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Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

June 9, 2003

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Stop: OWFN P1-35  
Washington, D.C. 20555-0001

Gentlemen:

In the Matter of )  
Tennessee Valley Authority )

Docket No. 50-260

**BROWNS FERRY NUCLEAR PLANT (BFN) - UNIT 2 - AMERICAN SOCIETY OF  
MECHANICAL ENGINEERS (ASME) SECTION XI, INSERVICE INSPECTION,  
CONTAINMENT INSPECTION (IWE), AND REPAIR AND REPLACEMENTS  
PROGRAMS - SUMMARY REPORTS (NIS-1 AND NIS-2) FOR CYCLE 12  
OPERATION**

In accordance with paragraphs IWA-6220 and IWA-6230 of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, 1995 Edition, 1996 addenda, TVA is submitting the BFN Unit 2 outage summary reports for NRC review. The summary reports are for inservice and containment inspection (NIS-1 Report), and repair and replacement activities (NIS-2 Report) for Unit 2 Cycle 12 operation.

TVA has determined that certain BFN Unit 2 welds had nondestructive examination (NDE) coverage limitations (less than 90 percent coverage completed) which exceed that specified in ASME Code Case N-460, "Alternative Examination Coverage for Class 1 and Class 2 Welds, Section XI, Division 1." Two austenitic stainless steel full penetration piping welds, one each for the Reactor Recirculation and Reactor Water Cleanup Systems, had calculated NDE examination coverage of 50 and 75 percent respectively. The limitations encountered during the performance of the ultrasonic (UT) examination were caused

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by component configuration. In addition, the welds are Category R-A (Westinghouse Owners Group (WOG) WCAP-14572, Revision 1-NP-A) Class 1 piping welds. These welds received greater than 90 percent examination coverage per the requirements of ASME Section XI. However, 10 CFR 50.55a(b)(2)(xv)(A)(2) restricts taking credit for "one-sided" examinations without completing a single-sided ASME Section XI, Appendix VIII demonstration using flaws on the opposite side of the weld. At the time of the examinations, no Performance Demonstration Initiative Program existed for single-side austenitic welds. Consequently, the percent examination coverage achieved for the two welds was 50 and 75 percent respectively.

Additionally, TVA has determined that Reactor Pressure Vessel (RPV) 12 welds had nondestructive examination (NDE) coverage limitations (less than 90 percent coverage completed) which exceed that specified in ASME Code Case N-460, "Alternative Examination Coverage for Class 1 and Class 2 Welds, Section XI, Division 1." The components are RPV nozzles (ASME Section XI, Code Category B-D, Nozzle-To-Vessel Welds) which had calculated NDE examination coverage ranging between 45 and 89 percent completed. The limitations encountered during the performance of the ultrasonic (UT) examination were caused by component configuration. The nozzle contours limit the accessible UT examination volume.

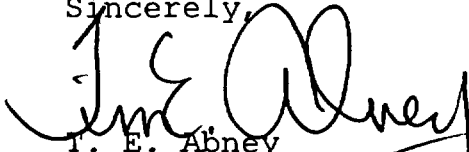
To address the above described weld examination limitations, TVA has submitted requests for relief 2-ISI-18 and 2-ISI-19 by letter dated June 2, 2003.

Enclosure 1 of this letter contains the BFN Unit 2 Inservice and Containment Inspection Summary Report (NIS-1) for Code Class 1 and 2 pressure retaining components and their supports. Enclosure 2 contains the Repair and Replacements Summary Report (NIS-2) for Code Class 1 and 2 components and supports.

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There are no new regulatory commitments in this letter. If you have any questions regarding these reports, please contact me at (256) 729-2636.

Sincerely,



T. E. Abney  
Manager of Licensing  
and Industry Affairs

Enclosures

cc (Enclosures):

(Via NRC Electronic Distribution)

Mr. Stephen J. Cahill, Branch Chief  
U.S. Nuclear Regulatory Commission  
Region II  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, S.W., Suite 23T85  
Atlanta, Georgia 30303-8931

NRC Resident Inspector  
Browns Ferry Nuclear Plant  
10833 Shaw Road  
Athens, Alabama 35611-6970

Mr. Kahtan Jabbour, Senior Project Manager  
U.S. Nuclear Regulatory Commission  
One White Flint, North  
(MS 08G9)  
11555 Rockville Pike  
Rockville, Maryland 20852-2739

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DTL:JWD:BAB

Enclosures

cc (w/o Enclosures):

- A. S. Bhatnagar, PAB 1E-BFN (w/Enclosures)
- M. J. Burzynski, BR 4X-C
- A. L. Ladd, PMB 2C-BFN (w/Enclosures)
- J. E. Maddox, LP 6A-C
- D. C. Olcsvary, LP 6A-C
- C. M. Root, PAB 1G-BFN
- J. R. Rupert, NAB 1A-BFN
- K. W. Singer, LP 6A-C
- M. D. Skaggs, POB 2C-BFN
- E. J. Vigluicci, ET 11A-K (w/Enclosures)
- R. E. Wiggall, SAB 1A-BFN (w/Enclosures)
- EDMS-K (w/Enclosures)

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ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNIT 2  
AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME),  
SECTION XI, THIRD TEN-YEAR INSPECTION INTERVAL  
INSERVICE INSPECTION (ISI), CONTAINMENT INSPECTION, AND  
AUGMENTED EXAMINATIONS PROGRAMS  
SUMMARY REPORT (NIS-1) FOR UNIT 2 CYCLE 12 OPERATION

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(SEE ATTACHED)

**BROWNS FERRY**

**NUCLEAR PLANT**

**UNIT 2 CYCLE 12**

**ASME SECTION XI**

**NIS-1**

**OWNER'S SUMMARY REPORT**

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                              DECATUR, ALABAMA 35609-2000  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## **UNIT 2 CYCLE 12**

### **NIS-1**

## **“OWNER’S REPORT FOR INSERVICE INSPECTION”**

### **TABLE OF CONTENTS**

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                      DECATUR, ALABAMA 35609-2000  
CHATTANOOGA, TENNESSEE 37402

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COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

APPENDIX I                      FORM NIS-1 OWNER'S REPORT

APPENDIX II                      SCOPE AND INTRODUCTION

SCOPE  
INTRODUCTION

APPENDIX III                      ISI ABSTRACT

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ASME CODE CASES  
UNIT 2 INTERVAL STATUS  
PERSONNEL AND EQUIPMENT CERTIFICATIONS

APPENDIX IV                      EXAMINATION LIMITATIONS

METHOD OF CALCULATION OF LIMITATIONS  
EXAMINATION LIMITATIONS

APPENDIX V                      EXAMINATION PLAN

KEY TO WELD TRACKING SYSTEM  
EXAMINATION PLAN OF CLASS 1 AND 2 COMPONENTS  
COMPONENT ISOMETRICS

APPENDIX VI                      SUMMARY OF INDICATIONS

SUMMARY OF INDICATIONS

ATTACHMENT 1                      AUGMENTED EXAMINATION SUMMARY

SECTION 1: AUGMENTED SUMMARY  
SECTION 2: EXAMINATIONS PERFORMED DURING  
UNIT 2 CYCLE 12 (EXAMINATION SUMMARY)

ATTACHMENT 2                      IWE-BFN CONTAINMENT INSERVICE INSPECTION PROGRAM

OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35609-2000
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COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## **APPENDIX I**

### **NIS-1 OWNER'S REPORT**

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1101 MARKET STREET                      DECATUR, ALABAMA 35609-2000  
CHATTANOOGA, TENNESSEE 37402

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COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## **Inservice Inspection Introduction Summary**

In accordance with paragraph IWA-6230 of 1995 Edition, 1996 Addenda of Section XI of the ASME Boiler and Pressure Vessel Code the following information is provided.

1. Date of document completion: May 27, 2003

2. Name of owner and address of principal offices:

Tennessee Valley Authority  
Office Of Nuclear Power  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

3. Name and address of the nuclear generating plant:

Browns Ferry Nuclear Plant  
P.O. Box 2000  
Decatur, Alabama 35602

4. Name or number assigned to the nuclear power unit by TVA:

Browns Ferry Nuclear Plant, Unit 2.

5. Commercial operation date of unit:

March 1, 1975

**As required by the Provisions of the ASME Code Rules**

**Note:** Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8.5 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.

FORM NIS-1 (back)

8. Examination Dates 07/18/01 to 03/14/03

9. Inspection Period Identification: First Period, 05/25/01 to 05/24/04

10. Inspection Interval Identification: 05/25/01 to 05/24/2011

11. Applicable Edition of Section XI 1995 Edition Addenda 1996

12. Date/Revision of Inspection Plan: 2-SI-4.6.G Revision 020

13. Abstract of Examinations and Tests. Include a list of examinations and tests and a statement concerning status of work required for the Inspection Plan.

See Appendix II, III, IV, V, VI, and Attachment 2

14. Abstract of Results of Examinations and Tests.

See Appendix II, III, IV, V, VI, and Attachment 2

15. Abstract of Corrective Measures. See Appendix VI

We certify that a) the statements made in this report are correct, b) the examinations and tests meet the Inspection Plan as required by the ASME Code, Section XI, and c) corrective measures taken conform to the rules of the ASME Code, Section XI.

Certificate of Authorization No. Not Applicable

Expiration Date Not Applicable

Date 6/2, 2003 Signed Tennessee Valley Authority  
Owner

By 

**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 Tennessee and employed by HSBI & I of Hartford, CT., have inspected the components described in this Owners' Report during the period 07/18/01 to 03/14/03, and state that to the best of my knowledge and belief, the Owner has performed examinations and tests and taken corrective measures described in this Owners' Report in accordance with the Inspection Plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations tests, and corrective measures described in this Owners' 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.

  
Inspectors Signature

Commissions

TN 3135

National Board, State, Province and No.

Date June 4, 2003



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**APPENDIX II**

**SCOPE**

**AND**

**INTRODUCTION**

OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35609-2000
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COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## Scope:

The scope of this appendix is to provide an overview of the Inservice inspections performed during the Unit 2/Cycle 12 Outage on Class 1 and 2 components for ASME Section XI Code credit and other augmented examinations.

## Introduction:

The examinations were performed in accordance with implementing plant surveillance instruction 2-SI-4.6.G "Inservice Inspection and Risk Informed Inservice Inspection Program Unit 2". 2-SI-4.6.G is organized to comply with the ISI NDE requirements of the 1995 Edition, 1996 Addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Division 1, Articles IWX-1000, IWX-2000, IWX-3000, and IWX-6000 in accordance with Title 10 Code of Federal Regulations (CFR) Part 50, 50.55a (g); to implement the Browns Ferry Nuclear Plant (BFN) Technical Requirements TR-3.4.3; and to fulfill the requirements of SPP-9.1, ASME Section XI Inservice Inspection Program.

Beginning in the Third Period of the Second Inspection Interval, Surveillance Instruction 2-SI-4.6.G implemented the NRC approved BFN Risk-Informed Inservice Inspection Program to address all piping locations that are subject to service induced degradation. In accordance with, "Westinghouse Owners Group (WOG) Application Of Risk-Informed Methods To Piping Inservice Inspection Topical Report, WCAP-14572 revision 1-NP-A, Section 4, Table 4.1-1," this program provides an acceptable alternative approach to the existing ASME Section XI requirements for scope and frequency of piping weld examinations, and satisfies the criteria of 10CFR50.55a(a)(3)(i) providing an acceptable level of quality and safety.

2-SI-4.6.G reflects the built-in limitations of the original plant design, geometry, construction, component materials and the current technology or state-of-the-art nondestructive examination techniques. The SI specifies the methods to be used and provides schedule tables from which specific items were scheduled for examination during the outage. Examinations were witnessed or verified by an Authorized Nuclear Inservice Inspector (ANII) and performed in accordance with the Section XI of the ASME Boiler and Pressure Vessel Code.

Inservice Inspections for the Unit 2 Cycle 12 refueling outage began on July 18, 2001 and ended on March 14, 2003. ISI examinations were performed on the following systems: Control Rod Drive (CRD), Core Spray (CS), Reactor Feedwater (FW), High Pressure Coolant Injection (HPCI), Main Steam (MS), Reactor Recirculation (RECIRC), Residual Heat Removal (RHR), Reactor Pressure Vessel (RPV), and Reactor Water Clean-up (RWCU).

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The majority of examinations were performed by the TVA Inspection Services Organization (ISO). Augmentation of personnel was provided by Wesdyne, Inc., and Framatome ANP.

An overview of ISI activities consists of the following:

- . ASME Section XI Class 1 and 2 Piping Examinations
- . ASME Section XI Class 1 Reactor Pressure Vessel Weld Examinations
- . ASME Section XI Class 1 and 2 Support Examinations
- . Reactor Pressure Vessel In-Vessel Visual Inspection Examinations (RPVII)
- . Augmented Examinations

OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35609-2000
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### **APPENDIX III**

### **ISI ABSTRACT**

OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35609-2000
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COMMERCIAL SERVICE DATE: MARCH 1, 1975	
NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.	

### **Examination Summary:**

The Unit 2, Cycle 12 Inservice Inspection (ISI) was the first scheduled refueling outage during the first inspection period of the third ASME Section XI 10-year inspection interval. Approximately 123 visual ( 7 of which were RPV Nozzle Inner Radius Sections Code Category B-D, Item No. B3.100, performed from vessel ID, reference RFR # 2-ISI-16 and 2-ISI-17), 2 visual exams were successive examinations, 48 ultrasonic ( 9 of these welds are inclusive to take credit for BWRVIP-75, IGSCC Category "C" credit), 10 magnetic particle and 8 liquid penetrant examinations were performed in support of code credit components. Also, preservice examinations were performed; 8 visual examinations. Six (6) Notification of Indications (NOI's) were issued to document indications identified during the performance of the examinations. These NOI's were evaluated by engineering and dispositioned (see Appendix VI, Summary of Indications). These examinations were performed on ASME Section XI Code Class 1 and 2 Components. ASME Code Category and Item Numbers for components examined are listed in Appendix V.

Other examinations were performed in accordance with BFN's augmented inspection program and are included in Attachment 1 for information. Approximately 273 visual, 15 ultrasonic, and 11 radiography examinations were performed in accordance with the augmented programs. These totals are inclusive of the Reactor Pressure Vessel Internals Inspection (RPVII) Augmented examination program on Unit 2 RPV internals.

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## ASME Code Cases

The following code cases have been approved for use as applicable during the Unit 2/Cycle 12 outage:

- N-498-1            Alternate Rules for 10-Year System Hydrostatic Testing for Class 1, 2 and 3 Systems Section XI Division 1
- N-532            Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report and Submission as Required by IWA-4000 and IWA-6000- Section XI Division 1.
- N-577            Risk-Informed Requirements for Class 1, 2, and 3 Piping, Method A, , Section XI, Division 1, (RIMS # R08 000601 846), with the more detailed provisions provided in WCAP-14572, Revision 1-NPA, "Westinghouse Owners Group Application Of Risk - Informed Methods To Piping Inservice Inspection Topical Report." Reference Safety Evaluation Report (SER) from NRC Date January 19, 2001.

**This percentage does not include Flow Accelerated Corrosion (FAC) Item # R1.18.**

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NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.	

**PERSONNEL/EQUIPMENT CERTIFICATIONS:**

NDE personnel certification records for TVA and contractor employees are maintained by TVA's Nuclear Engineering and Technical Services Corporate, Inspection Services Organization (ISO). These records are maintained as permanent QA records for a forty year plant life. Any details or specifics regarding NDE certification records should be directed to the ISO at the Sequoyah Training Center in Soddy-Daisy, Tennessee at telephone number (423) 843-4026.

NDE equipment certification records are maintained by the TVA ISO. Any details or specifics regarding NDE equipment certification records should be directed to ISO at the Sequoyah Training Center in Soddy Daisy, Tennessee at telephone number (423)843-4026.



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NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

**APPENDIX IV**  
**EXAMINATION LIMITATIONS**

OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35609-2000
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## METHOD OF CALCULATION OF LIMITATIONS

During the performance of Inservice Inspections, the ASME Section XI Code 1995 Edition, 1996 Addenda, requires the determination of the ultrasonic examination volume to establish the required beam path angles needed to maximize coverage and verify technique parameters. This information is necessary in those instances where there may be a reduction in the examination volume.

Surface examinations are typically conducted on 100% of the weld length plus a defined amount of base material on each side of the weld. Surface areas are calculated in those instances where there may be a reduction in the examination area.

The Code required ultrasonic examination volume or surface examination area for each type of piping weld or nozzle-to-vessel weld is depicted in the figures of IWB-2500 or IWC-2500. As depicted for piping welds, volume width generally constitutes the weld plus 1/4" on each side while volume thickness generally constitutes the lower 1/3 of the piping thickness for the length of the weld. As depicted, for nozzle-to-vessel welds, the volume width generally constitutes the weld plus 1/2t (ts/2) on each side of the weld while volume thickness generally constitutes the entire component thickness (i.e. full volume). The volume changes with variations in weld configuration (e.g. transition between different pipe thickness or nozzle-to-vessel configuration). Therefore, it is necessary to determine the required volume for each group of similar welds to allow setting of scanner limits for automated ultrasonic examinations and scan paths for manual ultrasonic examinations. Surface examination area is generally the weld plus 1/2-inch of base material on each side of the weld.

Reactor Pressure Vessel Nozzle to shell or head weld examination volume has been reduced to 1/2" beyond the widest part of the boundary of the deposited weld material in lieu of the requirements of ASME Section XI Figures IWB-2500-7 (a) and IWB-2500-7 (b) per Request For Relief No. PDI-2 .

Paragraph IWA-2232 of the Code requires that the ultrasonic examination of piping systems be conducted in accordance with Appendix I of ASME Section XI. Appendix I requires that the ultrasonic examination of piping systems be conducted in accordance with Appendix VIII of ASME Section XI, and the nozzle-to-vessel welds be conducted in accordance with Article 4 of ASME Section V, 1995 Edition, 1996 Addenda as supplemented by Appendix I of ASME Section XI. Appendix VIII and Article 4 define the applicable examination methods (e.g., examination angles, scan directions) to be used during examination.

TVA developed procedure N-GP-28 to provide a standardized methodology for calculation of Code coverage in those instances where configuration or other components cause an examination limitation. Components/welds with limitations were evaluated in terms of the feasibility of other NDE techniques or methods to increase coverage.

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#### EXAMINATION LIMITATIONS:

A tabulation of NDE examination limitations recorded during the Unit 2/Cycle 12 Inservice Inspection is contained in this Appendix.

The following items/components had less than 100% R-A/Code coverage achieved. In accordance with the 1995 Edition, 1996 Addenda of ASME Section XI Code and NRC Information Notice, 98-42 "Implementation Of 10 CFR 50.55a(g) Inservice Inspection Requirements," which defines, "essentially 100%" of each weld to mean "greater than 90%" in 10CFR 50.55a(g)(6)(ii)(A)(2) for required examination coverage of reactor pressure vessel welds. This standard has been applied to all examinations of welds or other areas required by ASME Section XI.

<u>SYSTEM</u>	<u>COMPONENT ID</u>	<u>COVERAGE CALCULATED</u>		<u>REPORT NO.</u>
		<u>ASME XI</u>	<u>10CFR50.55a</u>	
RHR	RHRG-2-07A	92.5%	92.5%	R-027
RPV	RCH-2-1V	94%	94%	R-113
RPV	N6A-NV	90.5%	90.5%	R-110

The following items/components had examination limitations outside those specified in 1995 Edition, 1996 Addenda of ASME Section XI Code and NRC Information Notice, 98-42 "Implementation Of 10 CFR 50.55a(g) Inservice Inspection Requirements." The Inservice Inspection Program 2-SI-4.6.G will be revised to incorporate these limitations in the form of Requests for Relief (RFR). Program revisions, including Requests for Relief, will be submitted to the NRC.

<u>SYSTEM</u>	<u>COMPONENT ID</u>	<u>COVERAGE CALCULATED</u>		<u>REPORT NO.</u>	<u>RFR No.</u>
		<u>ASME XI</u>	<u>10CFR50.55a</u>		
RECIRC	KR-2-25	75%	50%	R-066	2-ISI-18
RWCU	RWCU-2-003-G003	100%	75%	R-124	2-ISI-18

The following items/components had examination limitations outside those specified in 1995 Edition, 1996 Addenda of ASME Section XI Code and NRC Information Notice, 98-42 "Implementation Of 10 CFR 50.55a(g) Inservice Inspection Requirements." The Inservice Inspection Program 2-SI-4.6.G will be revised to incorporate these limitations in the form of Requests for Relief (RFR). Program revisions, including Requests for Relief, will be submitted to the NRC. Reference BFN RFR: 2-ISI-16 and 2-ISI-17.

<u>SYSTEM</u>	<u>COMPONENT ID</u>	<u>COVERAGE CALCULATED</u>	<u>REPORT NO.</u>	<u>RFR No.</u>
RPV	N1A	48.8%	R-160	2-ISI-19
RPV	N2B	51.5%	R-161	2-ISI-19
RPV	N2F	51.5%	R-162	2-ISI-19
RPV	N2J	51.5%	R-163	2-ISI-19
RPV	N3D	47.3%	R-164	2-ISI-19
RPV	N4A	45.4%	R-141	2-ISI-19
RPV	N4B	45.4%	R-142	2-ISI-19
RPV	N4C	45.4%	R-143	2-ISI-19
RPV	N4D	45.4%	R-144	2-ISI-19
RPV	N4E	45.4%	R-145	2-ISI-19

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CHATTANOOGA, TENNESSEE 37402	

UNIT: TWO CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

**EXAMINATION LIMITATIONS: (CONTINUED)**

<u>SYSTEM</u>	<u>COMPONENT ID</u>	<u>COVERAGE CALCULATED</u>	<u>REPORT NO.</u>	<u>RFR No.</u>
RPV	N4F	45.4%	R-146	2-ISI-19
RPV	N8A	89.5%	R-165	2-ISI-19

The following BFN Unit 2 Reactor Pressure Vessel Inner Radius Sections, Code Category, B-D, Item No. B3.100, received an Enhanced Remote Visual (EVT-1) examination, capable of a 1-mil wire resolution in accordance with ASME Section XI, VT-1 requirements. This was in lieu of a volumetric examination required in accordance with the 1995 Edition, 1996 Addenda of ASME Section XI Code.

This was in accordance with Request For Relief # 2-ISI-17 for the Reactor Pressure Vessel Nozzles, N2A, N2B, N2C, N2D, N2E, N2F, N2G, N2H, N2J, N2K, N5A, N5B, N8A, and N8B, approved by the NRC on October 07, 2001, (TAC NO. MB4880). TVA provided the NRC specific limitations and estimated coverage's for each nozzle in the Request For Relief # 2-ISI-17. TVA is reporting the actual coverage's obtained during the Enhanced Remote Visual (EVT-1) examination, capable of a 1-mil wire resolution in this report below.

<u>SYSTEM</u>	<u>COMPONENT ID</u>	<u>ESIMATED COVERAGE</u>	<u>ACTUAL COVERAGE</u>	<u>REPORT NO.</u>
RPV	N2B-IR	50%	60%	R-169
RPV	N2F-IR	50%	60%	R-169
RPV	N2J-IR	50%	60%	R-169
RPV	N8A-IR	60%	60%	R-169

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                    P.O. BOX 2000  
1101 MARKET STREET                        DECATUR, ALABAMA 35609-2000  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                    CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## **APPENDIX V**

### **EXAMINATION PLAN**

OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35609-2000
UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.	
COMMERCIAL SERVICE DATE: MARCH 1, 1975	
NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.	

The following printout is an outage ISI report designed to meet the reporting requirements of IWA-6000 of the ASME Section XI Code. This report contains Unit 2/Cycle 12 Inservice Inspection data for Code Class 1 and Code Class 2 components selected for ASME Section XI credit. Attachment 1 contains a summary of Augmented examinations performed during Unit 2/Cycle 12 outage. Attachment 2 contains a summary of IWE-Containment Inservice Inspection (CISI) examinations performed during the Unit 2 Cycle 12 outage. Essential unit and system files are contained herein as a reference to describe abbreviations and features in the printout. The aforementioned precedes the outage ISI report.

Code Class 3 Inservice data and reports are contained in the Browns Ferry Inservice Inspection (ISI) Final Plant Report.

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                      DECATUR, ALABAMA 35609-2000  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

**UNIT 2/CYCLE 12**  
**ISI REPORT OF CLASS 1 AND CLASS 2**  
**COMPONENTS**

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                      DECATUR, ALABAMA 35602  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

### **Key to computer weld/feature tracking system**

A. CYCLE- Refueling Cycle Number and Unit Number

B. SYSTEM- System/Component

CCWS- Closed Cooling Water System (Reactor Building Closed Cooling Water)

CRDS- Control Rod Drive System

CSS- Core Spray System

EECW- Emergency Equipment Cooling Water System

FPCS- Fuel Pool Cooling System

FWS- Feedwater System

HPCIS- High Pressure Coolant Injection System

MSS- Main Steam System

RCICS- Reactor Core Isolation Cooling System

RECIR- Recirculation System

RHRS- Residual Heat Removal System

RHRWS- Residual Heat Removal Service Water System

RPV- Reactor Pressure Vessel

RWCU- Reactor Water Cleanup System

C. Component Number/Identifier

D. Drawing- ISI Drawing Number and sheet number from the Surveillance Instruction (SI-4.6.G)

E. Exreq- ASME Section XI Code year and interval (See Note # 1)

F. Category- Code Category

G. Item Number- Code Item Number

H. Exam Scheduled

I. NDE METH- Nondestructive Examination (NDE) Method

ET- Eddy Current Test

MT- Magnetic Particle Test

PT- Penetrant Test

RT- Radiography Test

UT- Ultrasonic Test

VT- Visual Test



OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35602
--	--

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

J. Calibration Standard- If required

K. Exam Date- Date of Inspection

L. Exam Report No.- Examination Report Number

M. Exam Results - P - Pass

R- Rejectable

E- Evaluated acceptable for continued operation by Engineering

O. COMMENTS

**NOTE (1): EXREQ Identifiers:**

96E-03 - ASME Section XI Code 1995 Edition, 1996 Addenda/ Third Interval

P95-96 - Preservice Examination Cycle 12/ Third Interval

B01-02 - Feedwater Sparger Visual (VT-1) Examinations to 0-TI-365

B02-02 - Examinations performed to BWRVIP-75 for IGSCC detection

B04-02 - Weld inspection for Pipe Whip Protection

B07-02 - Examinations performed to the recommendations of BWRVIP-27 and BWRVIP-49

S01-03 - Successive Examinations

V01-02 - Voluntary Examinations

OTI365 - Augmented examinations of RPV Internals


November 26, 2002

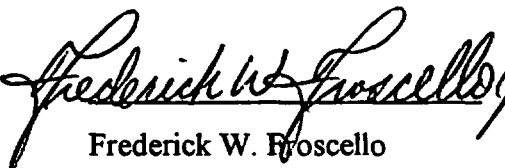
Albert Ladd, ANI/ANII, PEC-1C, BFN

**BROWNS FERRY NUCLEAR PLANT (BFN) - UNIT 2 CYCLE 12 REFUELING  
OUTAGE INSERVICE INSPECTION (ISI) SCAN PLAN, REVISION 0.**

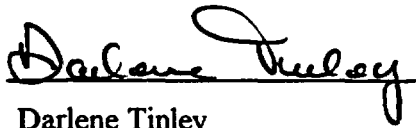
Attached for your review is the BFN Unit 2 Cycle 12 refueling outage ISI Scan Plan, Revision 0. The examinations are scheduled to be performed during the Unit 2 outage by BFN Site Engineering/Component Engineering. The examinations are performed to satisfy the requirements of ASME Code Section XI, 1995 Edition, 1996 Addenda.

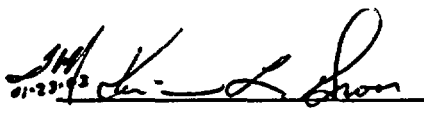
This document was prepared by Hal Hodges of BFN Component Engineering and coordinated with Fred Froscello and Darlene Tinley of TVAN Inspection Services.

