixie Highway, Newport MI 48166</u> Address	Unit <u>2</u>
3. Work Performed by <u>Detroit Edison Company</u> Name <u>6400 North Dixie Highway, Newport, MI 48166</u> Address	<u>Deco Maintenance</u> Repair Organization P.O. No., Job No., etc. Type Code Symbol <u>N/A</u> Stamp Authorization No. <u>N/A</u> Expiration Date <u>N/A</u>
4. Identification of System <u>(N5-0265) Main Steam Relief Discharge Piping to Supression Chamber & B21-4095</u>	

5. (a) Applicable Construction Code ASME III, Class 2 19 71 Edition 71 Addenda N/A Code Case

(b) Applicable Edition/Addenda of Section XI Utilized for Repairs or Replacements 1992-92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
B2100F037P	Crosby	N58071-00-022	N/A	V22-2110	1979	Repair	Y

7. Description of Work Repaired damage to inbody and disc seating surfaces (dents/nicks) and replaced Spring washer that had damaged threads.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure _____ psi Test Temp. _____ °F Lift Test per Procedure 24.201.01

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks

Seating surfaces repaired by performing a licalized weld repair followed by machining. A liquid penetrant examination was performed of the final machined surfaces. Replacement spring washed procured per PO# 405109. Crosby part No. N90959-37-0027, Heat No. 36520


Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Repair conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Original Code data report N5-0265 to be supplemented by Owners Section XI Program 04-028

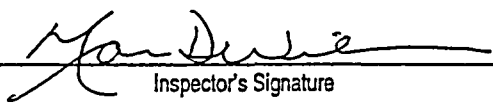
Certificate of Authorization No. N/A Expiration Date N/A

Signed R.M. Hambleton Lead ISI Engineer  Date December 15, 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 11-21-04 to 02-07-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions MSIG 10
Inspector's Signature National Board, State, Province, and Endorsements

Date Feb. 07 20 05

(10/94)

For complete work package, see Work Request D645040100

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS
As Required by the Provisions of the ASME Code Section XI

1. Owner Detroit Edison Company Date January 18, 2005
 Name
6400 North Dixie Highway, Newport MI 48166 Sheet 1 of 1
 Address

2. Plant Fermi 2 Nuclear Power Plant Unit 2
 Name
6400 North Dixie Highway, Newport MI 48166

3. Work Performed by Detroit Edison Company DECo Maintenance
 Name Repair Organization P.O. No., Job No., etc.
6400 North Dixie Highway, Newport, MI 48166 Type Code Symbol Stamp N/A
 Address Authorization No. N/A
 Expiration Date N/A

4. Identification of System E41 High Pressure Coolant Injection (HPCI)

5. (a) Applicable Construction Code ASME III Winter
Class 2 19 71 Edition 1971 Addenda, N/A Code Case
 (b) Applicable Edition/Addenda of Section XI Utilized for Repairs or
 Replacements 1992, 92 Addenda

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
Piece MK-E41-3162-2	Dravo Corp	4257	N/A	SW-E41-3162-2WC	N/A	Repair	Yes

7. Description of Work RF10 rework was to remove a pipe surface base material imperfection that was adjacent to circumferential weld. SW-E41-3162-2WC.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure []
 Other Pressure _____ psi Test Temp. _____ °F
N/A - The flaw was acceptable to the original material specification (SA-105B) and did not penetrate the pressure boundary.

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Form NIS-2 (Back)

9. Remarks The repair was performed in accordance with Work Request A560040100 and Section XI Program 04-029.
Final acceptance by nondestructive examinations are documented in RF-10 NDE summary report RF10-96.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this repair conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp N/A This NIS-2 supplements original N-5-0333 data reports as listed in Section XI Program 04-029.

Certificate of Authorization No. N/A Expiration Date N/A
Signed M. G. Broth, NDE Lead III Date January 18 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Michigan and employed by HSB CT of One State Street, Hartford, CT 06102 have inspected the components described in this Owner's Report during the period 11-21-04 to 02-04-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions MI610
Inspector's Signature National Board, State, Province, and Endorsements

Date Feb. 04 2005