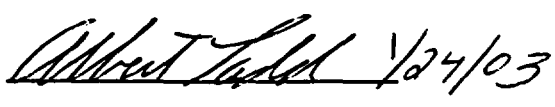
 1-10-03  
Harold E. Hodges  
BFN Component Engineering

 11/26/02  
Frederick W. Froscello  
ISO, ISI/NDE, Supervisor, BFN

*Handwritten notes:* #17 01/10/03  
#18 12/06/02

  
Darlene Tinley  
ISO, NDE Level III

 11/23/03  
Kevin Groom  
BFN Mechanical Design Engineering  
FAC Concurrence

 1/24/03  
Albert Ladd, ANI/ANII  
Concurrence

cc: R. L. Golub, PEC-1C, BFN  
M. L. Turnbow, STC-II,

Revision 000

01/10/2003

Total Examinations: 242

**TENNESSEE VALLEY AUTHORITY**  
**BROWNS FERRY NUCLEAR POWER PLANT - UNIT 2**  
**EXAMS SCHEDULED FOR CYCLE 12**

SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CALSTD	COMPDIS	NOMTHCK	COMPDESA	COMPDESB
CRDS	2-47B468S0006		2-ISI-0041-C-01	12	F1.20B ✓	F-A	96E-03	VT-3	N-VT-1		06.00		RGD HGR	
CRDS	2-47B468S0007		2-ISI-0041-C-01	12	F1.20B ✓	F-A	96E-03	VT-3	N-VT-1		06.00		RGD HGR	
CRDS	2-47B468S0012		2-ISI-0041-C-01	12	F1.20A	F-A	96E-03	VT-3	N-VT-1		06.00		RGD STRT	HRS
CRDS	2-47B468S0016		2-ISI-0041-C-02	12	F1.40B	F-A	96E-03	VT-3	N-VT-1		12.00		RGD HGR	
CRDS	2-47B468S0017		2-ISI-0041-C-02	12	F1.40B	F-A	96E-03	VT-3	N-VT-1		12.00		RGD SUP	
CRDS	2-47B468S0018		2-ISI-0041-C-02	12	F1.40B	F-A	96E-03	VT-3	N-VT-1		12.00		VSL SUP	
CRDS	2-47B468S0018-IA		2-ISI-0041-C-02	12	C3.20	C-C	96E-03	MT	N-MT-6			0.688	WLD ATT	
CRDS	2-47B468S0040		2-ISI-0041-C-01	12	F1.20A	F-A	96E-03	VT-3	N-VT-1		06.00		RGD HGR	
CSS	2-47B458S0004		2-ISI-0280-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
CSS	2-47B458S0007		2-ISI-0280-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
CSS	2-47B458S0010		2-ISI-0280-C-01	12	F1.10C	F-A	96E-03	VT-3	N-VT-1		12.00		VAR SUP	
CSS	CS-2-H-1		2-ISI-0105-C-02	12	F1.20A	F-A	96E-03	VT-3	N-VT-1		12.00		RGD HGR	
CSS	CS-2-H-11		2-ISI-0105-C-02	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		12.00		VAR SUP	
CSS	CS-2-H-11-IA		2-ISI-0105-C-02	12	C3.20	C-C	96E-03	MT	N-MT-6			0.750	WLD ATT	
CSS	CS-2-H-2		2-ISI-0105-C-02	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		14.00		VAR SUP	
CSS	CS-2-H-21		2-ISI-0105-C-01	12	F1.20A	F-A	96E-03	VT-3	N-VT-1		14.00		RGD SUP	
CSS	CS-2-H-7		2-ISI-0105-C-02	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		14.00		VAR SUP	
CSS	CS-2-H-7-IA		2-ISI-0105-C-02	12	C3.20	C-C	96E-03	MT	N-MT-6			1.000	WLD ATT	
CSS	CS-2-PS-01		2-ISI-0105-C-01	12	F1.40B	F-A	96E-03	VT-3	N-VT-1				PMP SUP	
CSS	CS-48N1025-2-B		2-ISI-0105-C-02	12	F1.20B	F-A	96E-03	VT-3	N-VT-1		16.00		RGD ANCH	
CSS	DCS-2-07	2-075-001	2-ISI-0271-C-01	12	R1.16C	R-A	96E-03	UT	N-UT-64	SS Alt Cal Block	12.00	0.687	P	EL
CSS	DCS-2-07	2-075-001	2-ISI-0271-C-01	12	NU0313	C	B02-02	UT	N-UT-64	SS Alt Cal Block	12.00	0.687	P	EL
CSS	DCS-2-13A	2-075-001	2-ISI-0271-C-01	12	R1.16C	R-A	96E-03	UT	N-UT-64	SS Alt Cal Block	12.00	0.687	P	P
CSS	DCS-2-13A	2-075-001	2-ISI-0271-C-01	12	NU0313	C	B02-02	UT	N-UT-64	SS Alt Cal Block	12.00	0.687	P	P
CSS	DSCS-2-01	2-075-002	2-ISI-0271-C-01	12	R1.16C	R-A	96E-03	UT	N-UT-64	SS Alt Cal Block	12.00	0.687	P	EL
CSS	DSCS-2-01	2-075-002	2-ISI-0271-C-01	12	NU0313	C	B02-02	UT	N-UT-64	SS Alt Cal Block	12.00	0.687	P	EL
CSS	DSCS-2-02	2-075-002	2-ISI-0271-C-01	12	R1.16C	R-A	96E-03	UT	N-UT-64	SS Alt Cal Block	12.00	0.687	EL	P
CSS	DSCS-2-02	2-075-002	2-ISI-0271-C-01	12	NU0313	C	B02-02	UT	N-UT-64	SS Alt Cal Block	12.00	0.687	EL	P
CSS	FCV-75-26		2-ISI-0271-C-01	12	B12.50	B-M-2	96E-03	VT-3	N-VT-1		12.75		INT	

SORT ORDER: SYSTEM-WELDNO

Page 1 of 7

SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CALSTD	COMPDIA	NOMTHCK	COMPDESA	COMPDESB
CSS	TCS-2-407		2-ISI-0271-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	CS Alt Cal Block	12.75	0.687	EL	P
EECWS	0-37B205S0056-1A		ISI-0368-C-01	12	D1.20	D-A	96E-03	VT-1	N-VT-1			0.375	WLD ATT	
EECWS	1-47B451R0055-1A		ISI-0368-C-14	12	D1.20	D-A	96E-03	VT-1	N-VT-1			0.750	WLD ATT	
EECWS	RHRWS-PMP-0-B1		ISI-0368-C-02	12	F1.40B	F-A	96E-03	VT-3	N-VT-1				PMP SUP	
EECWS	RHRWS-STR-0-A1		ISI-0368-C-01	12	F1.40B	F-A	96E-03	VT-3	N-VT-1				RGD HGR	
FWS	2-47B415H0001		2-ISI-0277-C-01	12	F1.40C	F-A	96E-03	VT-3	N-VT-1		20.00		VAR SUP	
FWS	2-47B415H0004		2-ISI-0277-C-01	12	F1.10C	F-A	96E-03	VT-3	N-VT-1		12.00		CFS	
FWS	2-47B415H0004-1A		2-ISI-0277-C-01	12	B10.20	B-K	96E-03	MT	N-MT-6			1.625	WLD ATT	
FWS	2-47B415H0005		2-ISI-0277-C-01	12	F1.10C	F-A	96E-03	VT-3	N-VT-1		20.00		VAR SUP	
FWS	2-47B415H0007		2-ISI-0277-C-01	12	F1.40C	F-A	96E-03	VT-3	N-VT-1		24.00		VAR SUP	
FWS	2-47B415H0010		2-ISI-0277-C-01	12	F1.10C	F-A	96E-03	VT-3	N-VT-1		20.00		CFS	
FWS	2-47B415H0010-1A		2-ISI-0277-C-01	12	B10.20	B-K	96E-03	MT	N-MT-6			0.500	WLD ATT	
FWS	2-47B415S0002		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
FWS	2-47B415S0002-1A		2-ISI-0277-C-01	12	B10.20	B-K	96E-03	MT	N-MT-6			0.500	WLD ATT	
FWS	2-47B415S0005		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
FWS	2-47B415S0008		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		24.00		SNBR	
FWS	2-47B415S0010		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
FWS	2-47B415S0014		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
FWS	2-47B415S0019		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		20.00		SNBR	
FWS	2-47B415S0025		2-ISI-0277-C-01	12	F1.10B	F-A	96E-03	VT-3	N-VT-1		24.00		RGD HGR	
FWS	2RFW1B-27E	2-003-041	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	Step Wedge			EL	
FWS	2RFW1B-30P	2-003-042	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	Step Wedge			P	
FWS	2RFW1B-39E	2-003-043	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	Step Wedge			EL	
FWS	2RFW1B-44E	2-003-043	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	Step Wedge			EL	
FWS	2RFW1B-6E	2-003-007	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	Step Wedge			EL	
FWS	2RFW2A-13T	2-003-036	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	Step Wedge			TEE	
FWS	2RFW2A-16T	2-003-036	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	Step Wedge			TEE	
FWS	2RFW2A-27E	2-003-037	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	Step Wedge			EL	
FWS	2RFW2A-39E	2-003-039	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	Step Wedge			EL	
FWS	2RFW2A-45P	2-003-039	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	Step Wedge			P	
FWS	3-568		2-ISI-0269-C-01	12	B12.50	B-M-2	96E-03	VT-3	N-VT-1		24.00		INT	
FWS	GFW-2-15		2-ISI-0269-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	CS Alt Cal Block	12.75	0.844	TEE	P
FWS	KFW-2-38		2-ISI-0269-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	CS Alt Cal Block	12.75	0.844	EL	P
FWS	KFW-2-39		2-ISI-0269-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	CS Alt Cal Block	12.75	0.844	P	EL
HPCIS	2-47B455H0048-1A		ISI-0275-C-01	12	B10.20	B-K	96E-03	MT	N-MT-6			0.237	WLD ATT	
HPCIS	2-47B455H0060		2-ISI-0130-C-01	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		10.00		VAR SUP	
HPCIS	2-47B455H0061		2-ISI-0130-C-01	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		10.00		VAR SUP	

SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHED	NDEPROC	CALSTD	COMPDIS	NOMTHCK	COMPDESA	COMPDESB
HPCIS	2-47B455H0065		2-ISI-0130-C-01	12	F1.20C	F-A	P95-96	VT-3	N-VT-1		10.00		VAR SUP	
HPCIS	2-47B455H0066		2-ISI-0130-C-02	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		14.00		VAR SUP	
HPCIS	2-47B455S0003		ISI-0275-C-01	12	F1.10B	F-A	96E-03	VT-3	N-VT-1		10.00		RGD HGR	
HPCIS	FCV-73-03		ISI-0275-C-01	12	B12.50	B-M-2	96E-03	VT-3	N-VT-1		10.00		INT	
HPCIS	THPCI-2-066	2-073-001	2-ISI-0273-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	CS Alt Cal Block	10.00	0.593	TEE	P
HPCIS	THPCI-2-068	2-073-001	2-ISI-0273-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	CS Alt Cal Block	10.00	0.593	EL	P
HPCIS	THPCI-2-070	2-073-001	2-ISI-0273-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	CS Alt Cal Block	10.00	0.593	EL	P
HPCIS	THPCI-2-072		2-ISI-0273-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	CS Alt Cal Block	10.00	0.593	VLV	P
HPCIS	THPCI-2-075	2-073-001	2-ISI-0273-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	CS Alt Cal Block	10.00	0.593	P	EL
HPCIS	THPCI-2-107	2-073-002	ISI-0128-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	CS Alt Cal Block	10.00	0.593	EL	P
HPCIS	THPCI-2-109	2-073-002	ISI-0128-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	CS Alt Cal Block	10.00	0.593	EL	P
MSS	2-47B400S0039		2-ISI-0279-C-02	12	F1.10A	F-A	96E-03	VT-3	N-VT-1		26.00		RGD HGR	
MSS	GMS-2-24		2-ISI-0222-C-02	12	TS3432	B-J	B04-02	UT	N-UT-76	CS Alt Cal Block	26.00	0.950	P	TEE
MSS	GMS-2-32		2-ISI-0222-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	CS Alt Cal Block	26.00	0.950	P	EL
MSS	HPAS-2-H-02		2-ISI-0079-C-02	12	F1.20C	F-A	P95-96	VT-3	N-VT-1		06.00		VAR SUP	
MSS	HPAS-2-H-07		2-ISI-0079-C-02	12	F1.20C	F-A	P95-96	VT-3	N-VT-1		06.00		VAR SUP	
MSS	MS-2-H-14-1A		2-ISI-0079-C-01	12	C3.20	C-C	96E-03	MT	N-MT-6			1.500	WLD ATT	
MSS	MSBC-2-01		2-ISI-0312-B-01	12	B7.50	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
MSS	MSBC-2-02		2-ISI-0312-B-01	12	B7.50	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
MSS	MSBC-2-05		2-ISI-0312-B-01	12	B7.50	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
MSS	MSBC-2-07		2-ISI-0312-B-01	12	B7.50	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
RBCCW	2-47B464S0121		ISI-0032-C-01	12	F1.20A	F-A	96E-03	VT-3	N-VT-1		08.00		RGD HGR	
RBCCW	2-47B464S0228		ISI-0032-C-01	12	F1.20D	F-A	96E-03	VT-3	N-VT-1		08.00		SNBR	
RBCCW	2-47B464S0228-1A		ISI-0032-C-01	12	C3.20	C-C	96E-03	MT	N-MT-6			0.500	WLD ATT	
RCICS	2-47B456R0001-1A		2-ISI-0131-C-01	12	C3.20	C-C	96E-03	MT	N-MT-6			0.500	WLD ATT	
RCWS	1-47B451S0228		ISI-0391-C-01	12	F1.30A	F-A	96E-03	VT-3	N-VT-1		06.00		HRS	
RCWS	1-47B451S0356		ISI-0391-C-01	12	F1.30B	F-A	96E-03	VT-3	N-VT-1		06.00		RGD HGR	
RECIR	2-47B408S0044		2-ISI-0278-C-02	12	F1.40C	F-A	96E-03	VT-3	N-VT-1		12.00		CFS	
RECIR	2-47B408S0056		2-ISI-0278-C-01	12	F1.40C	F-A	96E-03	VT-3	N-VT-1		12.00		CFS	
RECIR	2RB5	2-068-012	2-ISI-0270-C-02	12	R1.16A	R-A	96E-03	UT	N-UT-64	SS Alt Cal Block	12.00	0.569	P	EL
RECIR	KR-2-24	2-068-014	2-ISI-0270-C-02	12	R1.16C	R-A	96E-03	UT	N-UT-64	SS Alt Cal Block	28.00	1.322	EL	P

SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CALSTD	COMPdia	NOMTHCK	COMPDESA	COMPDESB
RECIR	KR-2-24	2-068-014	2-ISI-0270-C-02	12	NU0313	C	B02-02	UT	N-UT-64	SS Alt Cal Block	28.00	1.322	EL	P
RECIR	KR-2-25	2-068-014	2-ISI-0270-C-02	12	R1.16C	R-A	96E-03	UT	N-UT-64	SS Alt Cal Block	28.00	1.322	P	TEE
RECIR	KR-2-25	2-068-014	2-ISI-0270-C-02	12	NU0313	C	B02-02	UT	N-UT-64	SS Alt Cal Block	28.00	1.322	P	TEE
RECIR	KR-2-45	2-068-001	2-ISI-0270-C-01	12	R1.16C	R-A	96E-03	UT	N-UT-64	SS Alt Cal Block	28.00	1.138	P	EL
RECIR	KR-2-45	2-068-001	2-ISI-0270-C-01	12	NU0313	C	B02-02	UT	N-UT-64	SS Alt Cal Block	28.00	1.138	P	EL
RECIR	RBC-2-1		2-ISI-0270-C-01	12	B7.50	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
RHRS	2-47B452S0227-1A		2-ISI-0276-C-01	12	B10.20	B-K	96E-03	PT	N-PT-9			0.500	WLD ATT	
RHRS	DRHR-2-03B	2-074-005	2-ISI-0221-C-01	12	R1.16G	R-A	96E-03	VT-2	N-VT-4		24.00	1.219	P	P
RHRS	DRHR-2-03B	2-074-005	2-ISI-0221-C-01	12	NU0313	G	B02-02	VT-2	N-VT-4		24.00	1.219	P	P
RHRS	DRHR-2-13B	2-074-013	2-ISI-0221-C-01	12	R1.16G	R-A	96E-03	VT-2	N-VT-4		24.00	1.219	P	P
RHRS	DRHR-2-13B	2-074-013	2-ISI-0221-C-01	12	NU0313	G	B02-02	VT-2	N-VT-4		24.00	1.219	P	P
RHRS	DSRHR-2-07		2-ISI-0221-C-01	12	NU0313	C	B02-02	UT	N-UT-64	SS Alt Cal Block	24.00	1.219	P	EL
RHRS	DSRHR-2-07		2-ISI-0221-C-01	12	TS3432	B-J	B04-02	UT	N-UT-64	SS Alt Cal Block	24.00	1.219	P	EL
RHRS	FCV-74-54		2-ISI-0221-C-01	12	B12.50	B-M-2	96E-03	VT-3	N-VT-1		24.00		INT	
RHRS	FCV-74-67		2-ISI-0221-C-01	12	B12.50	B-M-2	96E-03	VT-3	N-VT-1		24.00		INT	
RHRS	RHR-2-R-95		2-ISI-0324-C-09	12	F1.20D	F-A	96E-03	VT-3	N-VT-1		24.00		SNBR	
RHRS	RHRG-2-05-A		2-ISI-0406-C-01	12	C2.33	C-B	96E-03	VT-2	N-VT-4		10.50	0.875	NOZ	
RHRS	RHRG-2-06-A		2-ISI-0406-C-01	12	C2.33	C-B	96E-03	VT-2	N-VT-4		10.50	0.875	NOZ	
RHRS	RHRG-2-07-A		2-ISI-0406-C-01	12	C1.10	C-A	96E-03	UT	N-UT-18	BF-26	54"	0.875	SHL	FLG
RHRS	RHRG-2-11-A		2-ISI-0406-C-01	12	C2.21	C-B	96E-03	MT	N-MT-6		10.00	0.875	NOZ	HD
RHRS	RHRG-2-11-A		2-ISI-0406-C-01	12	C2.21	C-B	96E-03	UT	N-UT-18	BF-32	10.00	0.875	NOZ	HD
RHRS	RHRG-2-13-A		2-ISI-0406-C-01	12	F1.40B	F-A	S01-03	VT-3	N-VT-1				HVES	
RHRS	RHRG-2-14-D		2-ISI-0406-C-01	12	F1.40B	F-A	S01-03	VT-3	N-VT-1				HVES	
RHRSW	2-17B300S0091		2-ISI-0145-C-01	12	F1.30A	F-A	96E-03	VT-3	N-VT-1		16.00		RGD HGR	
RHRSW	2-47B450H0043-1A		2-ISI-0145-C-02	12	D1.20	D-A	96E-03	VT-1	N-VT-1			0.625	WLD ATT	
RHRSW	2-47B450R0028		2-ISI-0145-C-02	12	F1.30A	F-A	96E-03	VT-3	N-VT-1		12.00		RGD STRT	
RPV	N-16A-SE		2-ISI-0383-C-01	12	NU0313	SIL571	B07-02	UT	N-UT-64	SS Alt Cal Block	2.00	0.218	NOZ	SE
RPV	N-16B-SE		2-ISI-0383-C-02	12	NU0313	SIL571	B07-02	UT	N-UT-64	SS Alt Cal Block	2.00	0.250	NOZ	SE
RPV	N1A		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	28.00	6.600	SHL	NOZ
RPV	N1A-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	N-VT-1		28.00	6.600	NOZ IR	
RPV	N2B		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	12.00	6.600	NOZ	SHL
RPV	N2B-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	N-VT-1		12.00	6.600	NOZ IR	
RPV	N2F		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	12.00	6.6	NOZ	SHL

SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CALSTD	COMPdia	NOMTHCK	COMPDESA	COMPDESB
RPV	N2F-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	N-VT-1		12.00	6.600	NOZ IR	
RPV	N2J		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	12.00	6.600	NOZ	SHL
RPV	N2J-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	N-VT-1		12.00	6.600	NOZ IR	
RPV	N3D		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	26.00	6.600	NOZ	SHL
RPV	N3D-JR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	N-VT-1		26.00	6.600	NOZ IR	
RPV	N4A		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ	SHL
RPV	N4A-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4A-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ IR	
RPV	N4A-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT				NOZ IR	NOZ BR
RPV	N4B		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ	SHL
RPV	N4B-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4B-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ IR	
RPV	N4B-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT				NOZ IR	NOZ BR
RPV	N4C		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ	SHL
RPV	N4C-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4C-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ IR	
RPV	N4C-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT				NOZ IR	NOZ IR
RPV	N4D		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ	SHL
RPV	N4D-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4D-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ IR	
RPV	N4D-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT				NOZ IR	NOZ BR
RPV	N4E		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ	SHL
RPV	N4E-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4E-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ IR	
RPV	N4E-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT				NOZ IR	NOZ BR
RPV	N4F		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ	SHL
RPV	N4F-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4F-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ IR	
RPV	N4F-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT				NOZ IR	NOZ BR
RPV	N5A		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	10.00	6.6	NOZ	SHL
RPV	N5A-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	N-VT-1		10.00	6.600	NOZ IR	
RPV	N6A-IR		ISI-0408-C-01	12	B3.100	B-D	96E-03	VT-1E	N-VT-1		06.00	4.340	NOZ IR	
RPV	N6A-NV		ISI-0408-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-19&BF-18	6.00	4.340	NOZ	CL HD
RPV	N8A		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	04.06	6.600	NOZ	SHL
RPV	N8A-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	N-VT-1		04.06	6.600	NOZ IR	
RPV	RCH-2-1C		ISI-0408-C-01	12	B1.21	B-A	96E-03	UT	N-UT-78	BF-19	~145	4.000	CH CS	
RPV	RCH-2-1V		ISI-0408-C-01	12	B1.22	B-A	96E-03	UT	N-UT-78	BF-19	~96L	4.000	VERT LS	
RPV	RCH-2-2V		ISI-0408-C-01	12	B1.22	B-A	96E-03	UT	N-UT-78	BF-19	~96L	4.000	VERT LS	
RPV	RPV-INTERIOR		2-CHM-2046-C-02	12	B13.10	B-N-1	96E-03	VT-3	VENDOR VT				INT	

SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHED	NDEPROC	CALSTD	COMPdia	NOMTHCK	COMPdesA	COMPdesB
RPV	RPV-NUTS-2-01		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-02		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-03		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-04		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-05		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-06		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-07		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-08		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-09		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-10		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-11		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-12		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-13		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-14		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-15		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-16		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-17		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-18		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-19		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-20		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-21		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-22		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-23		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-24		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-25		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-26		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-27		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-28		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-29		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-30		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-STAB-2-1		ISI-0415-C-01	12	F1.40C	F-A	96E-03	VT-3	N-VT-1				STAB	
RPV	RPV-STAB-2-1A-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1B-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1C-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1D-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1E-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1F-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1G-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1H-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-WASH-2-01		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	



SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CALSTD	COMPdia	NOMTHCK	COMPDESA	COMPDESB
RPV	RPV-WASH-2-02		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-03		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-04		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-05		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-06		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-07		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-08		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-09		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-10		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-11		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-12		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-13		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-14		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-15		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-16		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-17		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-18		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-19		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-20		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-21		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-22		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-23		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-24		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-25		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-26		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-27		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-28		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-29		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-30		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RWCUS	DSRWC-2-06	2-069-001	2-ISI-0272-C-01	12	NU0313	C	B02-02	UT	N-UT-64	SS Alt Cal Block	06.00	0.432	EL	P
RWCUS	DSRWC-2-06	2-069-001	2-ISI-0272-C-01	12	TS3432	B-J	B04-02	UT	N-UT-64	SS Alt Cal Block	06.00	0.432	EL	P
RWCUS	FCV-69-001		2-ISI-0272-C-01	12	B12.50	B-M-2	96E-03	VT-3	N-VT-1		06.00		INT	
RWCUS	RWCU-2-003-G003	2-069-002	2-ISI-0272-C-01	12	R1.16A	R-A	96E-03	UT	N-UT-64	SS Alt Cal Block	6.00	0.432	PEN	P

Unit/ Cycle	Scan Plan Rev	System	Component/Identifier	A S M E X I	Revision	Reason for Revision	Approved by ISI/NDE Sign & Date	Approved by NDE Level III Sign & Date	Database Revised by ISO Sign & Date	Data Base Revision Verified by ISI/NDE Sign & Date
2/c12	1	RPV	N10-SE, N11A-SE, N11B-SE, N12A-SE N12B-SE, N16A-SE AND N16B-SE	1	ADD RPV NDE/SAFE ENDS AS FOLLOWS N10-SE, N11A-SE N11B-SE, N12A-SE N12B-SE, N16A-SE AND N16B-SE	VT2 Augmented PER 25E-4.6.6 R19 PMA 7.11.10 + GE-SIL 512.	<i>[Signature]</i> 1/15/03	<i>[Signature]</i> 1/15/03	<i>[Signature]</i> 1/15/03	<i>[Signature]</i> 3/15/03
2/c12	1	RHR 074	RHRG-2-11-A	2	Delete MT/UT EXAMS of RHRG-2-11-A	Does not meet Requirements for exam per Table DUC-2500 code cat GB Item C2.21 Notes 1 + 2 in table	<i>[Signature]</i> 1/29/03	<i>[Signature]</i> 1/29/03	<i>[Signature]</i> 1/29/03	<i>[Signature]</i> 3/1/03
2/c12	1	CRD 85	2-47B46850007	2	Delete Support 2-47B46850007	Added Support 2-47B4685001 AS a SUBSTITUTE to SAVE RAD DOSE	<i>[Signature]</i> 1/25/03	<i>[Signature]</i> 1/25/03	<i>[Signature]</i> 1/25/03	<i>[Signature]</i> 3/1/03
2/c12	1	CRD 85	2-47B46850001 2-47B46850001-1A	2	ADD VT3 AND MT to 1A	ADDED These components as a substitute for 2-47B46850007 AND 2-47B4685001B-1A to SAVE RAD DOSE. Component 2-47B4685001B-1A will remain a component exam if it can be worked into the outage schedule.	<i>[Signature]</i> 1/29/03	<i>[Signature]</i> 1/29/03	<i>[Signature]</i> 1/29/03	<i>[Signature]</i> 3/1/03

# SCAN PLAN REVISION LOG

Unit/ Cycle	Scan Plan Rev	System	Component/Identifier	A S M E X	Revision	Reason for Revision	Approved by ISI/NDE Sign & Date	Approved by NDE Level III Sign & Date	Database Revised by ISO Sign & Date	Database Revision Verified by ISI/NDE Sign & Date
2/12	1	CRD	2.47B468- S0081A	2	Delete MT of 2.47B468S0021A	Substituted 2.47B468S0001-1A For Alarm Reasons.	1/1/01 3/2/01	3/2/01	3/2/03	3/6/03
2/12 <del>2/13</del> 2/12	1 <del>2/17/03</del>	RHR	FCV-74-47	1	Added Value FCV74-47 B.M-2	Value WAS disassembled allow access for inspection	1/1/01 4/1/01	3/2/03	3/2/03	3/3/03
2/12	1	FW	FCV-3-568	1	Add Value FCV-3-568 B-M-2 B12-50	Value WAS DISASSEMBLED DURING UZC12 mid-cycle outage				
2/12	1	FW	FCV3-568-BC	1	Add Value Bolting 2-FCV-3-568BC B-G-2 B7.70	Value WAS DISASSEMBLED DURING UZC12 mid cycle outage	1/1/01 4/1/01	4/1/03	4/1/03	4/1/03

# SCAN PLAN REVISION LOG

Unit/ Cycle	Scan Plan Rev	System	Component/Identifier	A S M E X I	Revision	Reason for Revision	Approved by ISI/NDE Sign & Date	Approved by NDE Level III Sign & Date	Database Revised by ISO Sign & Date	Database Revision Verified by ISI/NDE Sign & Date
2/C12	01	APC/013 RHR/074 RWCU/105 CS/075	FCV-73-03 FCV-74-54 FCV-74-67 FCV-69-01 FCV-75-26 B-M-2 B12.50	1	Remove Valves From Scan Plan FCV-73-03 FCV-74-54 FCV-74-67 FCV-69-01 FCV-75-26	Valves NOT opened in UZCR Outage	1h/10/03 4/1/03	4/1/03	4/1/03	4/1/03
2/C12	01	RPV/329	N16A-SE N16B-SE	1	Remove UT of N16A-SE & N16B- SE From Scan Plan	Not Required BWRVIP-49 Does NOT Require UT (Augmented exam)	1h/10/03 4/1/03	4/1/03	4/1/03	4/1/03
2/C12	01	RPV/329	N5A N5A-IR	1	Delete UT and EVT-1 exam From Scan Plan	Deferred to cycle 13 for ALARA/DOSE considerations	1h/10/03 4/1/03	4/1/03	4/1/03	4/1/03

March 31, 2003

Albert Ladd, ANI/ANII, PEC-1C, BFN

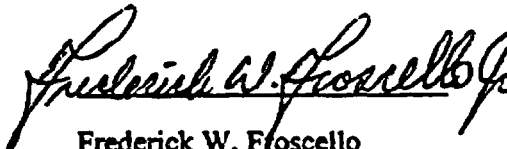
**BROWNS FERRY NUCLEAR PLANT (BFN) - UNIT 2 CYCLE 12 REFUELING  
OUTAGE INSERVICE INSPECTION (ISI) SCAN PLAN, REVISION 1.**

Attached for your review is the BFN Unit 2 Cycle 12 refueling outage ISI Scan Plan, Revision 1. The examinations are scheduled to be performed during the Unit 2 outage by BFN Site Engineering/Component Engineering. The examinations are performed to satisfy the requirements of ASME Code Section XI, 1995 Edition, 1996 Addenda.

This document was prepared by Hal Hodges of BFN Component Engineering and coordinated with Fred Froscello and Darlene Tinley of TVAN Inspection Services.

 4-1-03

Harold E. Hodges  
BFN Component Engineering

 4/10/03  
3/31/03  
Frederick W. Froscello  
ISO, ISI/NDE, Supervisor, BFN

 4/1/03

Darlene Tinley  
ISO, NDE Level III

 03/31/03

Kevin Groom  
BFN Mechanical Design  
Engineering FAC Concurrence

 4/12/03

Albert Ladd, ANI/ANII  
Concurrence

cc: R. L. Golub, PEC-1C, BFN  
M. L. Turnbow, STC-11,

Revision 001

04/11/2003

Total Examinations: 308

**TENNESSEE VALLEY AUTHORITY**  
**BROWNS FERRY NUCLEAR POWER PLANT - UNIT 2**  
**EXAMS SCHEDULED FOR CYCLE 12**

SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CALSTD	COMPDIS	NOMTHICK	COMPDESA	COMPDESB
CRDS	2-47B468S0001		2-ISI-0041-C-02	12	F1.20B	F-A	96E-03	VT-3-	N-VT-1		06.00		CAP	
CRDS	2-47B468S0001-1A		2-ISI-0041-C-02	12	C3.20	C-C	96E-03	MT	N-MT-6			0.500	WLD ATT	
CRDS	2-47B468S0006		2-ISI-0041-C-01	12	F1.20B	F-A	96E-03	VT-3	N-VT-1		06.00		RGD HGR	
CRDS	2-47B468S0012		2-ISI-0041-C-01	12	F1.20A	F-A	96E-03	VT-3	N-VT-1		06.00		RGD STRT	HRS
CRDS	2-47B468S0016		2-ISI-0041-C-02	12	F1.40B	F-A	96E-03	VT-3	N-VT-1		12.00		RGD HGR	
CRDS	2-47B468S0017		2-ISI-0041-C-02	12	F1.40B	F-A	96E-03	VT-3	N-VT-1		12.00		RGD SUP	
CRDS	2-47B468S0018		2-ISI-0041-C-02	12	F1.40B	F-A	96E-03	VT-3	N-VT-1		12.00		VSL SUP	
CRDS	2-47B468S0040		2-ISI-0041-C-01	12	F1.20A	F-A	96E-03	VT-3	N-VT-1		06.00		RGD HGR	
CRDS	2-SI-3.3.1.D		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				E-LEAK	
CRDS	2-SI-3.3.1.D		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				E-LEAK	
CRDS	2-SI-3.3.7		N/A	12	C7.10	C-H	96E-03	VT-2	N-VT-4				HYDRO	
CRDS	2-SI-3.3.7		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				HYDRO	
CRDS	2-SI-3.3.7		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				HYDRO	
CSS	2-47B458S0004		2-ISI-0280-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
CSS	2-47B458S0007		2-ISI-0280-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
CSS	2-47B458S0010		2-ISI-0280-C-01	12	F1.10C	F-A	96E-03	VT-3	N-VT-1		12.00		VAR SUP	
CSS	CS-2-H-1		2-ISI-0105-C-02	12	F1.20A	F-A	96E-03	VT-3	N-VT-1		12.00		RGD HGR	
CSS	CS-2-H-11		2-ISI-0105-C-02	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		12.00		VAR SUP	
CSS	CS-2-H-11-1A		2-ISI-0105-C-02	12	C3.20	C-C	96E-03	MT	N-MT-6			0.750	WLD ATT	
CSS	CS-2-H-2		2-ISI-0105-C-02	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		14.00		VAR SUP	
CSS	CS-2-H-21		2-ISI-0105-C-01	12	F1.20A	F-A	96E-03	VT-3	N-VT-1		14.00		RGD SUP	
CSS	CS-2-H-7		2-ISI-0105-C-02	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		14.00		VAR SUP	
CSS	CS-2-H-7-1A		2-ISI-0105-C-02	12	C3.20	C-C	96E-03	MT	N-MT-6			1.000	WLD ATT	
CSS	CS-2-PS-01		2-ISI-0105-C-01	12	F1.40B	F-A	96E-03	VT-3	N-VT-1				PMP SUP	
CSS	CS-48N1025-2-B		2-ISI-0105-C-02	12	F1.20B	F-A	96E-03	VT-3	N-VT-1		16.00		RGD ANCH	
CSS	DCS-2-07	2-075-001	2-ISI-0271-C-01	12	R1.16C	R-A	96E-03	UT	N-UT-64	WB-83	12.00	0.687	P	EL
CSS	DCS-2-07	2-075-001	2-ISI-0271-C-01	12	NU0313	C	B02-02	UT	N-UT-64	WB-83	12.00	0.687	P	EL
CSS	DCS-2-13A	2-075-001	2-ISI-0271-C-01	12	R1.16C	R-A	96E-03	UT	N-UT-64	WB-83	12.00	0.687	P	P
CSS	DCS-2-13A	2-075-001	2-ISI-0271-C-01	12	NU0313	C	B02-02	UT	N-UT-64	WB-83	12.00	0.687	P	P
CSS	DSCS-2-01	2-075-002	2-ISI-0271-C-01	12	R1.16C	R-A	96E-03	UT	N-UT-64	WB-83	12.00	0.687	P	EL
CSS	DSCS-2-01	2-075-002	2-ISI-0271-C-01	12	NU0313	C	B02-02	UT	N-UT-64	WB-83	12.00	0.687	P	EL
CSS	DSCS-2-02	2-075-002	2-ISI-0271-C-01	12	R1.16C	R-A	96E-03	UT	N-UT-64	WB-83	12.00	0.687	EL	P
CSS	DSCS-2-02	2-075-002	2-ISI-0271-C-01	12	NU0313	C	B02-02	UT	N-UT-64	WB-83	12.00	0.687	EL	P
CSS	TCS-2-407		2-ISI-0271-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	WB-79	12.75	0.687	EL	P
EECWS	0-37B205S0056-1A		ISI-0368-C-01	12	D1.20	D-A	96E-03	VT-1	N-VT-1			0.375	WLD ATT	

SORT ORDER: SYSTEM-WELDNO

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SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CALSTD	COMPDIA	NOMTHICK	COMPDESA	COMPDESB
EFCWS	1-47B451R0055-1A		ISI-0368-C-14	12	D1.20	D-A	96E-03	VT-1	N-VT-1			0.750	WLD ATT	
EFCWS	2-SI-3.3.14A		N/A	12	D2.30	D-B	96E-03	VT-2	N-VT-4				HYDRO	
EFCWS	2-SI-3.3.14A		N/A	12	D2.50	D-B	96E-03	VT-2	N-VT-4				HYDRO	
EFCWS	2-SI-3.3.14A		N/A	12	D2.70	D-B	96E-03	VT-2	N-VT-4				HYDRO	
EFCWS	2-SI-3.3.14B		N/A	12	D2.10	D-B	96E-03	VT-2	N-VT-4				HYDRO	
EFCWS	2-SI-3.3.14B		N/A	12	D2.30	D-B	96E-03	VT-2	N-VT-4				HYDRO	
EFCWS	2-SI-3.3.14B		N/A	12	D2.50	D-B	96E-03	VT-2	N-VT-4				HYDRO	
EFCWS	2-SI-3.3.14B		N/A	12	D2.70	D-B	96E-03	VT-2	N-VT-4				HYDRO	
EFCWS	RHRSW-PMP-0-B1		ISI-0368-C-02	12	F1.40B	F-A	96E-03	VT-3	N-VT-1				PMP SUP	
EFCWS	RHRSW-STR-0-A1		ISI-0368-C-01	12	F1.40B	F-A	96E-03	VT-3	N-VT-1				RGD HGR	
FPCS	2-SI-3.3.3		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				E-LEAK	
FPCS	2-SI-3.3.3		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				E-LEAK	
FWS	2-47B415H0001		2-ISI-0277-C-01	12	F1.40C	F-A	96E-03	VT-3	N-VT-1		20.00		VAR SUP	
FWS	2-47B415H0004		2-ISI-0277-C-01	12	F1.10C	F-A	96E-03	VT-3	N-VT-1		12.00		CFS	
FWS	2-47B415H0004-1A		2-ISI-0277-C-01	12	B10.20	B-K	96E-03	MT	N-MT-6			1.625	WLD ATT	
FWS	2-47B415H0005		2-ISI-0277-C-01	12	F1.10C	F-A	96E-03	VT-3	N-VT-1		20.00		VAR SUP	
FWS	2-47B415H0007		2-ISI-0277-C-01	12	F1.40C	F-A	96E-03	VT-3	N-VT-1		24.00		VAR SUP	
FWS	2-47B415H0010		2-ISI-0277-C-01	12	F1.10C	F-A	96E-03	VT-3	N-VT-1		20.00		CFS	
FWS	2-47B415H0010-1A		2-ISI-0277-C-01	12	B10.20	B-K	96E-03	MT	N-MT-6			0.500	WLD ATT	
FWS	2-47B415S0002		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
FWS	2-47B415S0002-1A		2-ISI-0277-C-01	12	B10.20	B-K	96E-03	MT	N-MT-6			0.500	WLD ATT	
FWS	2-47B415S0005		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
FWS	2-47B415S0008		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		24.00		SNBR	
FWS	2-47B415S0009		2-ISI-0277-C-01	12	F1.10D	F-A	P95-96	VT-3	N-VT-1		24.00		SNBR	
FWS	2-47B415S0010		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
FWS	2-47B415S0014		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		12.00		SNBR	
FWS	2-47B415S0019		2-ISI-0277-C-01	12	F1.10D	F-A	96E-03	VT-3	N-VT-1		20.00		SNBR	
FWS	2-47B415S0025		2-ISI-0277-C-01	12	F1.10B	F-A	96E-03	VT-3	N-VT-1		24.00		RGD HGR	
FWS	2RFW1B-27E	2-003-041	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	01-7472			EL	
FWS	2RFW1B-30P	2-003-042	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	01-7473			P	
FWS	2RFW1B-39E	2-003-043	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	01-7480			EL	
FWS	2RFW1B-44E	2-003-043	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	01-7471			EL	
FWS	2RFW1B-6E	2-003-007	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	01-7471			EL	
FWS	2RFW2A-13T	2-003-036	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	01-7471			TEE	
FWS	2RFW2A-16T	2-003-036	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	01-7473			TEE	
FWS	2RFW2A-27E	2-003-037	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	01-7471			EL	
FWS	2RFW2A-39E	2-003-039	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	01-7471			EL	
FWS	2RFW2A-45P	2-003-039	2-ISI-0269-C-01	12	R1.18	R-A	96E-03	UT	N-UT-26	01-7472			P	
FWS	3-568		2-ISI-0269-C-01	12	B12.50	B-M-2	96E-03	VT-3	N-VT-1		24.00		INT	
FWS	3-568-BC		2-ISI-0269-C-01	12	B7.70	B-G-2	96E-03	VT-1	N-VT-1				BLTG	

SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CALSTD	COMPdia	NOMTHICK	COMPDESA	COMPDESB
FWS	GFW-2-15		2-ISI-0269-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	WB-80	12.75	0.844	TEE	P
FWS	KFW-2-38		2-ISI-0269-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	WB-79	12.75	0.844	EL	P
FWS	KFW-2-39		2-ISI-0269-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	WB-80	12.75	0.844	P	EL
HPCIS	2-47B455H0048-1A		ISI-0275-C-01	12	B10.20	B-K	96E-03	MT	N-MT-6			0.237	WLD ATT	
HPCIS	2-47B455H0060		2-ISI-0130-C-01	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		10.00		VAR SUP	
HPCIS	2-47B455H0061		2-ISI-0130-C-01	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		10.00		VAR SUP	
HPCIS	2-47B455H0065		2-ISI-0130-C-01	12	F1.20C	F-A	P95-96	VT-3	N-VT-1		10.00		VAR SUP	
HPCIS	2-47B455H0066		2-ISI-0130-C-02	12	F1.20C	F-A	96E-03	VT-3	N-VT-1		14.00		VAR SUP	
HPCIS	2-47B455S0003		ISI-0275-C-01	12	F1.10B	F-A	96E-03	VT-3	N-VT-1		10.00		RGD HGR	
HPCIS	2-47B455S0023		ISI-0275-C-01	12	F1.10D	F-A	P95-96	VT-3	N-VT-1		10.00		SNBR	
HPCIS	2-SI-3.3.09		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				HYDRO	
HPCIS	2-SI-3.3.09		N/A	12	C7.50	C-H	96E-03	VT-2	N-VT-4				HYDRO	
HPCIS	2-SI-3.3.09		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				HYDRO	
HPCIS	THPCI-2-066	2-073-001	2-ISI-0273-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	WB-79	10.00	0.593	TEE	P
HPCIS	THPCI-2-068	2-073-001	2-ISI-0273-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	WB-79	10.00	0.593	EL	P
HPCIS	THPCI-2-070	2-073-001	2-ISI-0273-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	WB-79	10.00	0.593	EL	P
HPCIS	THPCI-2-072		2-ISI-0273-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	BF-50	10.00	0.593	VLV	P
HPCIS	THPCI-2-075	2-073-001	2-ISI-0273-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	WB-79	10.00	0.593	P	EL
HPCIS	THPCI-2-107	2-073-002	ISI-0128-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	WB-80	10.00	0.593	EL	P
HPCIS	THPCI-2-109	2-073-002	ISI-0128-C-01	12	R1.11	R-A	96E-03	UT	N-UT-76	WB-80	10.00	0.593	EL	P
MSS	2-47B400S0039		2-ISI-0279-C-02	12	F1.10A	F-A	96E-03	VT-3	N-VT-1		26.00		RGD HGR	
MSS	2-47B400S0098		2-ISI-0279-C-02	12	F1.10D	F-A	V01-02	VT-3	N-VT-1		26.00		SNBR	
MSS	2-47B400S0098-1A		2-ISI-0279-C-02	12	B10.20	B-K	V01-02	VT-1	N-VT-1			0.625	WLD ATT	
MSS	2-SI-3.3.1.C		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				E-LEAK	
MSS	2-SI-3.3.1.C		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				E-LEAK	
MSS	GMS-2-24		2-ISI-0222-C-02	12	TS3432	B-J	B04-02	UT	N-UT-76	WB-80	26.00	0.950	P	TEE
MSS	GMS-2-32		2-ISI-0222-C-01	12	TS3432	B-J	B04-02	UT	N-UT-76	WB-80	26.00	0.950	P	EL
MSS	HPAS-2-H-02		2-ISI-0079-C-02	12	F1.20C	F-A	P95-96	VT-3	N-VT-1		06.00		VAR SUP	
MSS	HPAS-2-H-07		2-ISI-0079-C-02	12	F1.20C	F-A	P95-96	VT-3	N-VT-1		06.00		VAR SUP	
MSS	MS-2-H-14-1A		2-ISI-0079-C-01	12	C3.20	C-C	96E-03	MT	N-MT-6			1.500	WLD ATT	
MSS	MSBC-2-01		2-ISI-0312-B-01	12	B7.50	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
MSS	MSBC-2-02		2-ISI-0312-B-01	12	B7.50	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
MSS	MSBC-2-05		2-ISI-0312-B-01	12	B7.50	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
MSS	MSBC-2-07		2-ISI-0312-B-01	12	B7.50	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
MSS	PCV1-2-022		2-ISI-0312-B-01	12	B12.50	B-M-2	96E-03	VT-3	N-VT-1		26.00		INT	
MSS	PCV1-2-022-PBC		2-ISI-0312-B-01	12	B7.50	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
MSS	PCV1-2-022-PBC		2-ISI-0312-B-01	12	B7.50	B-G-2	P95-96	VT-1	N-VT-1				BLTG	
MSS	PCV1-2-022-VBC		2-ISI-0312-B-01	12	B7.70	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
MSS	PCV1-2-022-VBC		2-ISI-0312-B-01	12	B7.70	B-G-2	P95-96	VT-1	N-VT-1				BLTG	
PCONT	2-SI-3.3.15		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				HYDRO	

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SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CAI.STD	COMP.DIA	NOMTHICK	COMP.DESA	COMP.DESB
PCONT	2-SI-3.3.15		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RADW	2-SI-3.3.2.A		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RADW	2-SI-3.3.2.A		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RADW	2-SI-3.3.2.B		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RADW	2-SI-3.3.2.B		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RBCCW	2-47B464S0121		ISI-0032-C-01	12	F1.20A	F-A	96E-03	VT-3	N-VT-1		08.00		RGD HGR	
RBCCW	2-47B464S0228		ISI-0032-C-01	12	F1.20D	F-A	96E-03	VT-3	N-VT-1		08.00		SNBR	
RBCCW	2-47B464S0228-1A		ISI-0032-C-01	12	C3.20	C-C	96E-03	MT	N-MT-6			0.500	WLD ATT	
RCICS	2-47B456R0001-1A		2-ISI-0131-C-01	12	C3.20	C-C	96E-03	MT	N-MT-6			0.500	WLD ATT	
RCICS	2-SI-3.3.10		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				E-LEAK	
RCICS	2-SI-3.3.10		N/A	12	C7.50	C-H	96E-03	VT-2	N-VT-4				E-LEAK	
RCICS	2-SI-3.3.10		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				E-LEAK	
RCWS	1-47B451S0228		ISI-0391-C-01	12	F1.30A	F-A	96E-03	VT-3	N-VT-1		06.00		HRS	
RCWS	1-47B451S0356		ISI-0391-C-01	12	F1.30B	F-A	96E-03	VT-3	N-VT-1		06.00		RGD HGR	
RECIR	2-47B408S0044		2-ISI-0278-C-02	12	F1.40C	F-A	96E-03	VT-3	N-VT-1		12.00		CFS	
RECIR	2-47B408S0056		2-ISI-0278-C-01	12	F1.40C	F-A	96E-03	VT-3	N-VT-1		12.00		CFS	
RECIR	2RB5	2-068-012	2-ISI-0270-C-02	12	R1.16A	R-A	96E-03	UT	N-UT-64	WB-83	12.00	0.569	P	EL
RECIR	KR-2-24	2-068-014	2-ISI-0270-C-02	12	R1.16C	R-A	96E-03	UT	N-UT-64	WB-83	28.00	1.322	EL	P
RECIR	KR-2-24	2-068-014	2-ISI-0270-C-02	12	NU0313	C	B02-02	UT	N-UT-64	WB-83	28.00	1.322	EL	P
RECIR	KR-2-25	2-068-014	2-ISI-0270-C-02	12	R1.16C	R-A	96E-03	UT	N-UT-64	WB-83	28.00	1.322	P	TFF
RECIR	KR-2-25	2-068-014	2-ISI-0270-C-02	12	NU0313	C	B02-02	UT	N-UT-64	WB-83	28.00	1.322	P	TEE
RECIR	KR-2-45	2-068-001	2-ISI-0270-C-01	12	R1.16C	R-A	96E-03	UT	N-UT-64	WB-83	28.00	1.138	P	EL
RECIR	KR-2-45	2-068-001	2-ISI-0270-C-01	12	NU0313	C	B02-02	UT	N-UT-64	WB-83	28.00	1.138	P	EL
RECIR	RBC-2-1		2-ISI-0270-C-01	12	B7.50	B-G-2	96E-03	VT-1	N-VT-1				BLTG	
RHR	2-SI-3.3.8.C		N/A	12	C7.10	C-H	96E-03	VT-2	N-VT-4				SIST	
RHR	2-SI-3.3.8.C		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				SIST	
RHR	2-SI-3.3.8.C		N/A	12	C7.50	C-H	96E-03	VT-2	N-VT-4				SIST	
RHR	2-SI-3.3.8.C		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				SIST	
RHRS	2-SI-3.3.8.A		N/A	12	C7.10	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RHRS	2-SI-3.3.8.A		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RHRS	2-SI-3.3.8.A		N/A	12	C7.50	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RHRS	2-SI-3.3.8.A		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RHRS	2-SI-3.3.8.A		N/A	12	D2.30	D-B	96E-03	VT-2	N-VT-4				HYDRO	
RHRS	2-SI-3.3.8.A		N/A	12	D2.70	D-B	96E-03	VT-2	N-VT-4				HYDRO	
RHRS	2-SI-3.3.8.B		N/A	12	C7.10	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RHRS	2-SI-3.3.8.B		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RHRS	2-SI-3.3.8.B		N/A	12	C7.50	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RHRS	2-SI-3.3.8.B		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				HYDRO	
RIIRS	DRHR-2-03B	2-074-005	2-ISI-0221-C-01	12	R1.16G	R-A	96E-03	VT-2	N-VT-4		24.00	1.219	P	P
RIIRS	DRHR-2-03B	2-074-005	2-ISI-0221-C-01	12	NU0313	G	B02-02	VT-2	N-VT-4		24.00	1.219	P	P

SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHED	NDEPROC	CALSTD	COMPDIS	NOMTHCK	COMPDESA	COMPDESB
RHRS	DRHR-2-13B	2-074-013	2-ISI-0221-C-01	12	R1.16G	R-A	96E-03	VT-2	N-VT-4		24.00	1.219	P	P
RHRS	DRHR-2-13B	2-074-013	2-ISI-0221-C-01	12	NU0313	G	B02-02	VT-2	N-VT-4		24.00	1.219	P	P
RHRS	DSRHR-2-07		2-ISI-0221-C-01	12	NU0313	C	B02-02	UT	N-UT-64	WB-83	24.00	1.219	P	EL
RHRS	DSRHR-2-07		2-ISI-0221-C-01	12	TS3432	B-J	B04-02	UT	N-UT-64	WB-83	24.00	1.219	P	EL
RHRS	FCV-74-47		2-ISI-0221-C-01	12	B12.50	B-M-2	96E-03	VT-3	N-VT-1		20.00		INT	
RHRS	FCV-74-47		2-ISI-0221-C-01	12	B12.50	B-M-2	V01-02	VT-3	N-VT-1		20.00		INT	
RHRS	RHR-2-R-95		2-ISI-0324-C-09	12	F1.20D	F-A	96E-03	VT-3	N-VT-1		24.00		SNBR	
RHRS	RHRG-2-05-A		2-ISI-0406-C-01	12	C2.33	C-B	96E-03	VT-2	N-VT-4		10.50	0.875	NOZ	
RHRS	RHRG-2-06-A		2-ISI-0406-C-01	12	C2.33	C-B	96E-03	VT-2	N-VT-4		10.50	0.875	NOZ	
RHRS	RHRG-2-07-A		2-ISI-0406-C-01	12	C1.10	C-A	96E-03	UT	N-UT-18	BF-26	54"	0.875	SHL	FLG
RHRS	RHRG-2-13-A		2-ISI-0406-C-01	12	F1.40B	F-A	S01-03	VT-3	N-VT-1				HVES	
RHRS	RHRG-2-14-D		2-ISI-0406-C-01	12	F1.40B	F-A	S01-03	VT-3	N-VT-1				HVES	
RHRSW	2-17B300S0091		2-ISI-0145-C-01	12	F1.30A	F-A	96E-03	VT-3	N-VT-1		16.00		RGD HGR	
RHRSW	2-47B450H0043-1A		2-ISI-0145-C-02	12	D1.20	D-A	96E-03	VT-1	N-VT-1			0.625	WLD ATT	
RHRSW	2-47B450R0028		2-ISI-0145-C-02	12	F1.30A	F-A	96E-03	VT-3	N-VT-1		12.00		RGD STRT	
RPV	2-SI-3.3.1.A		N/A	12	B15.10	B-P	96E-03	VT-2	N-VT-4				E-LEAK	
RPV	2-SI-3.3.1.A		N/A	12	B15.50	B-P	96E-03	VT-2	N-VT-4				E-LEAK	
RPV	2-SI-3.3.1.A		N/A	12	B15.60	B-P	96E-03	VT-2	N-VT-4				E-LEAK	
RPV	2-SI-3.3.1.A		N/A	12	B15.70	B-P	96E-03	VT-2	N-VT-4				E-LEAK	
RPV	N-16A-SE		2-ISI-0383-C-01	12	N/A	BWRVIP-49	B07-02	VT-2	N-VT-4		2.00	0.218	NOZ	SE
RPV	N-16B-SE		2-ISI-0383-C-02	12	N/A	BWRVIP-49	B07-02	VT-2	N-VT-4		2.00	0.250	NOZ	SE
RPV	N10-SE		2-ISI-0380-C-01	12	N/A	BWRVIP-27	B07-02	VT-2	N-VT-4		1.5	0.218	SE	NOZ
RPV	N11A-SE		2-ISI-0383-C-01	12	N/A	BWRVIP-49	B07-02	VT-2	N-VT-4		2.00	0.250	SE	P
RPV	N11B-SE		2-ISI-0383-C-02	12	N/A	BWRVIP-49	B07-02	VT-2	N-VT-4		2.00	0.250	SE	P
RPV	N12A-SE		2-ISI-0383-C-01	12	N/A	BWRVIP-49	B07-02	VT-2	N-VT-4		2.00	0.250	SE	P
RPV	N12B-SE		2-ISI-0383-C-02	12	N/A	BWRVIP-49	B07-02	VT-2	N-VT-4		2.00	0.250	P	PC,PIPE
RPV	N1A		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	28.00	6.600	SHL	NOZ
RPV	N1A-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	VENDOR VT		28.00	6.600	NOZ IR	
RPV	N2B		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	12.00	6.600	NOZ	SHL
RPV	N2B-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	VENDOR VT		12.00	6.600	NOZ IR	
RPV	N2F		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	12.00	6.6	NOZ	SHL
RPV	N2F-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	VENDOR VT		12.00	6.600	NOZ IR	
RPV	N2J		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	12.00	6.600	NOZ	SHL
RPV	N2J-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	VENDOR VT		12.00	6.600	NOZ IR	
RPV	N3D		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	26.00	6.600	NOZ	SHL
RPV	N3D-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	VENDOR VT		26.00	6.600	NOZ IR	
RPV	N4A		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	12.00	6.600	NOZ	SHL
RPV	N4A-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4A-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT	BF-18	12.00	6.600	NOZ IR	
RPV	N4A-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT	BF-18			NOZ IR	NOZ BR

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SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CALSTD	COMPDI	NOMTHCK	COMPDESA	COMPDESB
RPV	N4B		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78		12.00	6.600	NOZ	SHL
RPV	N4B-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4B-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT	BF-18	12.00	6.600	NOZ IR	
RPV	N4B-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT	BF-18			NOZ IR	NOZ BR
RPV	N4C		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	12.00	6.600	NOZ	SHL
RPV	N4C-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4C-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT		12.00	6.600	NOZ IR	
RPV	N4C-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT	BF-18			NOZ IR	NOZ IR
RPV	N4D		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	12.00	6.600	NOZ	SHL
RPV	N4D-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4D-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT	BF-18	12.00	6.600	NOZ IR	
RPV	N4D-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT	BF-18			NOZ IR	NOZ BR
RPV	N4E		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	12.00	6.600	NOZ	SHL
RPV	N4E-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4E-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT	BF-18	12.00	6.600	NOZ IR	
RPV	N4E-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT	BF-18			NOZ IR	NOZ BR
RPV	N4F		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	12.00	6.600	NOZ	SHL
RPV	N4F-FW-SPARG		2-CHM-2046-C-02	12	N/A	NU0619	B01-02	VT-1	VENDOR VT					
RPV	N4F-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	UT	VENDOR UT	BF-18	12.00	6.600	NOZ IR	
RPV	N4F-IR/NB		2-ISI-0277-C-01	12	NU0619	B-D	B01-02	UT	VENDOR UT	BF-18			NOZ IR	NOZ BR
RPV	N6A-IR		ISI-0408-C-01	12	B3.100	B-D	96E-03	VT-1E	N-VT-1		06.00	4.340	NOZ IR	
RPV	N6A-NV		ISI-0408-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-19& BF-84-IR	6.00	4.340	NOZ	CL HD
RPV	N8A		2-CHM-2046-C-01	12	B3.90	B-D	96E-03	UT	N-UT-78	BF-18	04.06	6.600	NOZ	SHL
RPV	N8A-IR		2-CHM-2046-C-01	12	B3.100	B-D	96E-03	VT-1E	N-VT-1		04.06	6.600	NOZ IR	
RPV	RCH-2-1C		ISI-0408-C-01	12	B1.21	B-A	96E-03	UT	N-UT-78	BF-19	~145	4.000	CH CS	
RPV	RCH-2-1V		ISI-0408-C-01	12	B1.22	B-A	96E-03	UT	N-UT-78	BF-19	~96L	4.000	VERT LS	
RPV	RCH-2-2V		ISI-0408-C-01	12	B1.22	B-A	96E-03	UT	N-UT-78	BF-19	~96L	4.000	VERT LS	
RPV	RPV CORE PLATE		2-CHM-2046-C-02	12	N/A	N/A	0TI365	VT-3	VENDOR VT				INT	
RPV	RPV CS PIPING		2-CHM-2046-C-02	12	N/A	N/A	0TI365	EVT	VENDOR VT		6.000		INT	
RPV	RPV CS PIPING		2-CHM-2046-C-02	12	N/A	N/A	0TI365	VT-1	VENDOR VT		6.000		INT	
RPV	RPV JET PUMPS		2-CHM-2046-C-02	12	N/A	N/A	0TI365	EVT	VENDOR VT				INT	
RPV	RPV JET PUMPS		2-CHM-2046-C-02	12	N/A	N/A	0TI365	VT-1	VENDOR VT				INT	
RPV	RPV JET PUMPS		2-CHM-2046-C-02	12	N/A	N/A	0TI365	VT-3	VENDOR VT				INT	
RPV	RPV STEAM DRYER		2-CHM-2046-C-02	12	N/A	N/A	0TI365	EVT	VENDOR VT				INT	
RPV	RPV TOP GUIDE		2-CHM-2046-C-02	12	N/A	N/A	0TI365	VT-3	VENDOR VT				INT	
RPV	RPV TOP GUIDE		2-CHM-2046-C-02	12	N/A	N/A	0TI365	VT-1	VENDOR VT				INT	
RPV	RPV TOP GUIDE		2-CHM-2046-C-02	12	N/A	N/A	0TI365	EVT	VENDOR VT				INT	
RPV	RPV-INTERIOR		2-CHM-2046-C-02	12	B13.10	B-N-1	96E-03	VT-3	VENDOR VT				INT	
RPV	RPV-NUTS-2-01		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	

SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CALSTD	COMPDIS	NOMTHCK	COMPDESA	COMPDESB
RPV	RPV-NUTS-2-02		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-03		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-04		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-05		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-06		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-07		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-08		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-09		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-10		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-11		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-12		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-13		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-14		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-15		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-16		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-17		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-18		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-19		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-20		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-21		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-22		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-23		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-24		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-25		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-26		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-27		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-28		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-29		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-NUTS-2-30		ISI-0266-C-01	12	B6.10	B-G-1	96E-03	VT-1	N-VT-1		08.50		CL HD BLT	
RPV	RPV-STAB-2-1		ISI-0415-C-01	12	F1.40C	F-A	96E-03	VT-3	N-VT-1				STAB	
RPV	RPV-STAB-2-1A-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1B-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1C-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1D-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1E-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1F-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1G-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-STAB-2-1H-1A		ISI-0415-C-01	12	B10.10	B-K	96E-03	PT	N-PT-9				WLD ATT	
RPV	RPV-WASH-2-01		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-02		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	

SYSTEM	WELDNO	SEGMENT	ISONO	CYCLE	ITEMNO	CATEGORY	EXREQ	EXSCHD	NDEPROC	CALSTD	COMPDIS	NOMTHICK	COMPDESA	COMPDESB
RPV	RPV-WASH-2-03		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-04		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-05		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-06		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-07		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-08		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-09		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-10		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-11		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-12		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-13		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-14		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-15		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-16		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-17		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-18		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-19		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-20		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-21		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-22		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-23		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-24		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-25		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-26		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-27		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-28		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-29		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RPV	RPV-WASH-2-30		ISI-0266-C-01	12	B6.50	B-G-1	96E-03	VT-1	N-VT-1		06.00	08.62	WASH	
RWCUS	DSRWC-2-06	2-069-001	2-ISI-0272-C-01	12	NU0313	C	B02-02	UT	N-UT-64	WB-83	06.00	0.432	EL	P
RWCUS	DSRWC-2-06	2-069-001	2-ISI-0272-C-01	12	TS3432	B-J	B04-02	UT	N-UT-64	WB-83	06.00	0.432	EL	P
RWCUS	RWCU-2-003-G003	2-069-002	2-ISI-0272-C-01	12	R1.16A	R-A	96E-03	UT	N-UT-64	WB-83	6.00	0.432	PEN	P
SLCS	2-SI-3.3.4		N/A	12	C7.30	C-H	96E-03	VT-2	N-VT-4				HYDRO	
SLCS	2-SI-3.3.4		N/A	12	C7.50	C-H	96E-03	VT-2	N-VT-4				HYDRO	
SLCS	2-SI-3.3.4		N/A	12	C7.70	C-H	96E-03	VT-2	N-VT-4				HYDRO	

**OWNER: TENNESSEE VALLEY AUTHORITY**  
**NUCLEAR POWER GROUP**  
**1101 MARKET STREET**  
**CHATTANOOGA, TENNESSEE 37402**

**EXAM REQUIREMENT**  
**96E-03 NO VT-2**  
**P95-96**  
**S01-03**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

**UNIT: TWO CYCLE: 12**      **COMMERCIAL SERVICE DATE: MARCH 1, 1975**

System	Component Number	ISO Drawing	Exreq	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
CRDS	2-47B468S0001	2-ISI-0041-C-02	96E-03	F-A	F1.20B	VT-3		20030212	R-046	P	
CRDS	2-47B468S0001-1A	2-ISI-0041-C-02	96E-03	C-C	C3.20	MT		20030213	R-047	P	
CRDS	2-47B468S0006	2-ISI-0041-C-01	96E-03	F-A	F1.20B	VT-3		20030213	R-048	P	
CRDS	2-47B468S0012	2-ISI-0041-C-01	96E-03	F-A	F1.20A	VT-3		20030213	R-049	P	
CRDS	2-47B468S0016	2-ISI-0041-C-02	96E-03	F-A	F1.40B	VT-3		20030212	R-045	P	
CRDS	2-47B468S0017	2-ISI-0041-C-02	96E-03	F-A	F1.40B	VT-3		20030212	R-044	P	
CRDS	2-47B468S0018	2-ISI-0041-C-02	96E-03	F-A	F1.40B	VT-3		20030212	R-043	P	
CRDS	2-47B468S0040	2-ISI-0041-C-01	96E-03	F-A	F1.20A	VT-3		20030213	R-050	P	
CSS	2-47B458S0004	2-ISI-0280-C-01	96E-03	F-A	F1.10D	VT-3		20030302	R-108	P	
CSS	2-47B458S0007	2-ISI-0280-C-01	96E-03	F-A	F1.10D	VT-3		20030226	R-069	P	
CSS	2-47B458S0010	2-ISI-0280-C-01	96E-03	F-A	F1.10C	VT-3		20030226	R-068	P	
CSS	CS-2-H-1	2-ISI-0105-C-02	96E-03	F-A	F1.20A	VT-3		20030131	R-034	P	
CSS	CS-2-H-11	2-ISI-0105-C-02	96E-03	F-A	F1.20C	VT-3		20030130	R-037	P	
CSS	CS-2-H-11-1A	2-ISI-0105-C-02	96E-03	C-C	C3.20	MT		20030203	R-036	P	
CSS	CS-2-H-2	2-ISI-0105-C-02	96E-03	F-A	F1.20C	VT-3		20030131	R-032	P	
CSS	CS-2-H-21	2-ISI-0105-C-01	96E-03	F-A	F1.20A	VT-3		20030131	R-035	P	
CSS	CS-2-H-7	2-ISI-0105-C-02	96E-03	F-A	F1.20C	VT-3		20030130	R-033	P	
CSS	CS-2-H-7-1A	2-ISI-0105-C-02	96E-03	C-C	C3.20	MT		20030131	R-031	P	
CSS	CS-2-PS-01	2-ISI-0105-C-01	96E-03	F-A	F1.40B	VT-3		20030130	R-029	P	
CSS	CS-48N1025-2-B	2-ISI-0105-C-02	96E-03	F-A	F1.20B	VT-3		20030130	R-028	P	
CSS	DCS-2-07	2-ISI-0271-C-01	96E-03	R-A	R1.16C	UT	WB-83	20030304	R-127	P	
CSS	DCS-2-13A	2-ISI-0271-C-01	96E-03	R-A	R1.16C	UT	WB-83	20030306	R-139	P	

OWNER: TENNESSEE VALLEY AUTHORITY  
 NUCLEAR POWER GROUP  
 1101 MARKET STREET  
 CHATTANOOGA, TENNESSEE 37402

EXAM REQUIREMENT  
 96E-03 NO VT-2  
 P95-96  
 S01-03

PLANT: BROWNS FERRY NUCLEAR PLANT  
 PO BOX 2000  
 DECATUR, ALABAMA 35609-2000

UNIT: TWO CYCLE: 12

COMMERCIAL SERVICE DATE: MARCH 1, 1975

CERTIFICATION OF AUTHORIZATION: NOT REQUIRED  
 NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED

System	Component Number	ISO Drawing	Exeq	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
CSS	DSCS-2-01	2-ISI-0271-C-01	96E-03	R-A	R1.16C	UT	WB-83	20030227	R-075	P	
CSS	DSCS-2-02	2-ISI-0271-C-01	96E-03	R-A	R1.16C	UT	WB-83	20030226	R-070	P	
EECW	0-37B205S0056-IA	ISI-0368-C-01	96E-03	D-A	D1.20	VT-1		20030121	R-017	P	
EECW	1-47B451R0055-IA	ISI-0368-C-14	96E-03	D-A	D1.20	VT-1		20030121	R-020	P	
EECW	RHRWS-PMP-0-B1	ISI-0368-C-02	96E-03	F-A	F1.40B	VT-3		20030121	R-019	P	
EECW	RHRWS-STR-0-A1	ISI-0368-C-01	96E-03	F-A	F1.40B	VT-3		20030121	R-018	P	
FWS	2-47B415H0001	2-ISI-0277-C-01	96E-03	F-A	F1.40C	VT-3		20030101	R-089	P	
FWS	2-47B415H0004	2-ISI-0277-C-01	96E-03	F-A	F1.10C	VT-3		20030301	R-098	P	
FWS	2-47B415H0004-IA	2-ISI-0277-C-01	96E-03	B-K	B10.20	MT		20030301	R-121	P	
FWS	2-47B415H0005	2-ISI-0277-C-01	96E-03	F-A	F1.10C	VT-3		20030228	R-086	P	
FWS	2-47B415H0007	2-ISI-0277-C-01	96E-03	F-A	F1.40C	VT-3		20030301	R-090	P	
FWS	2-47B415H0010	2-ISI-0277-C-01	96E-03	F-A	F1.10C	VT-3		20030301	R-099	P	
FWS	2-47B415H0010-IA	2-ISI-0277-C-01	96E-03	B-K	B10.20	MT		20030301	R-120	P	
FWS	2-47B415S0002	2-ISI-0277-C-01	96E-03	F-A	F1.10D	VT-3		20030303	R-116	P	
FWS	2-47B415S0002-IA	2-ISI-0277-C-01	96E-03	B-K	B10.20	MT		20030303	R-117	P	
FWS	2-47B415S0005	2-ISI-0277-C-01	96E-03	F-A	F1.10D	VT-3		20030301	R-096	P	
FWS	2-47B415S0008	2-ISI-0277-C-01	96E-03	F-A	F1.10D	VT-3		20030228	R-082	P	
FWS	2-47B415S0009	2-ISI-0277-C-01	P95-96	F-A	F1.10D	VT-3		20030309	R-159	P	Preservice exam, one pin prior to installation
FWS	2-47B415S0010	2-ISI-0277-C-01	96E-03	F-A	F1.10D	VT-3		20030301	R-095	P	
FWS	2-47B415S0014	2-ISI-0277-C-01	96E-03	F-A	F1.10D	VT-3		20030301	R-097	P	
FWS	2-47B415S0019	2-ISI-0277-C-01	96E-03	F-A	F1.10D	VT-3		20030301	R-092	P	
FWS	2-47B415S0025	2-ISI-0277-C-01	96E-03	F-A	F1.10B	VT-3		20030228	R-077	P	

**OWNER: TENNESSEE VALLEY AUTHORITY**  
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**1101 MARKET STREET**  
**CHATTANOOGA, TENNESSEE 37402**

**EXAM REQUIREMENT**  
**96E-03 NO VT-2**  
**P95-96**  
**S01-03**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**UNIT: TWO CYCLE: 12**

**COMMERCIAL SERVICE DATE: MARCH 1, 1975**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

System	Component Number	ISO Drawing	Exeq	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
FWS	2RFW1B-27E	2-ISI-0269-C-01	96E-03	R-A	R1.18	UT	01-7472	20030305	R-131	P	
FWS	2RFW1B-30P	2-ISI-0269-C-01	96E-03	R-A	R1.18	UT	01-7473	20030305	R-128	P	
FWS	2RFW1B-39E	2-ISI-0269-C-01	96E-03	R-A	R1.18	UT	01-7480	20030305	R-129	P	
FWS	2RFW1B-44E	2-ISI-0269-C-01	96E-03	R-A	R1.18	UT	01-7471	20030304	R-134	P	
FWS	2RFW1B-6E	2-ISI-0269-C-01	96E-03	R-A	R1.18	UT	01-7471	20030304	R-132	P	
FWS	2RFW2A-13T	2-ISI-0269-C-01	96E-03	R-A	R1.18	UT	01-7471	20030305	R-136	P	
FWS	2RFW2A-16T	2-ISI-0269-C-01	96E-03	R-A	R1.18	UT	01-7473	20030304	R-135	P	
FWS	2RFW2A-27E	2-ISI-0269-C-01	96E-03	R-A	R1.18	UT	01-7471	20030304	R-122	P	
FWS	2RFW2A-39E	2-ISI-0269-C-01	96E-03	R-A	R1.18	UT	01-7471	20030305	R-133	P	
FWS	2RFW2A-45P	2-ISI-0269-C-01	96E-03	R-A	R1.18	UT	01-7472	20030305	R-130	P	
FWS	3-568	2-ISI-0269-C-01	96E-03	B-M-2	B12.50	VF-3		20020426	R-003	P	
FWS	3-568-BC	2-ISI-0269-C-01	96E-03	B-G-2	B7.70	VT-1		20020426	R-004	P	
HPCIS	2-47B455H0048-1A	ISI-0275-C-01	96E-03	B-K	B10.20	MT		20030228	R-079	P	
HPCIS	2-47B455H0060	2-ISI-0130-C-01	96E-03	F-A	F1.20C	VT-3		20030204	R-038	P	
HPCIS	2-47B455H0061	2-ISI-0130-C-01	96E-03	F-A	F1.20C	VT-3		20030204	R-039	P	
HPCIS	2-47B455H0065	2-ISI-0130-C-01	P95-96	F-A	F1.20C	VT-3		20030225	R-040	P	WF-2210(b)
HPCIS	2-47B455H0066	2-ISI-0130-C-02	96E-03	F-A	F1.20C	VT-3		20030204	R-041	P	
HPCIS	2-47B455S0003	ISI-0275-C-01	96E-03	F-A	F1.10B	VT-3		20030227	R-078	P	
HPCIS	2-47B455S0023	ISI-0275-C-01	P95-96	F-A	F1.10D	VT-3		20030306	R-137	P	Pre-service of modified portion - CLAMP. Reference W.O. 03-003454-000.
HPCIS	THPCI-2-066	2-ISI-0273-C-01	96E-03	R-A	R1.11	UT	WB-79	20030301	R-112	P	
HPCIS	THPCI-2-068	2-ISI-0273-C-01	96E-03	R-A	R1.11	UT	WB-79	20030228	R-081	P	
HPCIS	THPCI-2-070	2-ISI-0273-C-01	96E-03	R-A	R1.11	UT	WB-79	20030228	R-080	P	



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**CHATTANOOGA, TENNESSEE 37402**

**EXAM REQUIREMENT**  
**96E-03 NO VT-2**  
**P95-96**  
**S01-03**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

**UNIT: TWO CYCLE: 12**

**COMMERCIAL SERVICE DATE: MARCH 1, 1975**

System	Component Number	ISO Drawing	Exreq	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
HPCIS	THPCI-2-075	2-ISI-0273-C-01	96E-03	R-A	R1.11	UT	WB-79	20030303	R-125	P	
HPCIS	THPCI-2-107	ISI-0128-C-01	96E-03	R-A	R1.11	UT	WB-80	20030225	R-059	P	
HPCIS	THPCI-2-109	ISI-0128-C-01	96E-03	R-A	R1.11	UT	WB-80	20030225	R-058	P	
MSS	2-47B400S0039	2-ISI-0279-C-02	96E-03	F-A	F1.10A	VT-3		20030226	R-067	P	
MSS	HPAS-2-H-02	2-ISI-0079-C-02	P95-96	F-A	F1.20C	VT-3		20030227	R-073A &	P	WVF-2220(b)
MSS	HPAS-2-H-07	2-ISI-0079-C-02	P95-96	F-A	F1.20C	VT-3		20030226	R-065	P	WVF-2210(b)
MSS	MS-2-H-14-IA	2-ISI-0079-C-01	96E-03	C-C	C3.20	MT		20030227	R-074	P	
MSS	MSBC-2-01	2-ISI-0312-B-01	96E-03	B-G-2	B7.50	VT-1		20030228	R-083	P	
MSS	MSBC-2-02	2-ISI-0312-B-01	96E-03	B-G-2	B7.50	VT-1		20030228	R-084	P	
MSS	MSBC-2-05	2-ISI-0312-B-01	96E-03	B-G-2	B7.50	VT-1		20030228	R-085	P	
MSS	MSBC-2-07	2-ISI-0312-B-01	96E-03	B-G-2	B7.50	VT-1		20030301	R-091		
MSS	PCV1-2-022	2-ISI-0312-B-01	96E-03	B-M-2	B12.50	VT-3		20030312	R-166	P	Valve Body Casting S/N 1059 Cycle 12
MSS	PCV1-2-022-PBC	2-ISI-0312-B-01	P95-96	B-G-2	B7.50	VT-1		20030302	R-104	P	Pre-service Examination. W. O. 02-006492-000
MSS	PCV1-2-022-PBC	2-ISI-0312-B-01	96E-03	B-G-2	B7.50	VT-1		20030312	R-167	R	3 STUDS AND 21 NUTS WERE ACCEPTABLE. 9 STUDS AND 2 NUTS WERE REJECTABLE FOR THREAD DAMAGE. FASTENERS REPLACED. REFERENCE REPORT # R-104.
MSS	PCV1-2-022-VBC	2-ISI-0312-B-01	96E-03	B-G-2	B7.70	VT-1		20020312	R-168	R	11 STUDS AND 7 NUTS WERE ACCEPTABLE. 1 STUD AND 1 NUT WERE REJECTABLE FOR THREAD DAMAGE. BOLTING REPLACED. REFERENCE REPORT #R-009 AND R-105.
MSS	PCV1-2-022-VBC	2-ISI-0312-B-01	P95-96	B-G-2	B7.70	VT-1		20030302	R-105	P	Pre-service Examination. W. O. 02-006492-000
MSS	PCV1-2-022-VBC	2-ISI-0312-B-01	P95-96	B-G-2	B7.70	VT-1		20021001	R-009	P	Preservice exam. Reference REPORT # R-105
RBCC	2-47B464S0121	ISI-0032-C-01	96E-03	F-A	F1.20A	VT-3		20030122	R-022	P	
RBCC	2-47B464S0228	ISI-0032-C-01	96E-03	F-A	F1.20D	VT-3		20030122	R-023	P	

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**EXAM REQUIREMENT**  
**96E-03 NO VT-2**  
**P95-96**  
**S01-03**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**UNIT: TWO CYCLE: 12**

**COMMERCIAL SERVICE DATE: MARCH 1, 1975**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

System	Component Number	ISO Drawing	Exreq	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
RBCC	2-47B464S0228-IA	ISI-0032-C-01	96E-03	C-C	C3.20	MT		20030122	R-021	P	
RCICS	2-47B456R0001-IA	2-ISI-0131-C-01	96E-03	C-C	C3.20	MT		20030205	R-042	P	
RCWS	1-47B451S0228	ISI-0391-C-01	96E-03	F-A	F1.30A	VT-3		20030113	R-012	P	
RCWS	1-47B451S0356	ISI-0391-C-01	96E-03	F-A	F1.30B	VT-3		20030113	R-011	P	
RECIR	2-47B408S0044	2-ISI-0278-C-02	96E-03	F-A	F1.40C	VT-3		20030225	R-057	P	
RECIR	2-47B408S0056	2-ISI-0278-C-01	96E-03	F-A	F1.40C	VT-3		20030225	R-056	P	
RECIR	2RB5	2-ISI-0270-C-02	96E-03	R-A	R1.16A	UT	WB-83	20030228	R-093	P	
RECIR	KR-2-24	2-ISI-0270-C-02	96E-03	R-A	R1.16C	UT	WB-83	2002025	R-064	P	
RECIR	KR-2-25	2-ISI-0270-C-02	96E-03	R-A	R1.16C	UT	WB-83	20030226	R-066	P	
RECIR	KR-2-45	2-ISI-0270-C-01	96E-03	R-A	R1.16C	UT	WB-83	20030228	R-087	P	
RECIR	RBC-2-1	2-ISI-0270-C-01	96E-03	B-G-2	B7.50	VT-1		20030225	R-055	P	
RHRS	FCV-74-47	2-ISI-0221-C-01	96E-03	B-M-2	B12.50	VT-3		20030304	R-119	P	Wedge, Stem and Valve Internals.
RHRS	RHR-2-R-95	2-ISI-0324-C-09	96E-03	F-A	F1.20D	VT-3		20030122	R-024	P	
RHRS	RHRG-2-07-A	2-ISI-0406-C-01	96E-03	C-A	C1.10	UT	BF-26	20030127	R-027	P	
RHRS	RHRG-2-13-A	2-ISI-0406-C-01	S01-03	F-A	F1.40B	VT-3		20030128	R-026	P	Successive exam.
RHRS	RHRG-2-14-D	2-ISI-0406-C-01	S01-03	F-A	F1.40B	VT-3		20030128	R-025	P	Successive exam.
RHRS	2-17B300S0091	2-ISI-0145-C-01	96E-03	F-A	F1.30A	VT-3		20030114	R-013	P	
RHRS	2-47B450H0043-IA	2-ISI-0145-C-02	96E-03	D-A	D1.20	VT-1		20030115	R-014	P	
RHRS	2-47B450R0028	2-ISI-0145-C-02	96E-03	F-A	F1.30A	VT-3		20030115	R-015	P	
RPV	N1A	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT	BF-18	20030304	R-160	P	Exam performed by Framatome
RPV	N1A-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	VT-1E		20030307	R-169	P	REFERENCE REQUEST FOR RELIEF 2-ISI-16. VENDOR PROCEDURE 54-ISI-363 REV. 00
RPV	N2B	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT	BF-18	20030303	R-161	P	Exam performed by Framatome

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**EXAM REQUIREMENT**  
**96E-03 NO VT-2**  
**P95-96**  
**S01-03**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**UNIT: TWO CYCLE: 12**

**COMMERCIAL SERVICE DATE: MARCH 1, 1975**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

System	Component Number	ISO Drawing	Exreq	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
RPV	N2B-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	VT-1E		20030307	R-169	P	REFERENCE REQUEST FOR RELIEF 2-ISI-17. VENDOR PROCEDURE 54-ISI-363 REV. 00
RPV	N2F	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT	BF-18		R-162	P	Exam performed by Framatome
RPV	N2F-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	VT-1E		20030307	R-169	P	REFERENCE REQUEST FOR RELIEF 2-ISI-17. VENDOR PROCEDURE 54-ISI-363 REV. 00
RPV	N2J	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT	BF-18	20030303	R-163	P	Exam performed by Framatome
RPV	N2J-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	VT-1E		20030307	R-169	P	REFERENCE REQUEST FOR RELIEF 2-ISI-17. VENDOR PROCEDURE 54-ISI-363 REV. 00
RPV	N3D	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT	BF-18	20030301	R-164	P	Exam performed by Framatome
RPV	N3D-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	VT-1E		20030307	R-169	P	REFERENCE REQUEST FOR RELIEF 2-ISI-16. VENDOR PROCEDURE 54-ISI-363 REV. 00
RPV	N4A	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT	BF-18	20020302	R-141	P	Exam performed by Framatome
RPV	N4A-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	UT	BF-18	20030302	R-141	P	Exam performed by Framatome
RPV	N4B	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT		20030304	R-142	P	Exam performed by Framatome
RPV	N4B-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	UT	BF-18	20030304	R-142	P	Exam performed by Framatome
RPV	N4C	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT	BF-18	20030301	R-143	P	Exam performed by Framatome
RPV	N4C-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	UT		20030301	R-143	P	Exam performed by Framatome
RPV	N4D	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT	BF-18	20030304	R-144	P	Exam performed by Framatome
RPV	N4D-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	UT	BF-18	20030304	R-144	P	Exam performed by Framatome
RPV	N4E	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT	BF-18	20030302	R-145	P	Exam performed by Framatome
RPV	N4E-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	UT	BF-18	20030302	R-145	P	Exam performed by Framatome
RPV	N4F	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT	BF-18	20030304	R-146	P	Exam performed by Framatome
RPV	N4F-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	UT	BF-18	20030304	R-146	P	Exam performed by Framatome
RPV	N6A-IR	ISI-0408-C-01	96E-03	B-D	B3.100	VT-1E		20030301	R-106	P	REFERENCE REQUEST FOR RELIEF 2-ISI-16

**OWNER: TENNESSEE VALLEY AUTHORITY**  
**NUCLEAR POWER GROUP**  
**1101 MARKET STREET**  
**CHATTANOOGA, TENNESSEE 37402**

**EXAM REQUIREMENT**  
**96E-03 NO VT-2**  
**P95-96**  
**S01-03**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**UNIT: TWO CYCLE: 12**

**COMMERCIAL SERVICE DATE: MARCH 1, 1975**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

System	Component Number	ISO Drawing	Exreq	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
RPV	N6A-NV	ISI-0408-C-01	96E-03	B-D	B3.90	UT	BF-19& B	20030228	R-110	P	
RPV	N8A	2-CHM-2046-C-01	96E-03	B-D	B3.90	UT	BF-18	20030305	R-165	P	Exam performed by Framatome
RPV	N8A-IR	2-CHM-2046-C-01	96E-03	B-D	B3.100	VT-1E		20030307	R-169	P	REFERENCE REQUEST FOR RELIEF 2-ISI-17. VENDOR PROCEDURE 54-ISI-363 REV. 00
RPV	RCH-2-1C	ISI-0408-C-01	96E-03	B-A	B1.21	UT	BF-19	20030228	R-115	P	
RPV	RCH-2-1V	ISI-0408-C-01	96E-03	B-A	B1.22	UT	BF-19	20030301	R-113	P	
RPV	RCH-2-2V	ISI-0408-C-01	96E-03	B-A	B1.22	UT	BF-19	20030301	R-114	P	
RPV	RPV-INTERIOR	2-CHM-2046-C-02	96E-03	B-N-1	B13.10	VT-3		20030307	R-169	P	Vendor Procedure 54-ISI-363-00
RPV	RPV-NUTS-2-01	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-02	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-03	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-04	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-05	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-06	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-07	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-08	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-09	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-10	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-11	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-12	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-13	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-14	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-15	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	

**OWNER: TENNESSEE VALLEY AUTHORITY**  
**NUCLEAR POWER GROUP**  
**1101 MARKET STREET**  
**CHATTANOOGA, TENNESSEE 37402**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**EXAM REQUIREMENT**  
**96E-03 NO VT-2**  
**P95-96**  
**S01-03**

**UNIT: TWO CYCLE: 12**

**COMMERCIAL SERVICE DATE: MARCH 1, 1975**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

System	Component Number	ISO Drawing	Exreq	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
RPV	RPV-NUTS-2-16	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-17	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-18	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-19	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-20	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-21	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-22	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-23	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-24	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-25	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-26	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-27	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-28	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-29	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-NUTS-2-30	ISI-0266-C-01	96E-03	B-G-1	B6.10	VT-1		20030301	R-103	P	
RPV	RPV-STAB-2-1	ISI-0415-C-01	96E-03	F-A	F1.40C	VT-3		20030307	R-147	P	
RPV	RPV-STAB-2-1A-1A	ISI-0415-C-01	96E-03	B-K	B10.10	PT		20030308	R-148	P	
RPV	RPV-STAB-2-1B-1A	ISI-0415-C-01	96E-03	B-K	B10.10	PT		20030308	R-149	P	
RPV	RPV-STAB-2-1C-1A	ISI-0415-C-01	96E-03	B-K	B10.10	PT		20030308	R-150	P	
RPV	RPV-STAB-2-1D-1A	ISI-0415-C-01	96E-03	B-K	B10.10	PT		20030308	R-151	P	
RPV	RPV-STAB-2-1E-1A	ISI-0415-C-01	96E-03	B-K	B10.10	PT		20030308	R-152	P	
RPV	RPV-STAB-2-1F-1A	ISI-0415-C-01	96E-03	B-K	B10.10	PT		20030308	R-153	P	

**OWNER: TENNESSEE VALLEY AUTHORITY**  
**NUCLEAR POWER GROUP**  
**1101 MARKET STREET**  
**CHATTANOOGA, TENNESSEE 37402**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**EXAM REQUIREMENT**  
**96E-03 NO VT-2**  
**P95-96**  
**S01-03**

**UNIT: TWO CYCLE: 12**

**COMMERCIAL SERVICE DATE: MARCH 1, 1975**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

System	Component Number	ISO Drawing	Exreq	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
RPV	RPV-STAB-2-1G-IA	ISI-0415-C-01	96E-03	B-K	B10.10	PT		20030308	R-154	P	
RPV	RPV-STAB-2-1H-IA	ISI-0415-C-01	96E-03	B-K	B10.10	PT		20030308	R-155	P	
RPV	RPV-WASH-2-01	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-02	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-03	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-04	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-05	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-06	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-07	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-08	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-09	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-10	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-11	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-12	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-13	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-14	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-15	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-16	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-17	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-18	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-19	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-20	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	

**OWNER: TENNESSEE VALLEY AUTHORITY**  
**NUCLEAR POWER GROUP**  
**1101 MARKET STREET**  
**CHATTANOOGA, TENNESSEE 37402**

**EXAM REQUIREMENT**  
**96E-03 NO VT-2**  
**P95-96**  
**S01-03**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**UNIT: TWO CYCLE: 12**

**COMMERCIAL SERVICE DATE: MARCH 1, 1975**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

System	Component Number	ISO Drawing	Exreq	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
RPV	RPV-WASH-2-21	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-22	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-23	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-24	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-25	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-26	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-27	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-28	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-29	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RPV	RPV-WASH-2-30	ISI-0266-C-01	96E-03	B-G-1	B6.50	VT-1		20030301	R-102	P	
RWCU	RWCU-2-003-G003	2-ISI-0272-C-01	96E-03	R-A	R1.16A	UT	WB-83	20030304	R-124	P	

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                              DECATUR, ALABAMA 35609-2000  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

**ASME SECTION XI PRESSURE TESTS CLASS 1, 2, AND 3**



**OWNER: TENNESSEE VALLEY AUTHORITY**  
**NUCLEAR POWER GROUP**  
**1101 MARKET STREET**  
**CHATTANOOGA, TENNESSEE 37402**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**EXAM REQUIREMENT**  
**96E-03 VT-2**

**UNIT: TWO CYCLE: 12**

**COMMERCIAL SERVICE DATE: MARCH 1, 1975**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

System	Component Number	ISO Drawing	Exreq	Category	Item Number	Exam Scheduled	NDE Procedure	Exam Date	Exam Report	Exam Results	Comments
CRDS	2-SI-3.3.1.D	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20020505	R-030	P	
CRDS	2-SI-3.3.1.D	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20030505	R-030	P	
CRDS	2-SI-3.3.7	N/A	96E-03	C-H	C7.10	VT-2	N-VT-4	20020919	R-007	P	
CRDS	2-SI-3.3.7	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20020919	R-007	P	
CRDS	2-SI-3.3.7	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20020919	R-007	P	
EECW	2-SI-3.3.14A	N/A	96E-03	D-B	D2.30	VT-2	N-VT-4	20021002	R-008	P	
EECW	2-SI-3.3.14A	N/A	96E-03	D-B	D2.50	VT-2	N-VT-4	20021002	R-008	P	
EECW	2-SI-3.3.14A	N/A	96E-03	D-B	D2.70	VT-2	N-VT-4	20021002	R-008	P	
EECW	2-SI-3.3.14B	N/A	96E-03	D-B	D2.10	VT-2	N-VT-4	20021112	R-010	P	
EECW	2-SI-3.3.14B	N/A	96E-03	D-B	D2.30	VT-2	N-VT-4	20021112	R-010	P	
EECW	2-SI-3.3.14B	N/A	96E-03	D-B	D2.50	VT-2	N-VT-4	20021112	R-010	P	
EECW	2-SI-3.3.14B	N/A	96E-03	D-B	D2.70	VT-2	N-VT-4	20021112	R-010	P	
FPCS	2-SI-3.3.3	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20030303	R-060	P	
FPCS	2-SI-3.3.3	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20030303	R-060	P	
HPCIS	2-SI-3.3.09	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20030504	R-016	P	
HPCIS	2-SI-3.3.09	N/A	96E-03	C-H	C7.50	VT-2	N-VT-4	20030504	R-016	P	
HPCIS	2-SI-3.3.09	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20030504	R-016	P	
MSS	2-SI-3.3.1.C	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20030505	R-051	P	
MSS	2-SI-3.3.1.C	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20030505	R-051	P	
PCONT	2-SI-3.3.15	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20010719	R-001	P	
PCONT	2-SI-3.3.15	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20010719	R-001	P	
RADW	2-SI-3.3.2.A	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20030314	R-062	P	

**OWNER: TENNESSEE VALLEY AUTHORITY**  
**NUCLEAR POWER GROUP**  
**1101 MARKET STREET**  
**CHATTANOOGA, TENNESSEE 37402**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**EXAM REQUIREMENT**  
**96E-03 VT-2**

**UNIT: TWO CYCLE: 12**

**COMMERCIAL SERVICE DATE: MARCH 1, 1975**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

System	Component Number	ISO Drawing	Exreq	Category	Item Number	Exam Scheduled	NDE Procedure	Exam Date	Exam Report	Exam Results	Comments
RADW	2-SI-3.3.2.A	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20030314	R-062	P	
RADW	2-SI-3.3.2.B	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20030314	R-063	P	
RADW	2-SI-3.3.2.B	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20030314	R-063	P	
RCICS	2-SI-3.3.10	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20020816	R-006	P	
RCICS	2-SI-3.3.10	N/A	96E-03	C-H	C7.50	VT-2	N-VT-4	20020816	R-006	P	
RCICS	2-SI-3.3.10	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20020816	R-006	P	
RHR	2-SI-3.3.8.C	N/A	96E-03	C-H	C7.10	VT-2	N-VT-4	20020806	R-005	P	
RHR	2-SI-3.3.8.C	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20020806	R-005	P	
RHR	2-SI-3.3.8.C	N/A	96E-03	C-H	C7.50	VT-2	N-VT-4	20020806	R-005	P	
RHR	2-SI-3.3.8.C	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20020806	R-005	P	
RHRS	2-SI-3.3.8.A	N/A	96E-03	C-H	C7.10	VT-2	N-VT-4	20020509	R-002	P	
RHRS	2-SI-3.3.8.A	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20020509	R-002	P	
RHRS	2-SI-3.3.8.A	N/A	96E-03	C-H	C7.50	VT-2	N-VT-4	20020509	R-002	P	
RHRS	2-SI-3.3.8.A	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20020509	R-002	P	
RHRS	2-SI-3.3.8.A	N/A	96E-03	D-B	D2.30	VT-2	N-VT-4	20020509	R-002	P	
RHRS	2-SI-3.3.8.A	N/A	96E-03	D-B	D2.70	VT-2	N-VT-4	20020509	R-002	P	
RHRS	2-SI-3.3.8.B	N/A	96E-03	C-H	C7.10	VT-2	N-VT-4	20030227	R-054	P	
RHRS	2-SI-3.3.8.B	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20030227	R-054	P	
RHRS	2-SI-3.3.8.B	N/A	96E-03	C-H	C7.50	VT-2	N-VT-4	20030227	R-054	P	
RHRS	2-SI-3.3.8.B	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20030227	R-054	P	
RHRS	DRHR-2-03B	2-ISI-0221-C-01	96E-03	R-A	R1.16G	VT-2	N-VT-4	20030424	R-158	P	
RHRS	DRHR-2-13B	2-ISI-0221-C-01	96E-03	R-A	R1.16G	VT-2	N-VT-4	20030424	R-158	P	

**OWNER: TENNESSEE VALLEY AUTHORITY**  
**NUCLEAR POWER GROUP**  
**1101 MARKET STREET**  
**CHATTANOOGA, TENNESSEE 37402**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**EXAM REQUIREMENT**  
**96E-03 VT-2**

**UNIT: TWO CYCLE: 12**

**COMMERCIAL SERVICE DATE: MARCH 1, 1975**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

System	Component Number	ISO Drawing	Exreq	Category	Item Number	Exam Scheduled	NDE Procedure	Exam Date	Exam Report	Exam Results	Comments
RHRS	RHRG-2-05-A	2-ISI-0406-C-01	96E-03	C-B	C2.33	VT-2	N-VT-4	20020509	R-002	P	
RHRS	RHRG-2-06-A	2-ISI-0406-C-01	96E-03	C-B	C2.33	VT-2	N-VT-4	20020509	R-002	P	
RPV	2-SI-3.3.1.A	N/A	96E-03	B-P	B15.10	VT-2	N-VT-4	20030424	R-158	P	
RPV	2-SI-3.3.1.A	N/A	96E-03	B-P	B15.50	VT-2	N-VT-4	20030424	R-158	P	
RPV	2-SI-3.3.1.A	N/A	96E-03	B-P	B15.60	VT-2	N-VT-4	20030424	R-158	P	
RPV	2-SI-3.3.1.A	N/A	96E-03	B-P	B15.70	VT-2	N-VT-4	20030424	R-158	P	
SLCS	2-SI-3.3.4	N/A	96E-03	C-H	C7.30	VT-2	N-VT-4	20030314	R-061	P	
SLCS	2-SI-3.3.4	N/A	96E-03	C-H	C7.50	VT-2	N-VT-4	20030314	R-061	P	
SLCS	2-SI-3.3.4	N/A	96E-03	C-H	C7.70	VT-2	N-VT-4	20030314	R-061	P	

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                      DECATUR, ALABAMA 35609-2000  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## **ISOMETRICS FOR COMPONENT LOCATIONS**

47N2054  
47W464-H SERIES  
47W2464-200 THRU 203  
47B2464-11, 18, 31, 41



- RIGID HANGER
- MECHANICAL SNUBBER
- RIGID STRUT

001	ADMIN	IN PHILLIPS	RCH	SLD	18-AP-02
REVISED PER BIRM MEMO DTA 02/20/02 103					
REV	CHANGE REF	PREPARED	CHECKED	APPROVED	DATE
<p align="center"><b>TENNESSEE VALLEY AUTHORITY</b>  <b>BROWNS FERRY NUCLEAR PLANT</b>  <b>UNIT #2</b>  <b>REACTOR BUILDING CLOSED COOLING WATER SYSTEM</b>  <b>SUPPORT LOCATIONS</b></p>					
ORIGIN	REV	SUBMITTED	APPROVED	SCALE: N/A	
DATE		DATE		DATE OF 01 MEET (S)	
ORIGIN			SLB	DRAWING NO. (REV)	
DATE				2-151-0032-C 001	

**CAD MAINTAINED DRAWING**

**CCD**

47W2468 SERIES  
ISI-0040-C (SM. 1) WELD MAP

 ANCHOR  
 RIGID HANGER  
 RIGID STRUT

[illegible]

**CCD**

ALL A/D HISTORY RESEARCHED AT R000

REFERENCE DRAWINGS:  
47W2460 SERIES

● RIGID HANGER  
— RIGID STRUT  
▲ ANCHOR

Isometric view of a piping system. The system features a main horizontal header at the bottom, labeled "WEST HEADER". Several vertical and diagonal branches connect to this header. Key components and labels include:

- 2-47B468S0001** and **2-47B468S0001-1A (0.50")**: A vertical branch on the left side.
- 2-47B468S0002**: A vertical branch near the top left.
- 2-47B468S0032**: A vertical branch near the top left.
- 2-47B468S0031**: A vertical branch on the left side.
- 2-47B468S0036**: A vertical branch on the left side.
- 2-47B468S0033**: A vertical branch near the top center.
- 2-47B468S0035**: A vertical branch near the top center.
- 2-47B468S0003**: A vertical branch on the right side.
- 2-47B468S0037**: A vertical branch on the right side.
- 2-47B468S0004** and **2-47B468S0004-1A (0.50")**: A vertical branch on the right side.
- 2-47B468S0005**: A vertical branch on the right side.
- 2-47B468S0034**: A vertical branch near the top right.
- WATCH LINE 'B'**: A label indicating a specific section of the piping.
- 2° WELDOLET (TYP.)**: A label for a weldolet connection at the bottom right.
- 6°**: Multiple labels indicating 6-degree angles at various joints.

A legend box in the top right corner contains the text "LEGE" and "ASME".

## NEST HEADER

• WELDOLET  
(TYP.)

--- MATCH LINE B

EL. 576'-2"

**2-47846850017**

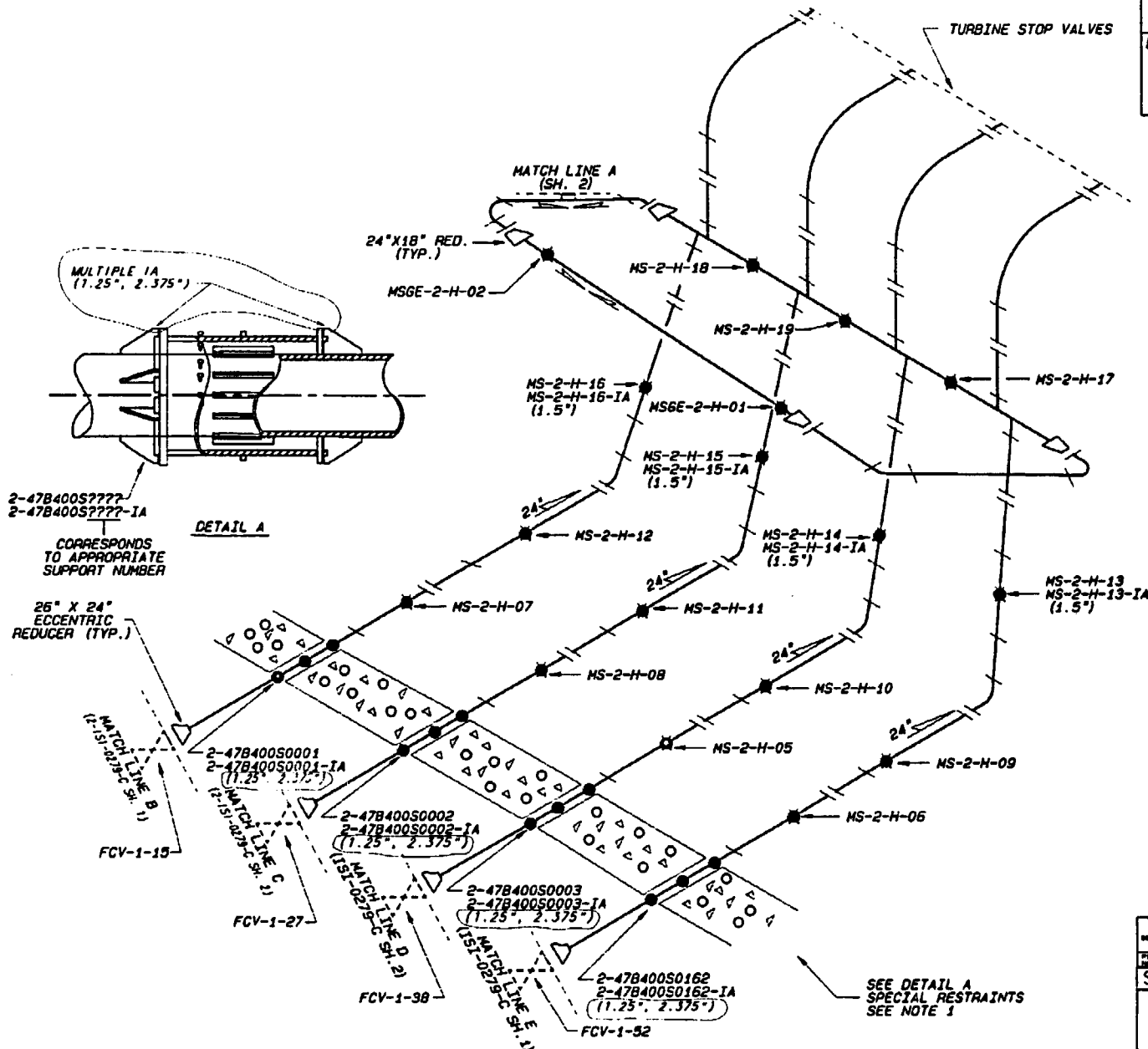
2-47B468S001B  
2-47B468S001B-1A  
(0.688")

### SCRAM DISCHARGE INSTRUMENT VOLUME TANK

CDD/ADMIN		FILE	N/A	N/A	N/A	N/A
600	ISSUED TO CREATE CDD SUPERSEDING A/D 151-0041-C-2 AS AND TO REFLECT AS-CONSTRUCTED STATUS PER A/D NO THRU A/D: RIMS MEMO RFE 304024 600 (ADMINISTRATIVE REVISION)					
REV	CHANGE REF	DATE	OF TR	CHGR	DSCH	PRVS
					APPR	APPR
					APPR	SSD
<p>5 TENNESSEE VALLEY AUTHORITY</p> <p>BROWNS FERRY NUCLEAR PLANT</p> <p>UNIT #2</p> <p>CONTROL ROD DRIVE SCRAM DISCHARGE SYSTEM</p> <p>SUPPORT LOCATIONS</p>						
ORIGIN	REV	SUBMITTED	APPROVED	SCALE	NTS	
DATE	7-1-66	DATE	DATE	SHEET OF OF 62 SHEET(S)		
REWORK		EOC	GLB	ORIGINATOR NO. REV		
DATE				2-151-0041-C 1000		
<p>0 CDD</p>						

REFERENCE DRAWINGS  
 BP-201-5  
 47W400 SH. 1 & 5  
 MS6-0021-C (SH. 1) WELD MAP

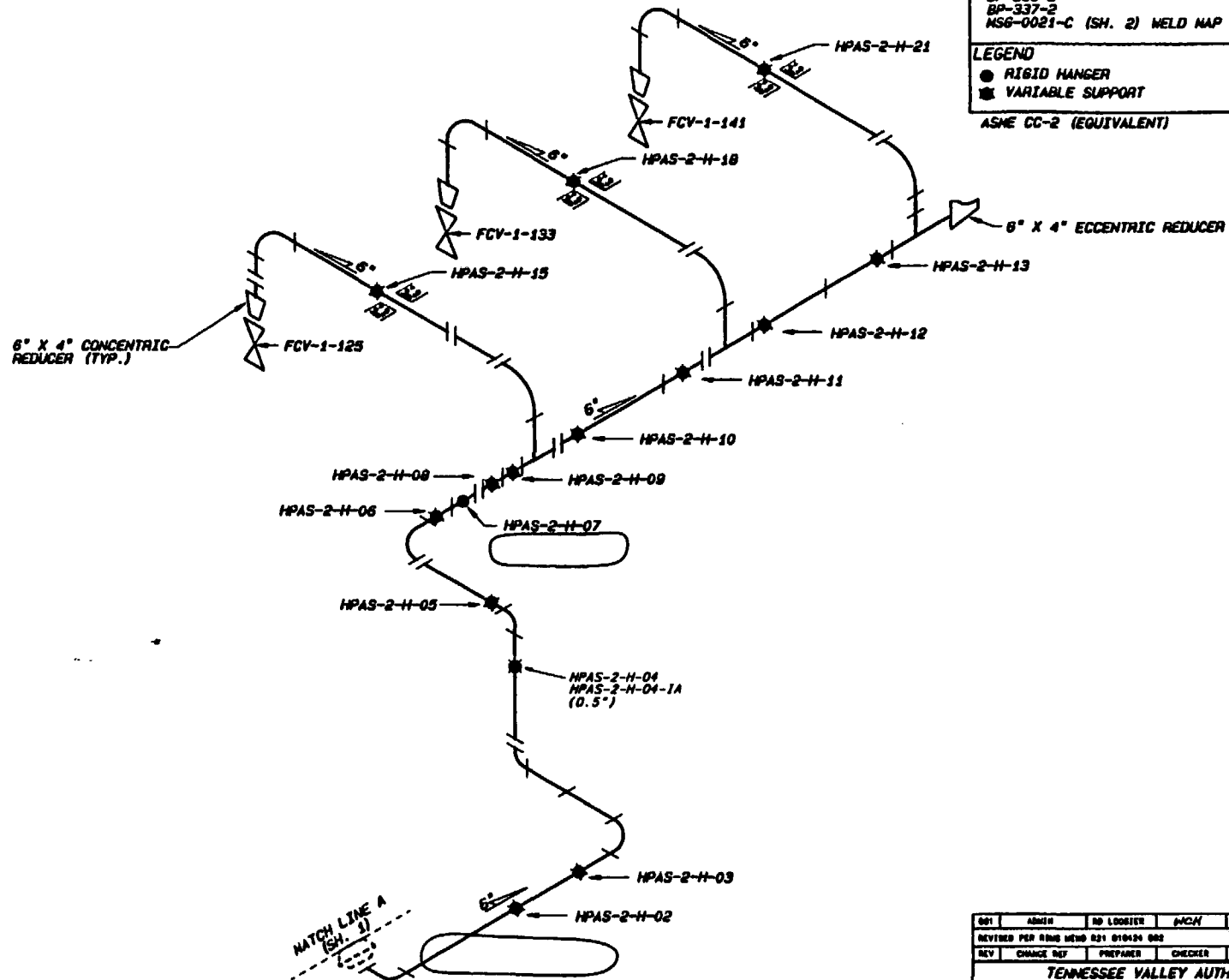
LEGEND  
 ● RIGID HANGER  
 \* VARIABLE SUPPORT  
 ASME CC-2 (EQUIVALENT)



SEE DETAIL A  
 SPECIAL RESTRAINTS  
 SEE NOTE 1

DES	AMER	REL	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ISSUED TO CREATE OUR PATENTED AS-RESERVED 131-0079-C-1 REV AND TO REPORT AS CONSTRUCTION STARTS PER BIDS WITH SHAKES AND 1/2" A/D 80-80									
REV	CHANGE	REF	DATE	BY	CHK	CSM	SVR	APPD	ISSD
S									
TENNESSEE VALLEY AUTHORITY									
BROWNS FERRY NUCLEAR PLANT									
UNIT #2									
MAINSTEAM SYSTEM									
SUPPORT LOCATIONS									
DRAWN	SUBMITTED	APPROVED	SCALE	N/A					
DATE	DATE	DATE	SHEET 1 OF 3 SHEET(S)						
CHECKED			GLB	2-131-0079-C-000					
DATE				CCD					





REFERENCE DRAWINGS  
 47W400 SH. 1 & 5  
 BP-336-2  
 BP-337-2  
 MSG-0021-C (SH. 2) WELD MAP

LEGEND  
 ● RIGID HANGER  
 \* VARIABLE SUPPORT  
 ASME CC-2 (EQUIVALENT)

REV  
 204

AutoCAD

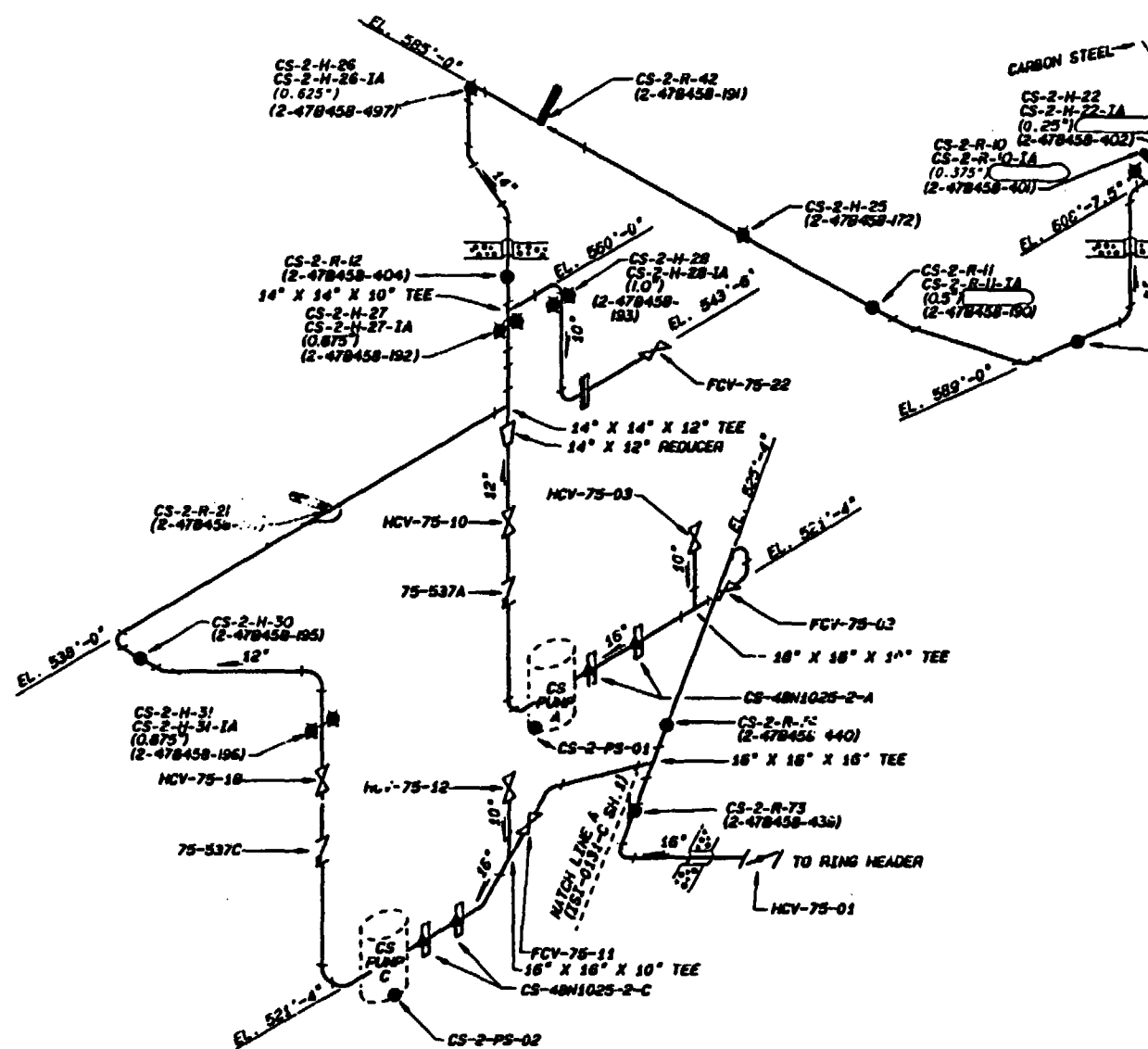
ALL A/D HISTORY RESEARCHED AT ROOG

001	ADMIN	NO LOOSER	MCN	GLB	6-84-01
REVISED PER RING MEMO R21 010424 000					
REV	CHANGE	DEF	PREPARED	CHECKER	APPROVED DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT #2					
MAINSTEAM SYSTEM					
SUPPORT LOCATIONS					
DRAWING	REV	REWORKED	APPROVED	SCALE	NYB
DATE: 12-18-83	DATE: ---	DATE: ---	DATE: ---	SHEET 1 OF 1 SHEETS	
CHUCKLE - JLS			GLB	DRAWING NO.	REV
DATE: ---				2-151-0079-C(001)	

CAD MAINTAINED DRAWING

CCD

REFERENCE DRAWINGS  
47N458 SERIES  
47N458-H SERIES  
181-0103-C (SH. 1) MELO MAP



- LEGEND:**
- RIGID SUPPORT
  - ⊕ VARIABLE SUPPORT
  - RIGID STRUT
  - △ ANCHOR
  - MECHANICAL SNUBBER

CALCULATION BRANCH/PROJECT IDENTIFIERS:  
CD-03075-001234  
CD-03075-001235

ASME CC-2 (EQUIVALENT)

**NOTE:**  
1. DRAWING NUMBERS SHOWN IN ( ) WITH  
CORRESPONDING SUPPORT I.D. DRAWING  
MAY ALSO HAVE MULTIPLE SHEETS.

002	ADMIN	ROL	E.L.O	IGN	6-29-70
REVISED PER RIMS MEMO R21 000621 002					
REV	CHANGE REF	PREPARED	CHECKER	APPROVED	DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
CORE SPRAY SYSTEM					
SUPPORT LOCATIONS					
DESIGN	REV	DATE	BY	CHKD	DATE
CD-03075-001234	1	6-29-70	GLB	GLB	6-29-70
CD-03075-001235	1	6-29-70	GLB	GLB	6-29-70
2-131-0008-C					002
CAD MAINTAINED DRAWING					CCD



- RIGID HANGER
- VARIABLE SUPPORT
- RIGID STRUT
- ▲ ANCHOR
- MECHANICAL SNUBBER

**CALCULATION BRANCH/PROJECT IDENTIFIER:**

CD-02075-895121  
CD-02073-883012

**ASME CC-2 (EQUIVALENT)**

**NOTE:**  
**FOR NOTES SEE SHEET 1.**

001	ADMIN	ROL	FLD	HEN	PSY
REVISED PER RIMS MEMO RE: GOSSET ONE					
REV	CHANGE REF	PREPARED	CHECKER	APPROVED	DATE
<p align="center"><b>TENNESSEE VALLEY AUTHORITY</b>  <b>BROWNS FERRY NUCLEAR PLANT</b>  <b>UNIT 2</b>  <b>CORE SPRAY SYSTEM</b>  <b>SUPPORT LOCATIONS</b></p>					
ISSUED BY	DATE	REVISION	DATE	ISSUED BY	DATE
WJG	2-23-61	1	WJG	WJG	2-23-61
APPROVED BY	DATE	REVISION	DATE	APPROVED BY	DATE
		GLB			2-13-0105-C
<p align="right">001</p>					

**CAD MAINTAINED DRAWING**

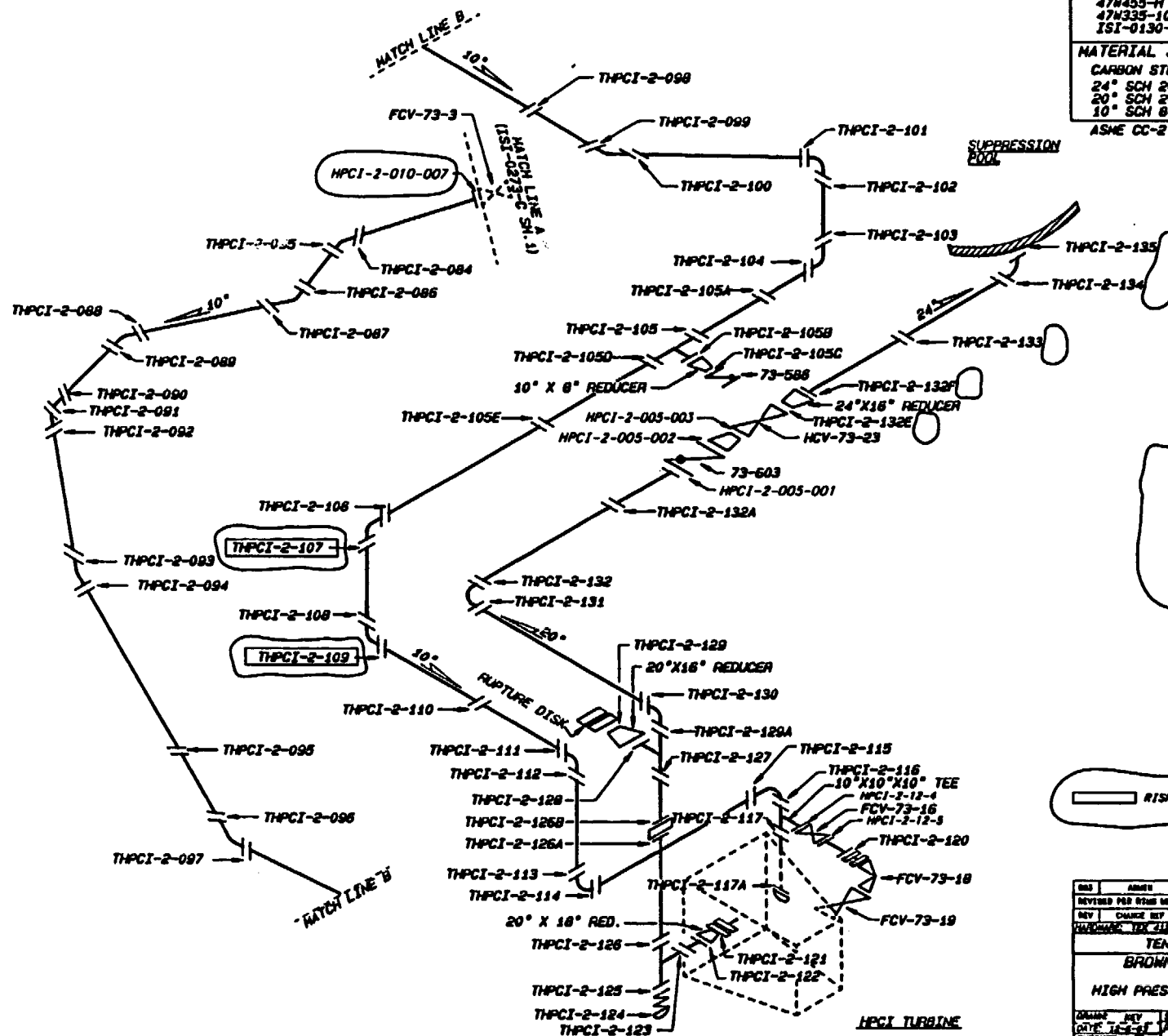
REFERENCE DRAWINGS  
47N455-H SERIES  
47N335-10, 12  
ISI-0130-C (SH. 1) SUPPORT MAP

# MATERIAL SPECIFICATIONS

## CARBON STEEL

24" SCH 20 (0.375" NOM WALL THK)  
20" SCH 20 (0.375" NOM WALL THK)  
10" SCH 80 (0.593" NOM WALL THK)

ASME CC-2 (EQUIVALENT)



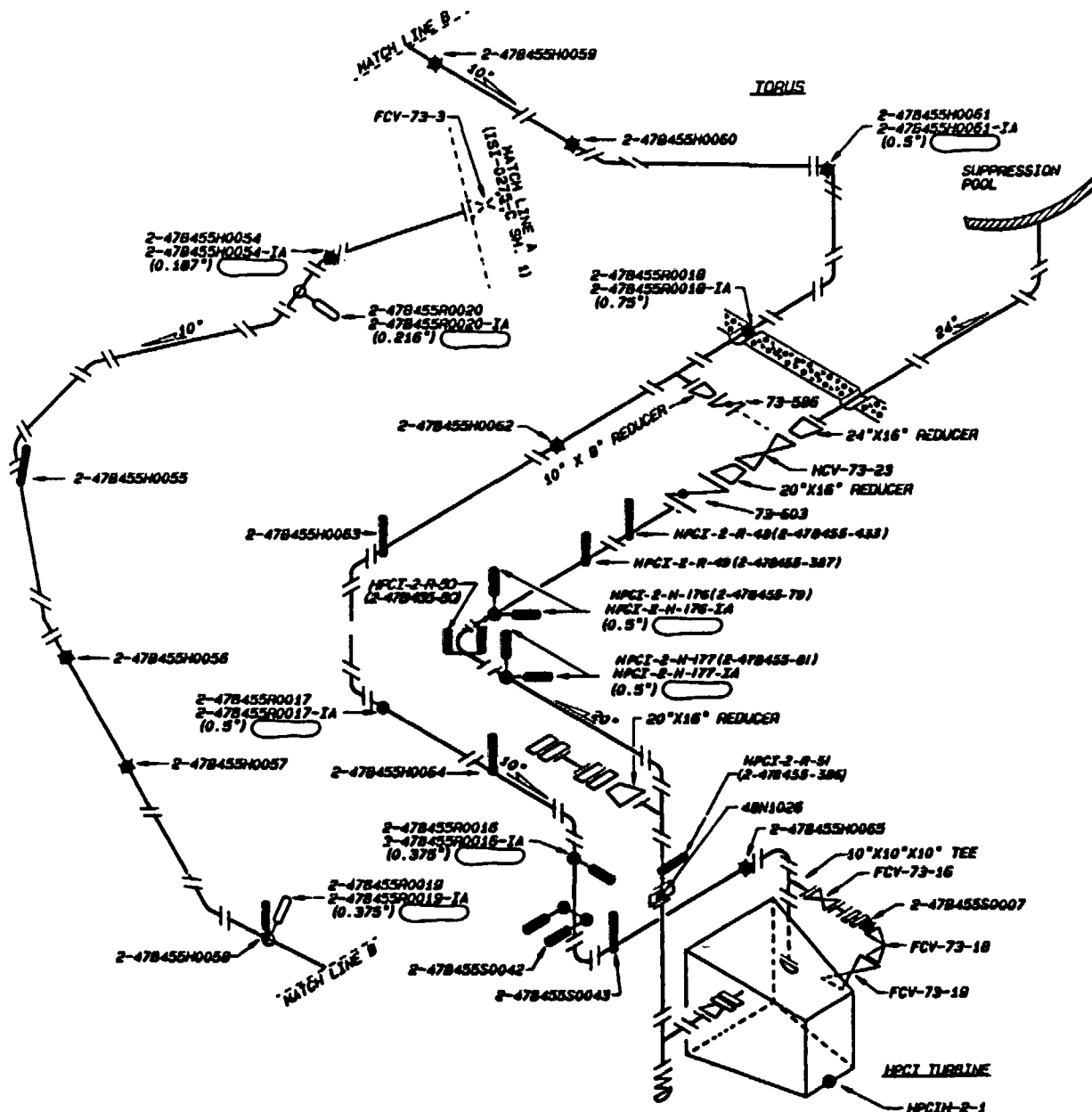
RISK INFORMED WELDS

DES	AMER	EN	WCH	QCH	E-24-04
DESIGNED FOR	DESIGNED FOR	DESIGNED FOR	DESIGNED FOR	DESIGNED FOR	DESIGNED FOR
REV	CHANGE SET	PREPARED	CHECKED	APPROVED	DATE
WELDING	WELDING	WELDING	WELDING	WELDING	WELDING
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT # 2					
HIGH PRESSURE COOLANT INJECTION SYSTEM					
WELD LOCATIONS					
DESIGNED BY	DESIGNED BY	DESIGNED BY	DESIGNED BY	DESIGNED BY	DESIGNED BY
DATE	DATE	DATE	DATE	DATE	DATE
DATE	DATE	DATE	DATE	DATE	DATE

CAD MAINTAINED DRAWING

CCD

ALL A/B HISTORY RESEARCHED AT R000



REFERENCE DRAWINGS  
 47B455-H-6, 7, 203  
 TST-020-C (SH.1) WELD MAP

#### LEGEND

RIGID HANGER  
 VARIABLE SUPPORT  
 HYDRAULIC SHUDBER  
 MECHANICAL SHUDBER  
 ANCHOR  
 RIGID STRUT

CALCULATION BRANCH  
 PROJECT IDENTIFIER:  
 CO-02073-88990

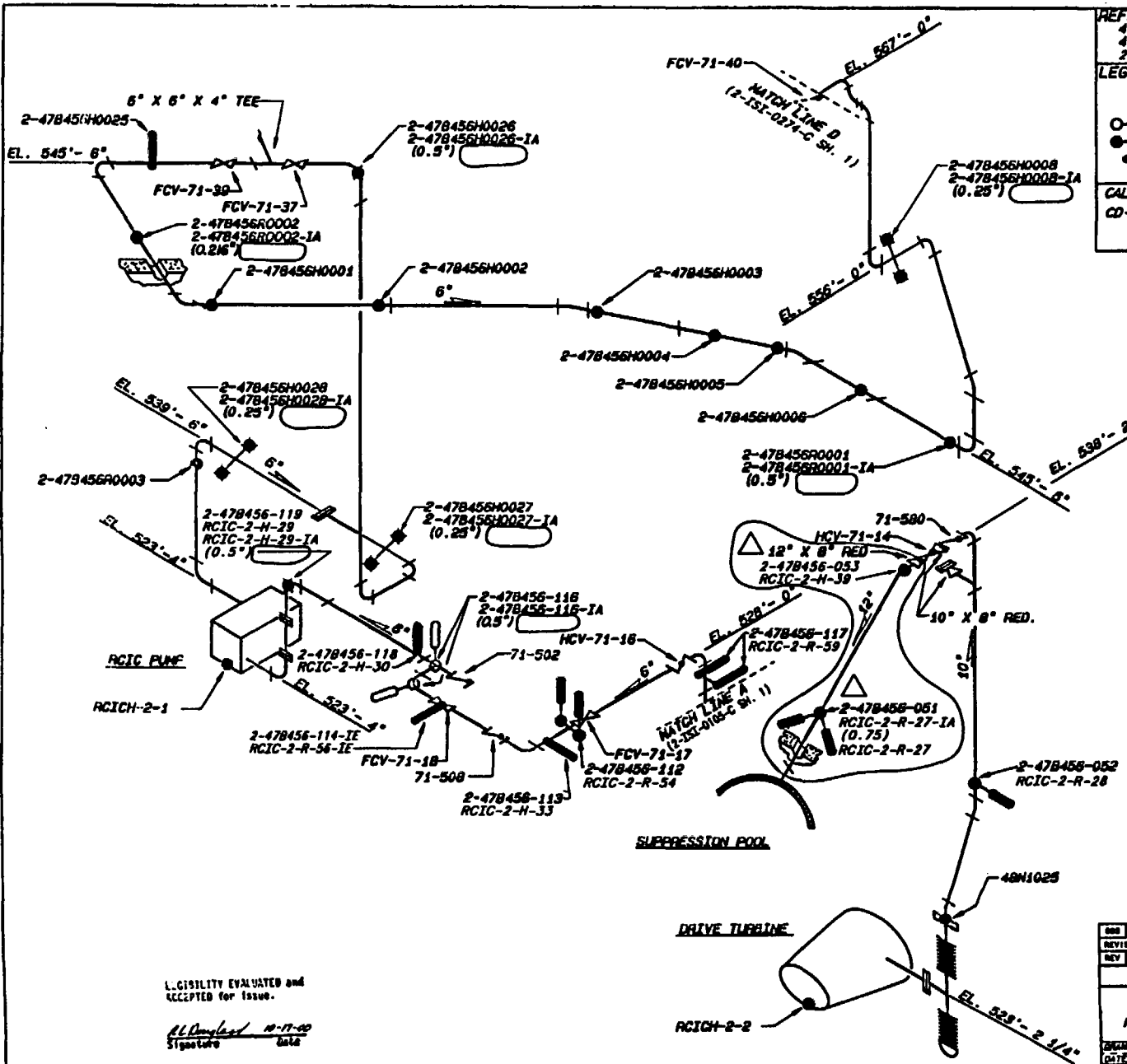
ASME CC-2 (EQUIVALENT)

NOTE  
 1. SUPPORT DRAWING NUMBERS  
 SHOWN IN "1" DRAWING  
 MAY HAVE MULTIPLE SHEET  
 NUMBERS.

001	ADMIN	ROP	220	HEH	0-02-201
REVISED PER RINS MEMO R21 000821 002					
REV	CHANGE	REF	PREPARED	CHECKER	APPROVED DATE
TENNESSEE VALLEY AUTHORITY					
BROWN FERRY NUCLEAR PLANT					
UNIT # 2					
HIGH PRESSURE COOLANT INJECTION SYSTEM					
SUPPORT LOCATIONS					
DATE	REV	REVISION	DATE	SCALE	BY
02-16-81	1	1	02-16-81	1/2" = 1'-0"	HEH
02-16-81	2	2	02-16-81	1/2" = 1'-0"	HEH
02-16-81	3	3	02-16-81	1/2" = 1'-0"	HEH
02-16-81	4	4	02-16-81	1/2" = 1'-0"	HEH
02-16-81	5	5	02-16-81	1/2" = 1'-0"	HEH
02-16-81	6	6	02-16-81	1/2" = 1'-0"	HEH
02-16-81	7	7	02-16-81	1/2" = 1'-0"	HEH
02-16-81	8	8	02-16-81	1/2" = 1'-0"	HEH
02-16-81	9	9	02-16-81	1/2" = 1'-0"	HEH
02-16-81	10	10	02-16-81	1/2" = 1'-0"	HEH
02-16-81	11	11	02-16-81	1/2" = 1'-0"	HEH
02-16-81	12	12	02-16-81	1/2" = 1'-0"	HEH
02-16-81	13	13	02-16-81	1/2" = 1'-0"	HEH
02-16-81	14	14	02-16-81	1/2" = 1'-0"	HEH
02-16-81	15	15	02-16-81	1/2" = 1'-0"	HEH
02-16-81	16	16	02-16-81	1/2" = 1'-0"	HEH
02-16-81	17	17	02-16-81	1/2" = 1'-0"	HEH
02-16-81	18	18	02-16-81	1/2" = 1'-0"	HEH
02-16-81	19	19	02-16-81	1/2" = 1'-0"	HEH
02-16-81	20	20	02-16-81	1/2" = 1'-0"	HEH
02-16-81	21	21	02-16-81	1/2" = 1'-0"	HEH
02-16-81	22	22	02-16-81	1/2" = 1'-0"	HEH
02-16-81	23	23	02-16-81	1/2" = 1'-0"	HEH
02-16-81	24	24	02-16-81	1/2" = 1'-0"	HEH
02-16-81	25	25	02-16-81	1/2" = 1'-0"	HEH
02-16-81	26	26	02-16-81	1/2" = 1'-0"	HEH
02-16-81	27	27	02-16-81	1/2" = 1'-0"	HEH
02-16-81	28	28	02-16-81	1/2" = 1'-0"	HEH
02-16-81	29	29	02-16-81	1/2" = 1'-0"	HEH
02-16-81	30	30	02-16-81	1/2" = 1'-0"	HEH
02-16-81	31	31	02-16-81	1/2" = 1'-0"	HEH
02-16-81	32	32	02-16-81	1/2" = 1'-0"	HEH
02-16-81	33	33	02-16-81	1/2" = 1'-0"	HEH
02-16-81	34	34	02-16-81	1/2" = 1'-0"	HEH
02-16-81	35	35	02-16-81	1/2" = 1'-0"	HEH
02-16-81	36	36	02-16-81	1/2" = 1'-0"	HEH
02-16-81	37	37	02-16-81	1/2" = 1'-0"	HEH
02-16-81	38	38	02-16-81	1/2" = 1'-0"	HEH
02-16-81	39	39	02-16-81	1/2" = 1'-0"	HEH
02-16-81	40	40	02-16-81	1/2" = 1'-0"	HEH
02-16-81	41	41	02-16-81	1/2" = 1'-0"	HEH
02-16-81	42	42	02-16-81	1/2" = 1'-0"	HEH
02-16-81	43	43	02-16-81	1/2" = 1'-0"	HEH
02-16-81	44	44	02-16-81	1/2" = 1'-0"	HEH
02-16-81	45	45	02-16-81	1/2" = 1'-0"	HEH
02-16-81	46	46	02-16-81	1/2" = 1'-0"	HEH
02-16-81	47	47	02-16-81	1/2" = 1'-0"	HEH
02-16-81	48	48	02-16-81	1/2" = 1'-0"	HEH
02-16-81	49	49	02-16-81	1/2" = 1'-0"	HEH
02-16-81	50	50	02-16-81	1/2" = 1'-0"	HEH
02-16-81	51	51	02-16-81	1/2" = 1'-0"	HEH
02-16-81	52	52	02-16-81	1/2" = 1'-0"	HEH
02-16-81	53	53	02-16-81	1/2" = 1'-0"	HEH
02-16-81	54	54	02-16-81	1/2" = 1'-0"	HEH
02-16-81	55	55	02-16-81	1/2" = 1'-0"	HEH
02-16-81	56	56	02-16-81	1/2" = 1'-0"	HEH
02-16-81	57	57	02-16-81	1/2" = 1'-0"	HEH
02-16-81	58	58	02-16-81	1/2" = 1'-0"	HEH
02-16-81	59	59	02-16-81	1/2" = 1'-0"	HEH
02-16-81	60	60	02-16-81	1/2" = 1'-0"	HEH
02-16-81	61	61	02-16-81	1/2" = 1'-0"	HEH
02-16-81	62	62	02-16-81	1/2" = 1'-0"	HEH
02-16-81	63	63	02-16-81	1/2" = 1'-0"	HEH
02-16-81	64	64	02-16-81	1/2" = 1'-0"	HEH
02-16-81	65	65	02-16-81	1/2" = 1'-0"	HEH
02-16-81	66	66	02-16-81	1/2" = 1'-0"	HEH
02-16-81	67	67	02-16-81	1/2" = 1'-0"	HEH
02-16-81	68	68	02-16-81	1/2" = 1'-0"	HEH
02-16-81	69	69	02-16-81	1/2" = 1'-0"	HEH
02-16-81	70	70	02-16-81	1/2" = 1'-0"	HEH
02-16-81	71	71	02-16-81	1/2" = 1'-0"	HEH
02-16-81	72	72	02-16-81	1/2" = 1'-0"	HEH
02-16-81	73	73	02-16-81	1/2" = 1'-0"	HEH
02-16-81	74	74	02-16-81	1/2" = 1'-0"	HEH
02-16-81	75	75	02-16-81	1/2" = 1'-0"	HEH
02-16-81	76	76	02-16-81	1/2" = 1'-0"	HEH
02-16-81	77	77	02-16-81	1/2" = 1'-0"	HEH
02-16-81	78	78	02-16-81	1/2" = 1'-0"	HEH
02-16-81	79	79	02-16-81	1/2" = 1'-0"	HEH
02-16-81	80	80	02-16-81	1/2" = 1'-0"	HEH
02-16-81	81	81	02-16-81	1/2" = 1'-0"	HEH
02-16-81	82	82	02-16-81	1/2" = 1'-0"	HEH
02-16-81	83	83	02-16-81	1/2" = 1'-0"	HEH
02-16-81	84	84	02-16-81	1/2" = 1'-0"	HEH
02-16-81	85	85	02-16-81	1/2" = 1'-0"	HEH
02-16-81	86	86	02-16-81	1/2" = 1'-0"	HEH
02-16-81	87	87	02-16-81	1/2" = 1'-0"	HEH
02-16-81	88	88	02-16-81	1/2" = 1'-0"	HEH
02-16-81	89	89	02-16-81	1/2" = 1'-0"	HEH
02-16-81	90	90	02-16-81	1/2" = 1'-0"	HEH
02-16-81	91	91	02-16-81	1/2" = 1'-0"	HEH
02-16-81	92	92	02-16-81	1/2" = 1'-0"	HEH
02-16-81	93	93	02-16-81	1/2" = 1'-0"	HEH
02-16-81	94	94	02-16-81	1/2" = 1'-0"	HEH
02-16-81	95	95	02-16-81	1/2" = 1'-0"	HEH
02-16-81	96	96	02-16-81	1/2" = 1'-0"	HEH
02-16-81	97	97	02-16-81	1/2" = 1'-0"	HEH
02-16-81	98	98	02-16-81	1/2" = 1'-0"	HEH
02-16-81	99	99	02-16-81	1/2" = 1'-0"	HEH
02-16-81	100	100	02-16-81	1/2" = 1'-0"	HEH

CAD MAINTAINED DRAWING

ALL A/D HISTORY RESEARCHED TO ROOT



REFERENCE DRAWINGS  
 47W456-H SERIES  
 47W456 SERIES  
 2-151-0129-C (SH. 1) WELD MAP

LEGEND:

- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- MECHANICAL SNUBBER
- RIGID STRUT

CALCULATION BRANCH/PROJECT IDENTIFIER:  
 CD-02071-88968

ASME CC-2 (EQUIVALENT)

△ EXEMPT PER ASME SECTION XI 1995  
 EDITION 1995 ADDENDA.

L. GIBLITY EVALUATED and  
 ACCEPTED FOR ISSUE.

*RL Douglas* 10-17-00  
 Signature Date

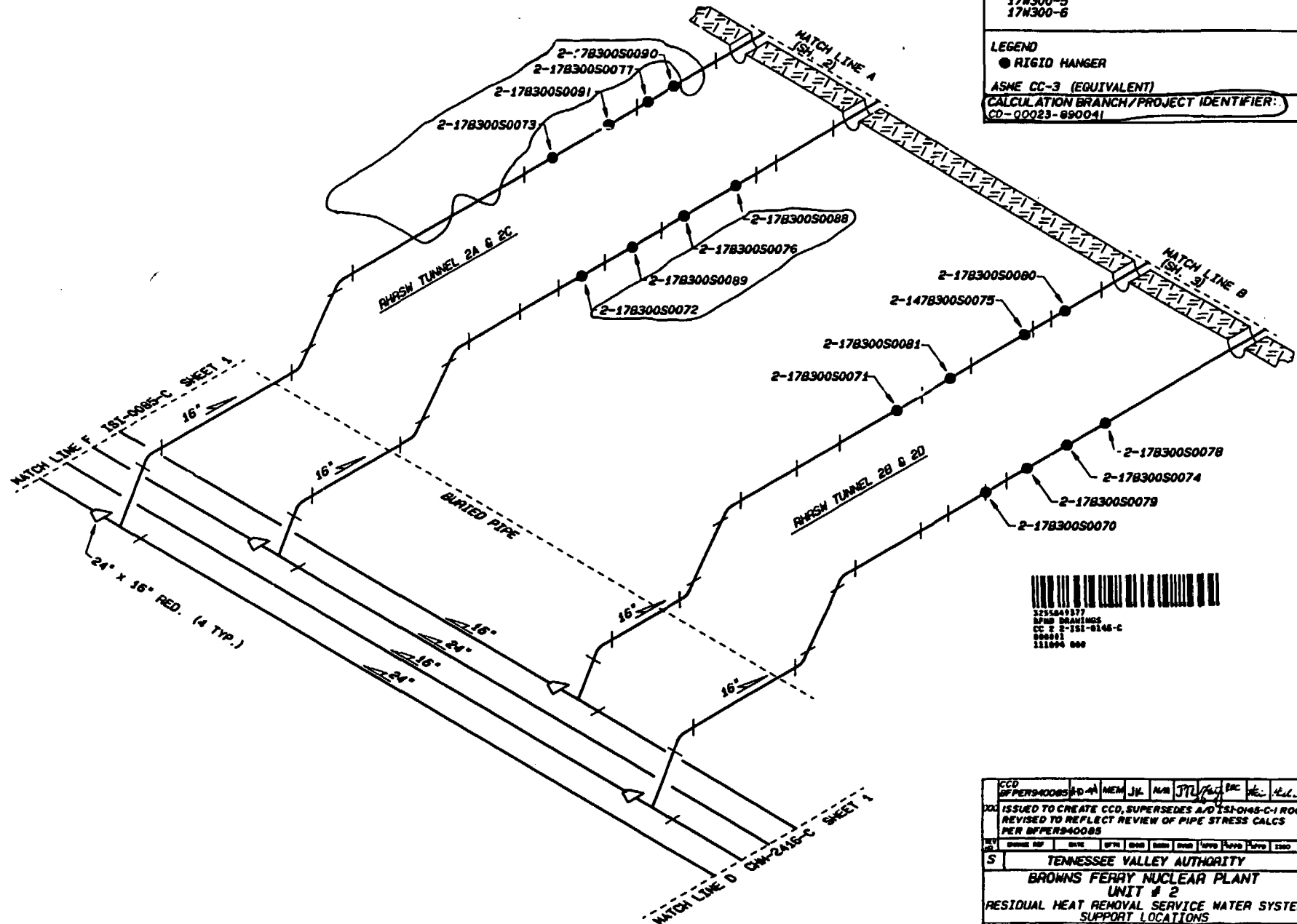
ALL A/D HISTORY RESEARCHED © R000

DES	ADDN	REV	REL	CHK	DATE
REVISED PER R116 MEMO R21 000021 002					
REV	CHANGE	REV	PREPARED	CHECKED	APPROVED DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
REACTOR CORE ISOLATION COOLING SYSTEM					
SUPPORT LOCATIONS					
ENGINEER	DESIGNER	APPROVER	SCALE	DATE	REV
DATE: 2-10-84	DATE: ---	DATE: ---	SCALE: 1" = 10'-0"	DATE: ---	REV: ---
DESIGNER: JLB	DATE: ---	GLB	DATE: ---	DATE: ---	DATE: ---
CAD MAINTAINED DRAWING					CCD

17W300-5  
17W300-6

● **RIGID HANGER**

**CALCULATION BRANCH/PROJECT IDENTIFIER:**  
CD-00023-890041



CCD OFFERS-40085	10-A	MEM	JL	NLS	JTL	WJ	EC	WJ	WJ
304	ISSUED TO CREATE CCD, SUPERSEDES A/D TSI-048-C-1 R06 REVISED TO REFLECT REVIEW OF PIPE STRESS CALCS PER OFFERS-40085								
REV	ISSUED	DATE	BY	CHK	DATE	BY	WFO	WFO	WFO
5	TENNESSEE VALLEY AUTHORITY BROWNS FERRY NUCLEAR PLANT UNIT # 2 RESIDUAL HEAT REMOVAL SERVICE WATER SYSTEM SUPPORT LOCATIONS								
ISSUED	REV	SUBMITTED	APPROVED	SCALE: NYS					
DATE: 3-10-84	DATE: ---	DATE: ---	DATE: ---	SHEET 01 OF 03 SHEET(S)					
CHANGED: JL	GLB			GRANTING NO.				REV	
DATE: ---	---			2-TS-048-C				000	
CCD									





NOTE:

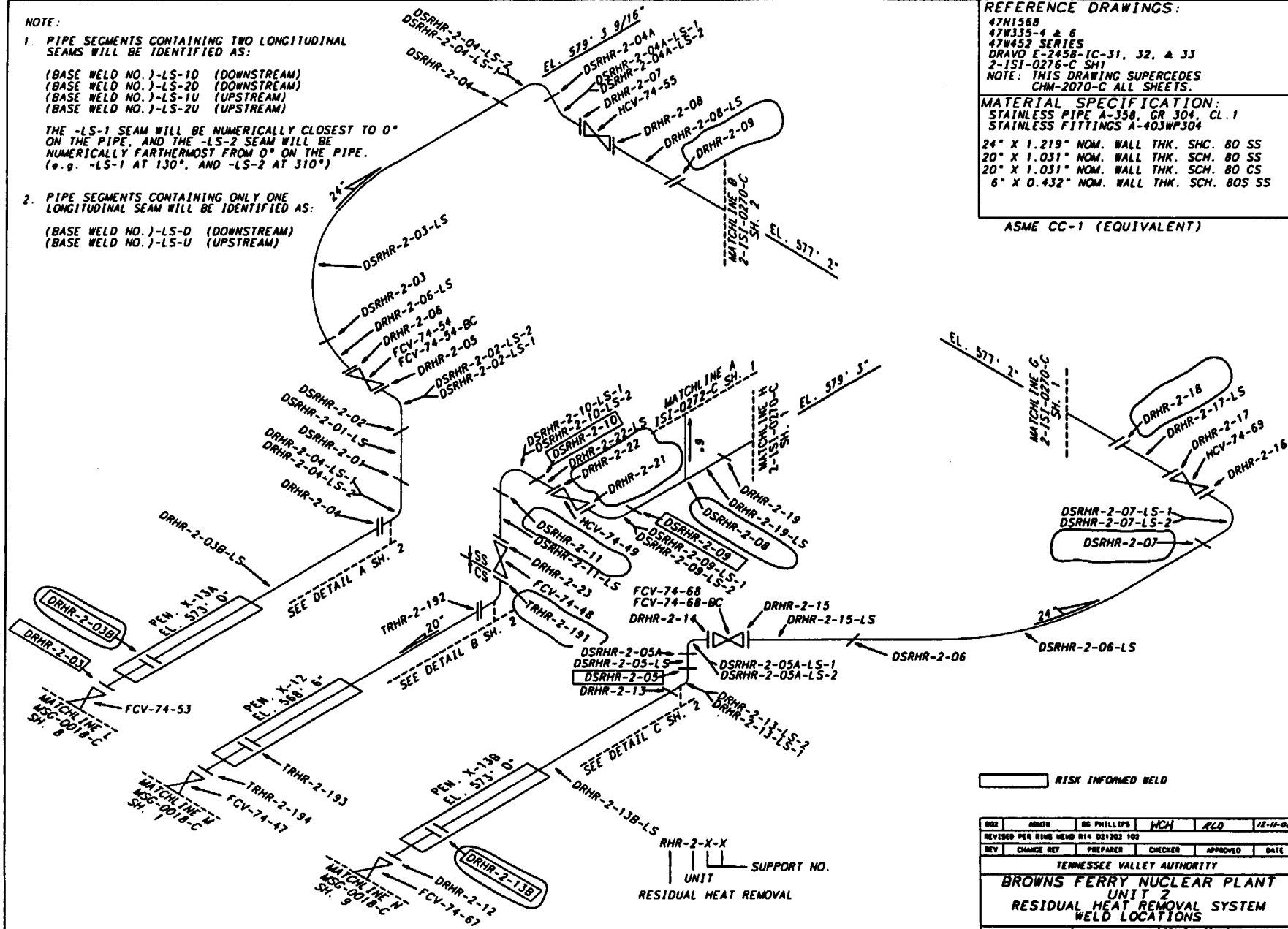
- PIPE SEGMENTS CONTAINING TWO LONGITUDINAL SEAMS WILL BE IDENTIFIED AS:

(BASE WELD NO.)-LS-1D (DOWNSTREAM)  
(BASE WELD NO.)-LS-2D (DOWNSTREAM)  
(BASE WELD NO.)-LS-1U (UPSTREAM)  
(BASE WELD NO.)-LS-2U (UPSTREAM)

THE -LS-1 SEAM WILL BE NUMERICALLY CLOSEST TO 0° ON THE PIPE, AND THE -LS-2 SEAM WILL BE NUMERICALLY FARTHERMOST FROM 0° ON THE PIPE.  
(e.g. -LS-1 AT 130°, AND -LS-2 AT 310°)

- PIPE SEGMENTS CONTAINING ONLY ONE LONGITUDINAL SEAM WILL BE IDENTIFIED AS:

(BASE WELD NO.)-LS-D (DOWNSTREAM)  
(BASE WELD NO.)-LS-U (UPSTREAM)



REFERENCE DRAWINGS:

47N1568  
47W335-4 & 6  
47W452 SERIES  
DRAWING E-2458-IC-31, 32, & 33  
2-151-0276-C SH1  
NOTE: THIS DRAWING SUPERCEDES  
CHM-2070-C ALL SHEETS.

MATERIAL SPECIFICATION:

STAINLESS PIPE A-358, GR 304, CL.1  
STAINLESS FITTINGS A-403WP304  
24" X 1.219" NOM. WALL THK. SCH. 80 SS  
20" X 1.031" NOM. WALL THK. SCH. 80 SS  
20" X 1.031" NOM. WALL THK. SCH. 80 CS  
6" X 0.432" NOM. WALL THK. SCH. 80S SS

ASME CC-1 (EQUIVALENT)

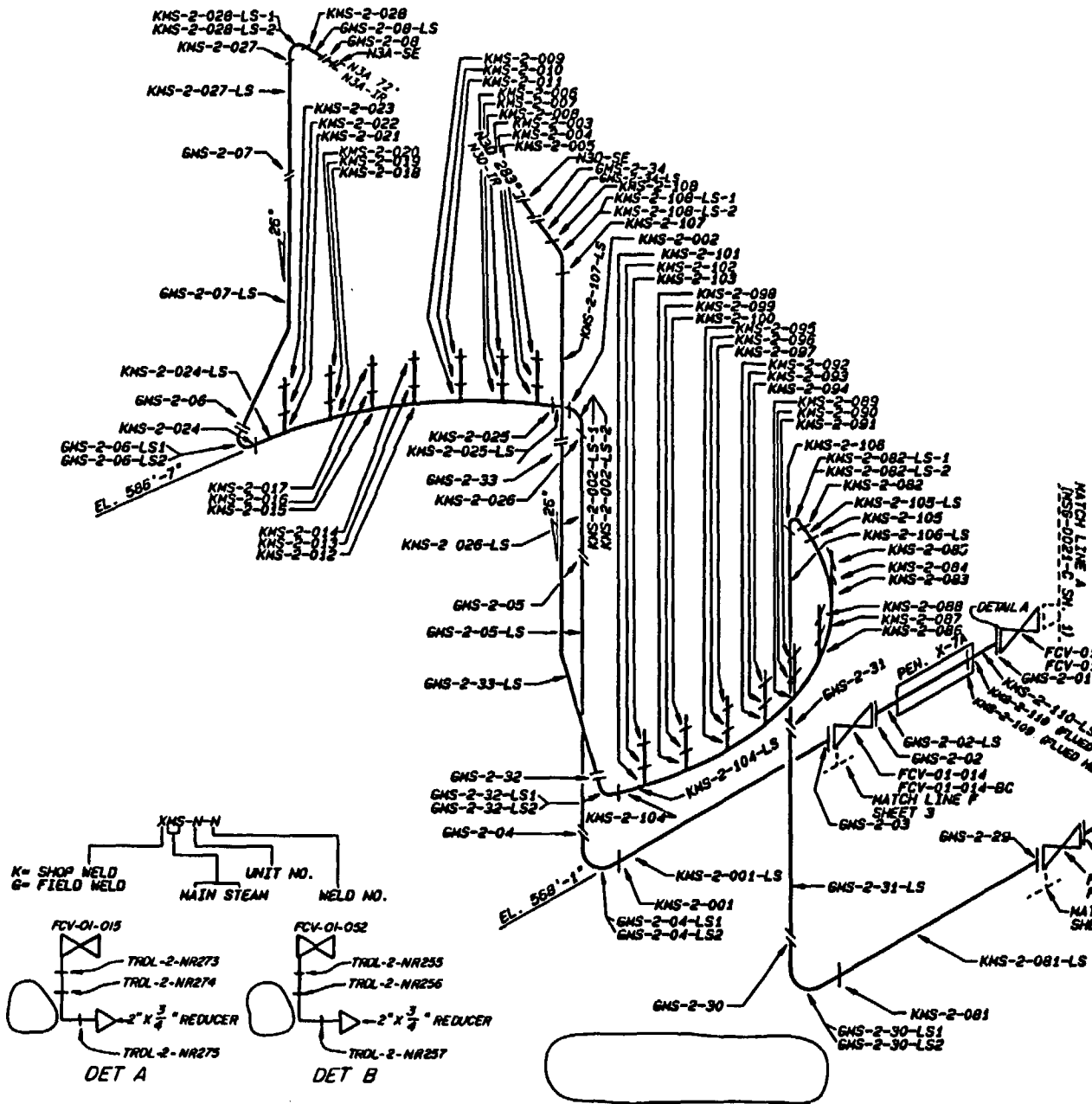
RISK INFORMED WELD

002	ADMIN	BO PHILLIPS	MDH	ALD	12-11-82
REVISED PER RHM HEAD R14 021202 100					
REV	CHANGE	REV	PREPARED	CHECKER	APPROVED DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
RESIDUAL HEAT REMOVAL SYSTEM					
WELD LOCATIONS					
DATE: 8-20-88					
DRAWN: RPC		SCALE: NTS		CARMAN/IS/CHP	
CHECKED: JES		APPROVED: GLB		SHEET 01 OF 02 REV	
SUBMITTED: EDC		2-151-0221-C 002			

CAD MAINTAINED DRAWING

CCD

ALL A/D HISTORY RESEARCHED AT R000



**REFERENCE DRAWINGS:**  
 47K1767  
 47W335-1  
 KELLOGG 729E229  
 CHN-2087-C (SH. 1) SUPPORT MAP  
 NOTE: THIS DRAWING SUPERCEDES  
 CHN-2069-C (SH. 1)

**PIPE DATA**  
 ASME CC-1 (EQUIVALENT)  
 ASTM A-153 KC 70  
 28" X 0.950 NOM. WALL THK. (CS)  
 6" X 0.719 NOM. WALL THK. (SCH. 160 CS)

**NOTES:**  
 ALL FIELD WELDS WERE MADE BY TVA

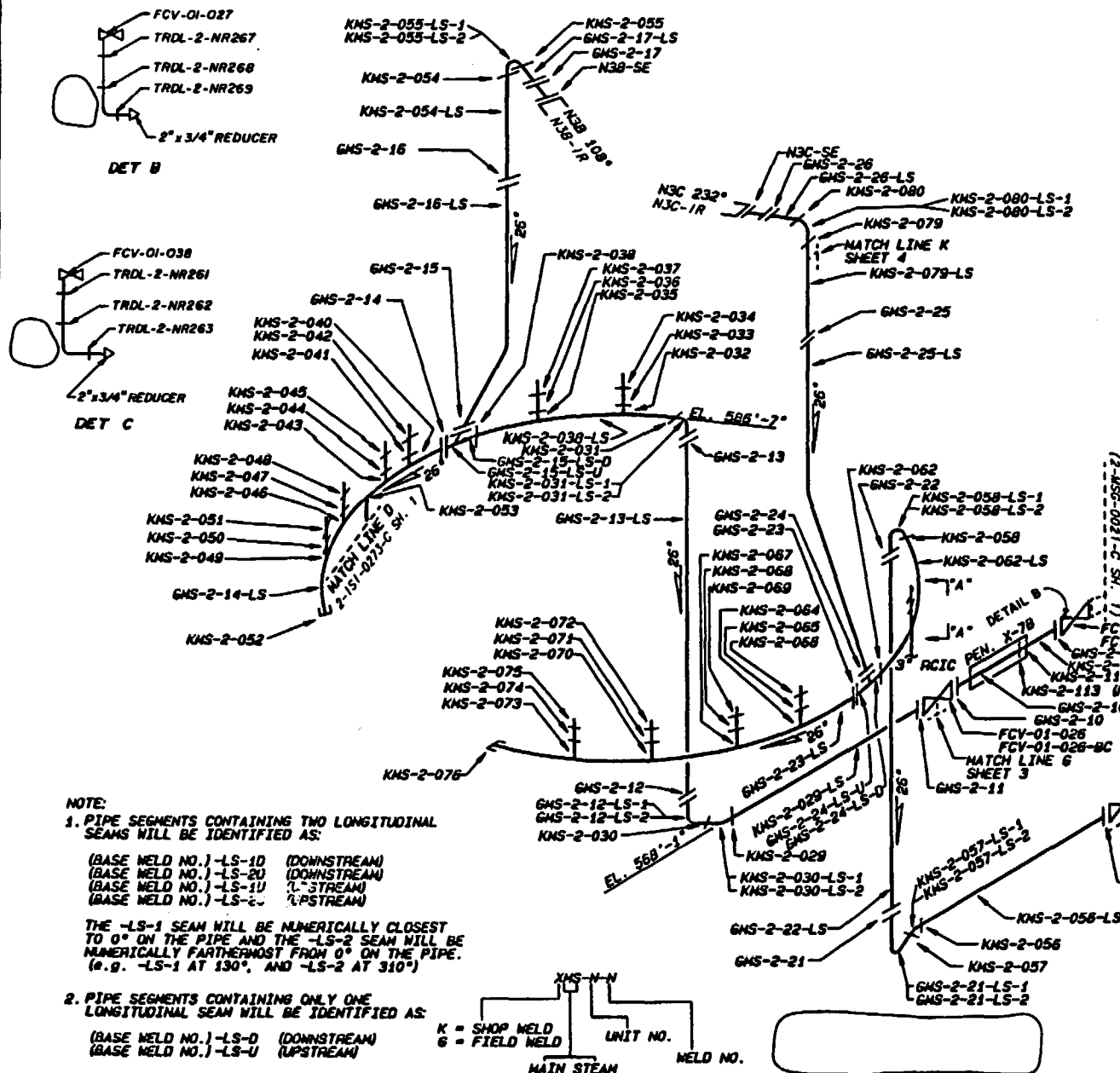
- NOTE:**
- PIPE SEGMENTS CONTAINING TWO LONGITUDINAL SEAMS WILL BE IDENTIFIED AS:  
 (BASE WELD NO.)-LS-1D (DOWNSTREAM)  
 (BASE WELD NO.)-LS-2D (DOWNSTREAM)  
 (BASE WELD NO.)-LS-1U (UPSTREAM)  
 (BASE WELD NO.)-LS-2U (UPSTREAM)
  - PIPE SEGMENTS CONTAINING ONLY ONE LONGITUDINAL SEAM WILL BE IDENTIFIED AS:  
 (BASE WELD NO.)-LS-D (DOWNSTREAM)  
 (BASE WELD NO.)-LS-U (UPSTREAM)

THE -LS-1 SEAM WILL BE NUMERICALLY CLOSEST TO 0° ON THE PIPE AND THE -LS-2 SEAM WILL BE NUMERICALLY FARTHEST FROM 0° ON THE PIPE. (e.g. -LS-1 AT 130°, AND -LS-2 AT 310°)

003	ADMIN	REL	MCN	HEW	6-24-61
REVISED PER RITE MEMO R21 006021 001					
REV	CHANGE	REF	PREPARED	CHECKER	APPROVED DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
MAIN STEAM SYSTEM WELD LOCATIONS					
DATE 10-16-64	BY EDC	APPROVED BY GLB	SCALE 1/4" = 1'-0"	REV 2-XST-0222-C	003
CDD					

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING



**NOTE:**

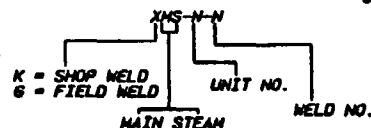
1. PIPE SEGMENTS CONTAINING TWO LONGITUDINAL SEAMS WILL BE IDENTIFIED AS:

(BASE WELD NO.)-LS-1D (DOWNSTREAM)  
 (BASE WELD NO.)-LS-2D (DOWNSTREAM)  
 (BASE WELD NO.)-LS-1U (UPSTREAM)  
 (BASE WELD NO.)-LS-2U (UPSTREAM)

THE -LS-1 SEAM WILL BE NUMERICALLY CLOSEST TO 0° ON THE PIPE AND THE -LS-2 SEAM WILL BE NUMERICALLY FARTHEST FROM 0° ON THE PIPE. (E.G. -LS-1 AT 130°, AND -LS-2 AT 310°)

2. PIPE SEGMENTS CONTAINING ONLY ONE LONGITUDINAL SEAM WILL BE IDENTIFIED AS:

(BASE WELD NO.)-LS-D (DOWNSTREAM)  
 (BASE WELD NO.)-LS-U (UPSTREAM)



**REFERENCE DRAWINGS:**

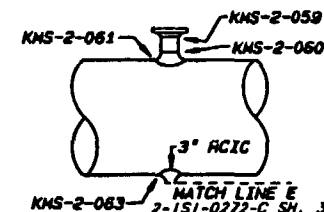
47K1767  
 47N335-1  
 KELLOG 729E229  
 2-151-0279-C (SH. 2) SUPPORT MAP  
 NOTE: THIS DRAWING SUPERCEDES  
 CHN-2069-C (SH. 2)

**PIPE DATA:**

ASME CC-1 (EQUIVALENT)  
 ASTM A-155 KC 70  
 26\"/>

**NOTES:**

ALL FIELD WELDS WERE MADE BY TVA



**DETAIL 'A'-A'**

MATCH LINE B  
 2-151-0272-C SH. 1

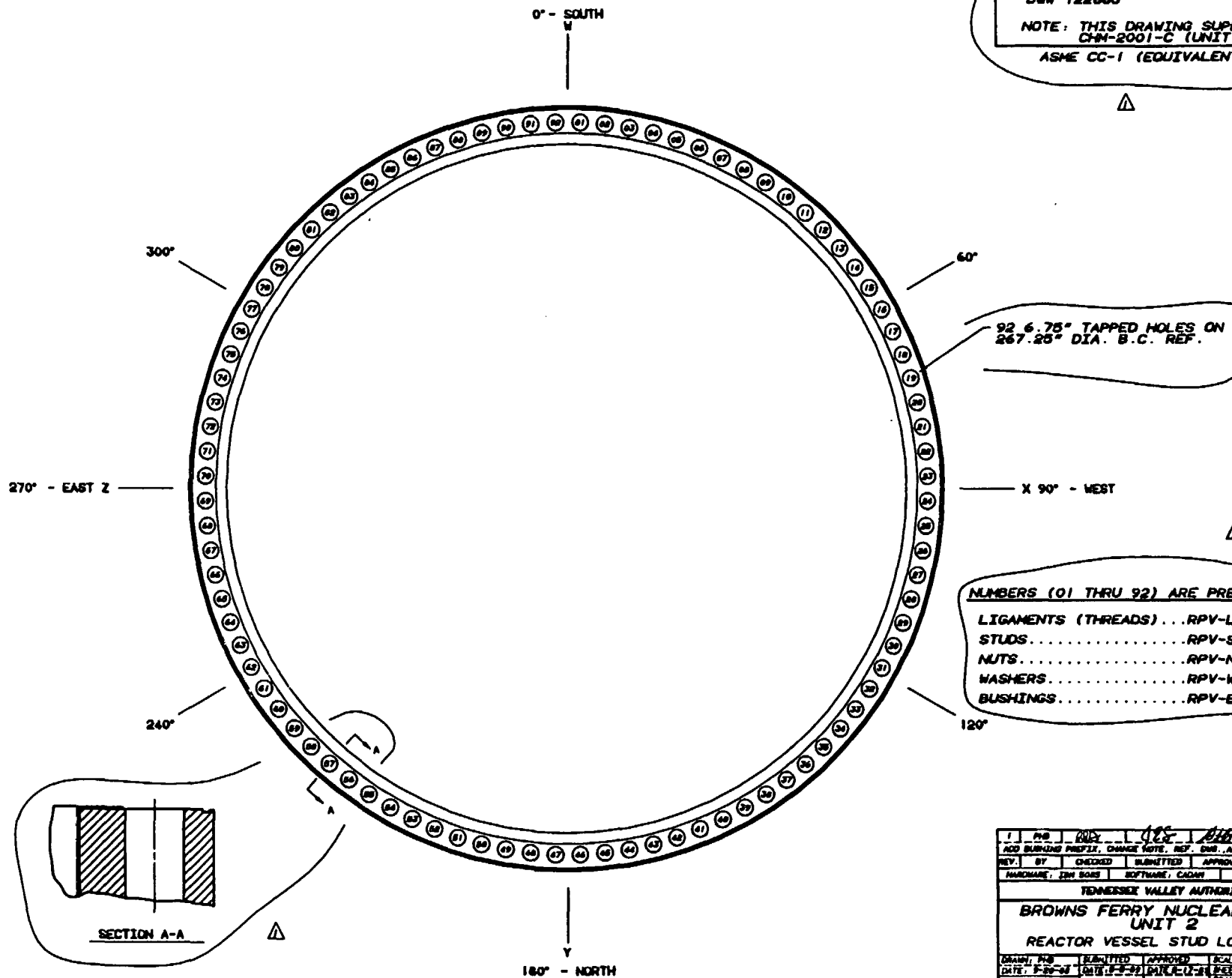
MATCH LINE C  
 2-151-0272-C SH. 1

003	ADMIN	ROL	MCH	HEH	5-29-70
REVISED PER RIMS MEMO R21 000821 001					
REV	CHANGE REF	PREPARED	CHECKER	APPROVED	DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
MAIN STEAM SYSTEM WELD LOCATIONS					
DESIGNED BY	REVIEWED BY	APPROVED BY	SCALE: N/A		
DATE: 12-15-68	DATE: 12-15-68	DATE: 12-15-68	DRAWN BY: J. H. HAYES		
DESIGNED BY: EDC	REVIEWED BY: GLB	APPROVED BY: GLB	DRAWING NO.: 2-151-0222-C		
DATE: 5-15-71	DATE: 5-15-71	DATE: 5-15-71	003		
CAD MAINTAINED DRAWING					CCD

ALL A/D HISTORY RESEARCHED AT R000

REFERENCE DRAWINGS  
B&W 122863

NOTE: THIS DRAWING SUPERSEDES  
CHM-2001-C (UNIT 2)  
ASME CC-1 (EQUIVALENT)

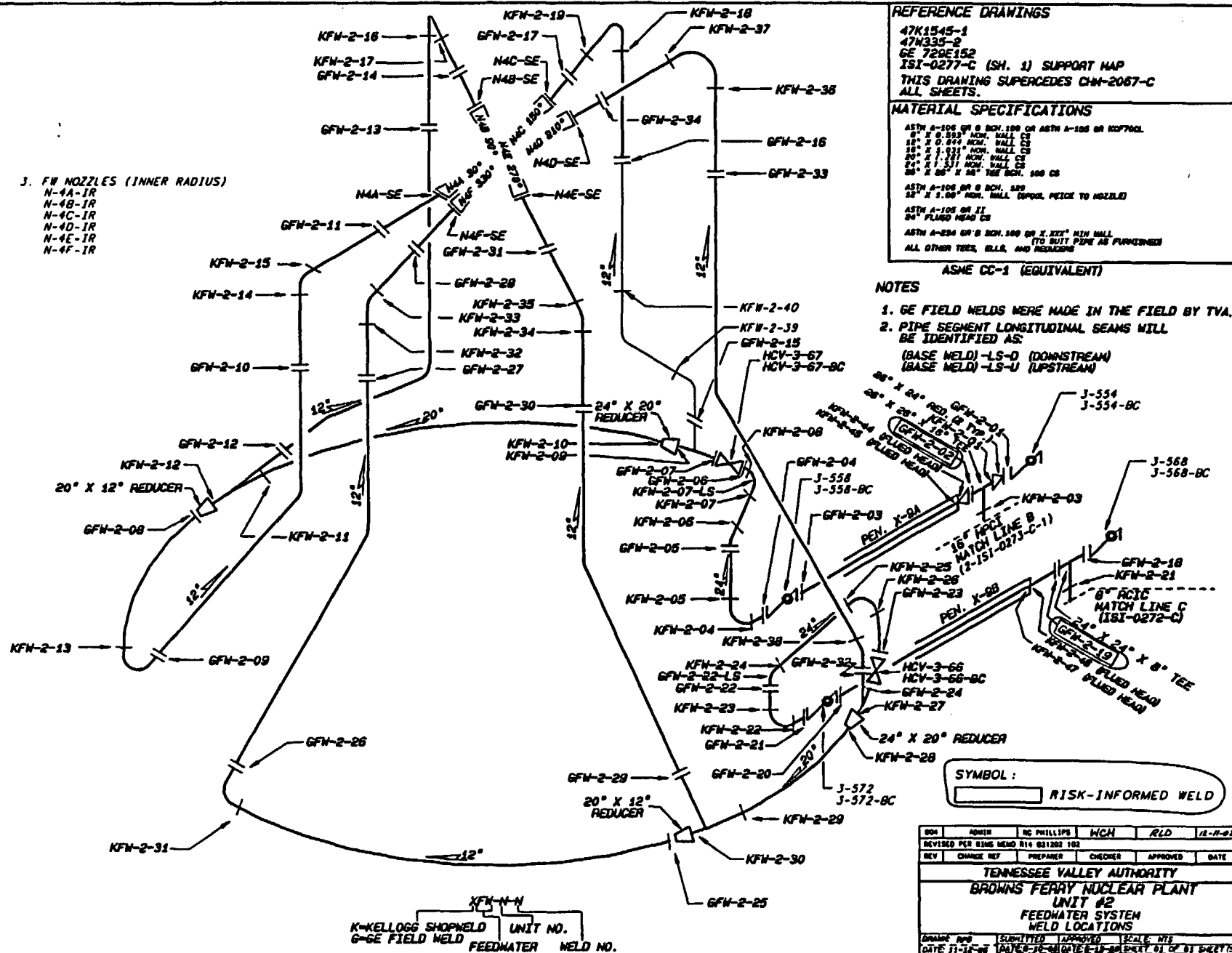


1	PRO	ONLY	012	012	5/15/92
ADD BUSHING PREFIX, CHANGE NOTE, REF. DWS, ADD FLANGE PROFILE					
REV.	BY	CHECKED	SUBMITTED	APPROVED	DATE
HARDWARE, INH BOMS		SOFTWARE, CADAM		USER, ISICOP	
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT UNIT 2 REACTOR VESSEL STUD LOCATIONS					
DRWN: MJB	EXAMINED	APPROVED	SCALE	NOTE	
DATE: 5-20-92	DATE: 5-22-92	DATE: 5-22-92	REV: 01	OF: 01	
CHECKED: MJB	BY: BJC	BY: GJB	DRAWING NO.		
DATE: 5-22-92	TST-0266-C01				

5/22/92

### 3. FW NOZZLES (INNER RADIUS)

N-4A-IR  
N-4B-IR  
N-4C-IR  
N-4D-IR  
N-4E-IR  
N-4F-IR



### REFERENCE DRAWINGS

47K1545-1  
47N335-2  
GE 729E152  
ISI-0277-C (SH. 1) SUPPORT MAP  
THIS DRAWING SUPERCEDES CHN-2067-C  
ALL SHEETS.

### MATERIAL SPECIFICATIONS

ASTM A-106 GR B SCH. 100 OR ASTM A-106 OR K07700  
8\"/>

ASTM A-106 GR B SCH. 100  
12\"/>

ASTM A-106 GR B  
24\"/>

ALL OTHER TUBES, BLS, AND REDUCERS

ASME CC-1 (EQUIVALENT)

### NOTES

1. GE FIELD WELDS WERE MADE IN THE FIELD BY TVA.
2. PIPE SEGMENT LONGITUDINAL SEAMS WILL BE IDENTIFIED AS:  
(BASE WELD)-LS-D (DOWNSTREAM)  
(BASE WELD)-LS-U (UPSTREAM)

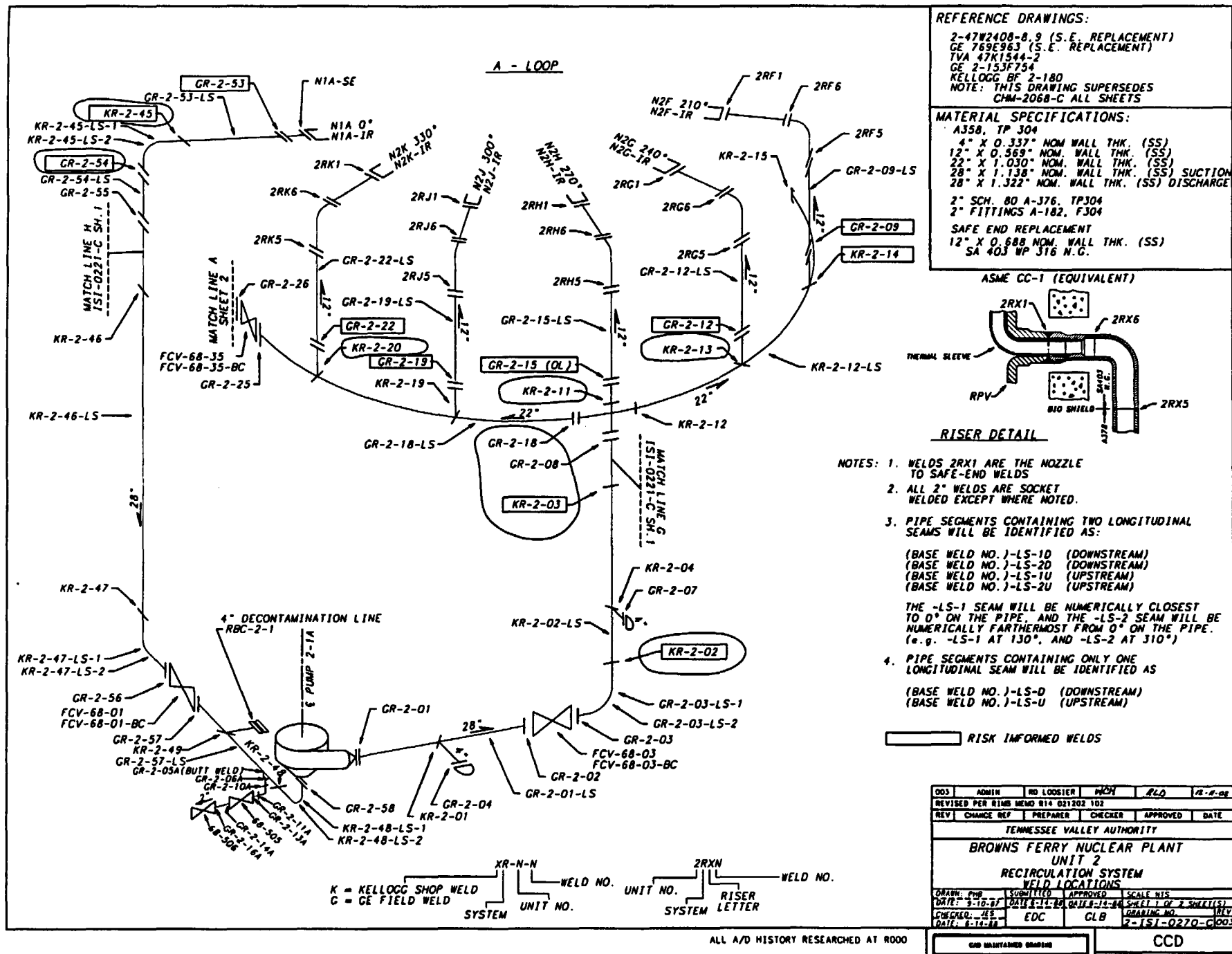
SYMBOL :   RISK-INFORMED WELD

SDA	ADMIN	MC PHILLIPS	MCH	RLD	12-N-02
REVISED PER BMS MEMO R16 021202 103					
REV	CHANGE REF	PREPARED	CHECKER	APPROVED	DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT #2					
FEEDWATER SYSTEM					
WELD LOCATIONS					
GRADE AND DATE 11-18-00	SUBMITTED DATE 11-18-00	APPROVED DATE 11-18-00	SCALE NTS	SHEET 04 OF 01 SHEET(S)	
PREPARED BY EDC	DATE 8-18-00	GLB	2-151-0269-C	REV	001

ALL A/D HISTORY RESEARCHED AT 0000

CAD MAINTAINED DRAWING

CCD





DRAVO E-2458-1C-34  
DRAVO E-2458-1C-35

### MATERIAL SPECIFICATIONS

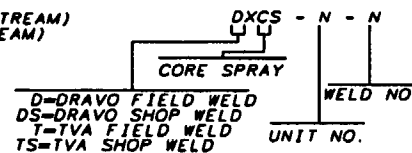
12" SCH. 80 SA 333 GR6 CS  
12.75" X .687" NOM. WALL THK.  
12" SCH. 80 ASTM A358 GR 304 SS  
12.75" X .687" NOM. WALL THK.  
10" SCH. 80 SA 333 GR6 CS  
10.75" X .593" NOM. WALL THK.  
10" SCH. 80 ASTM A358 GR 304 SS  
10.75" X .593" NOM. WALL THK.

**RISK INFORMED WELD**



1. WELDS DCS-2-07 AND DCS-Z-13A ARE DRAVO SHOP WELDS.
2. PIPE SEGMENTS CONTAINING ONLY ONE LONGITUDINAL SEAM WILL BE IDENTIFIED AS:

(BASE WELD NO.)-LS-D (DOWNSTREAM)  
(BASE WELD NO.)-LS-U (UPSTREAM)

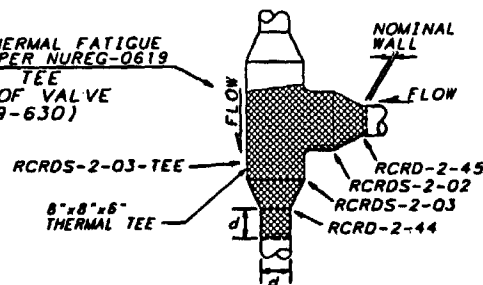


ALL A/D HISTORY RESEARCHED AT R000

004	ADMIN	RO LOOSIER	HCH	ALD	12-11-89
REVISED PER RIMS MEMO R14 021203 102					
REV	CHANGE REF	PREPARED	CHECKER	APPROVED	DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
CORE SPRAY SYSTEM					
WELD LOCATIONS					
DRAWN: PWB	DATE: 5-17-89	SCALE: NTS	CADMAN/ISTCMP		
CHECKED: JES	APPROVED:	SHEET 01 OF 01		REV	
SUBMITTED: EDC	GLB	2-151-0271-C-004			
CND UNLISTENED DRAWING			CCD		



REGION OF THERMAL FATIGUE  
EXAMINATION PER NUREG-0619  
THERMAL TEE  
(UPSTREAM OF VALVE  
2-FCV-69-630)



# REFERENCE DRAWINGS

CRD-2-005  
RCIC-2-004  
RWC-2-001  
478335-14, -17

NOTE:  
THIS DRAWING SUPERSEDES CHM-2075-C  
AND CHM-2072-C (ALL SHEETS)

## MATERIAL SPECIFICATIONS

### STAINLESS STEEL

#### FITTINGS

6" SA403 WP316NG SCH. 80 SS

#### PIPING

6" SA376 TP316NG SCH. 80 SS

6" A376GR TP304 SCH. 80 SS

6" A312GR TP304 SCH. 80 SS

### CARBON STEEL

4" SCH. 80 A-333, GR1 (SEAMLESS) CS

6" X 0.562" NOM WALL SCH. 120 CS

8" X 0.593" NOM WALL SCH. 100 CS

### VALVE

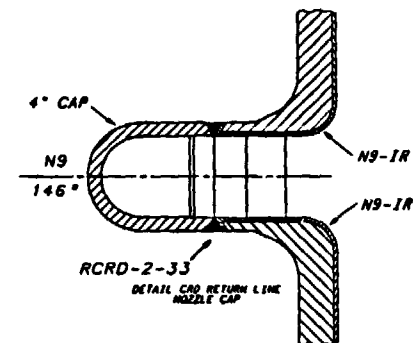
2-69-630 SA182 F316

### CRD CAP

4" X 0.674" NOM WALL SS

## ASME CC-1 (EQUIVALENT)

RISK INFORMED WELD

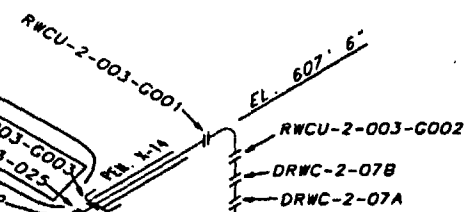


007	ADMIN	ING PHILLIPS	WCH	PLD	12-8-02
REVISED PER RIMS MEMO R14 021303 102					
REV	CHANGE	REF	PREPARED	CHECKER	APPROVED
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
REACTOR WATER CLEAN UP, RCIC, AND CRD WELD IDENTIFICATION					
DRAWN: PHB	DATE: 8-9-88	SCALE: NTS	1 CARAM/151/CP		
CHECKED: JES	APPROVED:	GLB	SHEET 01 OF 03 REV.		
SUBMITTED: EDC			2-151-0272-C 007		

CAD MAINTAINED DRAWING

CCD

ALL A/D HISTORY RESEARCHED AT R000



DSRWC-2-06

CARBON STEEL

STAINLESS STEEL

DSRWC-2-05 (OL)

DSRWC-2-04 (OL)

DSRWC-2-03 (OL)

DSRWC-2-02

RWC-2-003-044

RWC-2-003-026

FCV69-01

RWC-2-003-027

DSRWC-2-01

RWC-2-003-037

SOCKLE

568'

3"

69-500

DRWC-2-01

DRWC-2-01A

MATCH LINE A  
(2-151-0221-C SH. 1)  
20' RMR

TRCIC-2-001

8" X 8" X 4" TEE

TRCIC-2-001A

8" X 6" RED.

TRCIC-2-002

TRCIC-2-003

2-69-578

2-69-580 (STAINLESS STEEL)

RWC-2-001-G002

NUREG-0313

RWC-2-001-G001

NUREG-0313

RCRD-2-45

(NUREG-0313)

RCRD-2-50

(NUREG-0313)

RCRD-2-52

(NUREG-0313)

85-576 (STAINLESS STEEL)

ASME XI  
CODE CLASS 1  
BOUNDARY

CS-2  
MATCH LINE B  
(2-151-0125-C SH. 1)

FCV-71-040

TRCIC-2-007

TRCIC-2-004

EL. 567' 0"

# REFERENCE DRAWINGS

TVA 47W335-11  
TVA 47W335-12  
TVA 47K1547  
ISI-0275-C (SH. 1) SUPPORT MAP

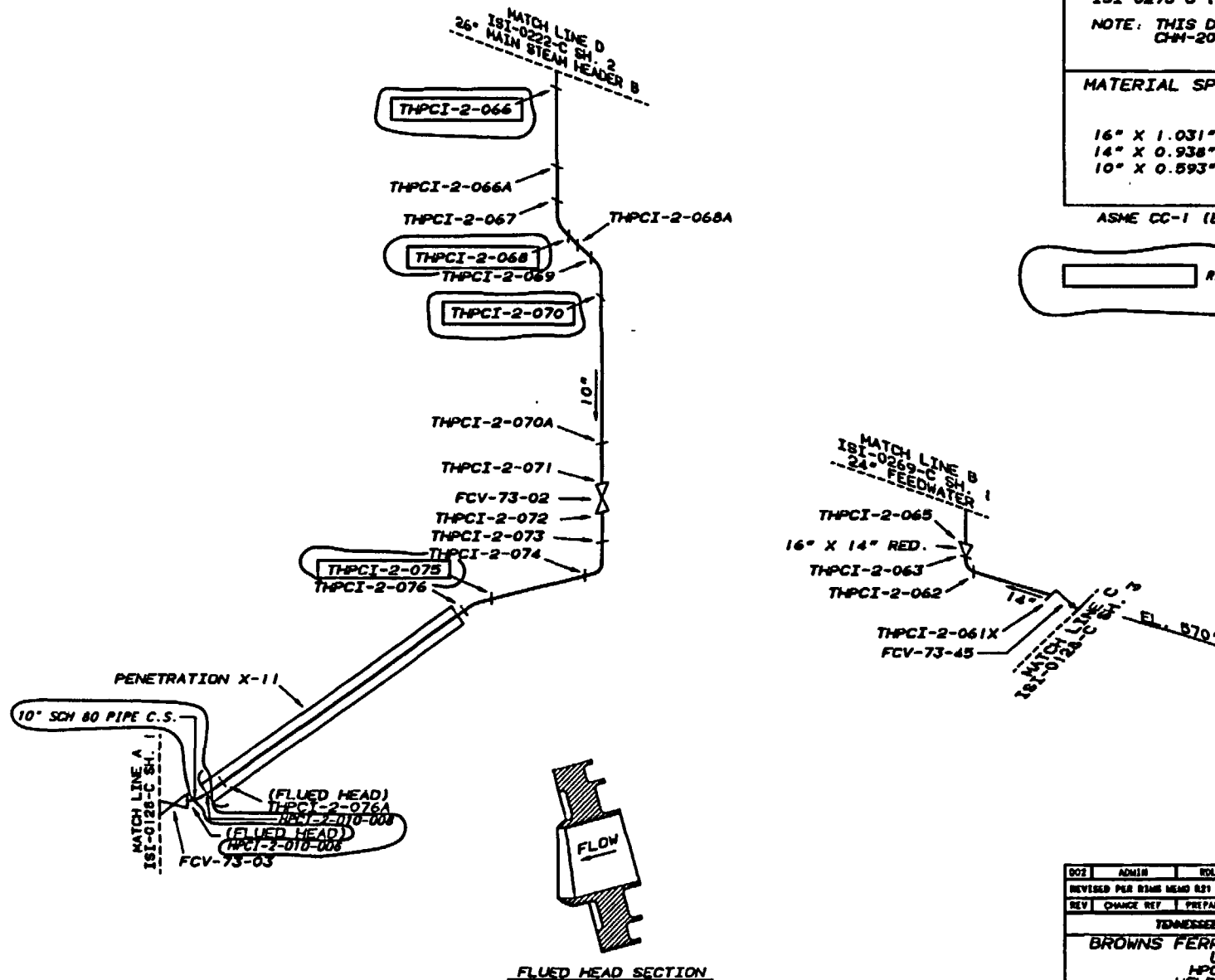
NOTE: THIS DRAWING SUPERSEDES  
CHH-2074-C ALL SHEETS

# MATERIAL SPECIFICATIONS

16" X 1.031" NOM. WALL THK. CS  
14" X 0.938" NOM. WALL THK. CS  
10" X 0.593" NOM. WALL THK. CS

ASME CC-1 (EQUIVALENT)

RISK INFORMED WELD



FLUED HEAD SECTION

002	ADMIN	ROL	1/24	1/24	1/24
REVISED PER RAME MEMO RST 000451 RST 001 A RAME MEMO RST 010454 002					
REV	CHANGE	REV	PREPARED	CHECKER	APPROVED
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
HPCI SYSTEMS					
WELD LOCATIONS					
GRAPH: PWS	DATE: 6-9-80	SCALE: N/A	TECHNICAL		
CHECKED: JES	APPROVED: JES	SHEET 01 OF 01		REV	
SUBMITTED: EDC		2-ISI-0273-C		002	

ALL A/P HISTORY RESEARCHED AT 0000

CAD MAINTAINED DRAWING

CCD

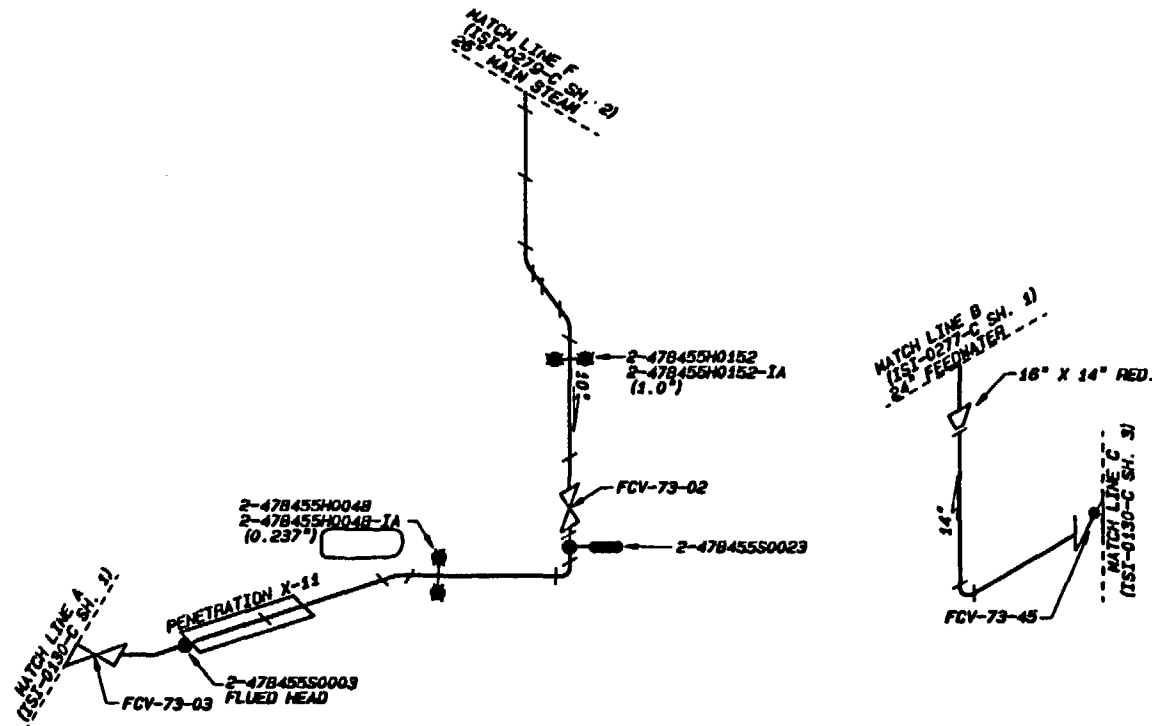
# REFERENCE DRAWINGS

47W455-4  
ISI-0273-C (SH. 1) WELD MAP  
NOTE: THIS DRAWING SUPERCEDES CHN-2083-C  
ALL SHEETS.

## LEGEND:

- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- MECHANICAL SNUBBER

ASME CC-1 (EQUIVALENT)

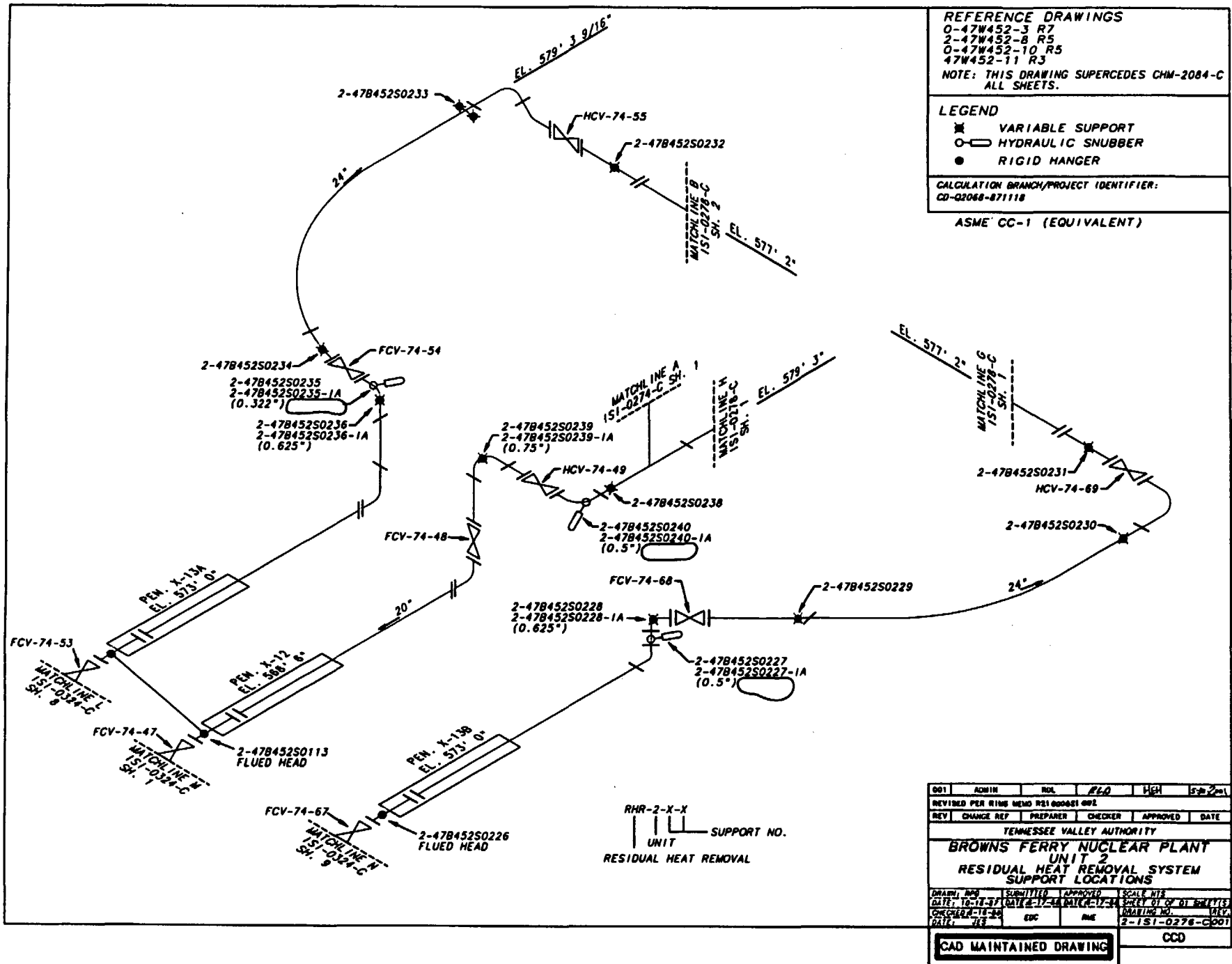


800	CCD/ADMIN	REP	212	HCN	8-30-74
ISSUED TO CREATE CCD, SUPERSEDES A/D ISI-0273-C-1 WOOD AND TO REFLECT AS-CONSTRUCTED STATUS FOR RHM DESIGN SET 000001 000 (ADMINISTRATIVE REVISION)					
REV	CHANGE	REF	PREPARED	CHECKER	APPROVED DATE
<b>TENNESSEE VALLEY AUTHORITY</b> <b>BROWNS FERRY NUCLEAR PLANT</b> <b>UNIT 2</b> <b>HIGH PRESSURE COOLANT INJECTION</b> <b>SUPPORT LOCATIONS</b>					
DESIGNED BY	DATE	SUBMITTED	APPROVED	SCALE	BY
EDC	8-13-70	8-13-70	8-13-70	1/2\"/>	

ALL A/D HISTORY RESEARCHED TO 0000

CAD MAINTAINED DRAWING

CCD



CALCULATION BRANCH/PROJECT  
IDENTIFIER: CD-Q2003-88978

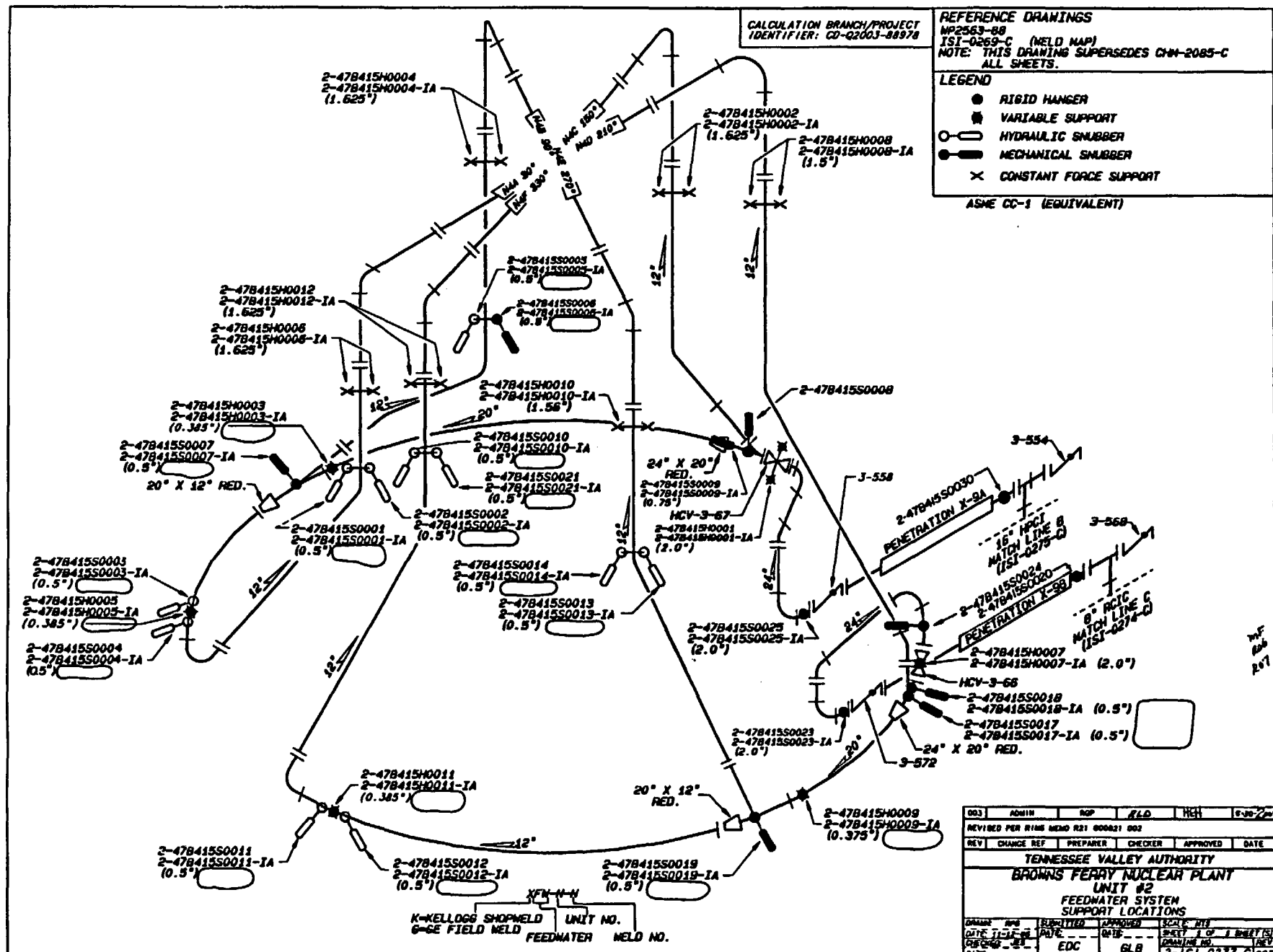
REFERENCE DRAWINGS

NP2583-88  
IST-0269-C (WELD MAP)  
NOTE: THIS DRAWING SUPERSEDES CHN-2085-C  
ALL SHEETS.

LEGEND

- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- MECHANICAL SNUBBER
- × CONSTANT FORCE SUPPORT

ASME CC-1 (EQUIVALENT)



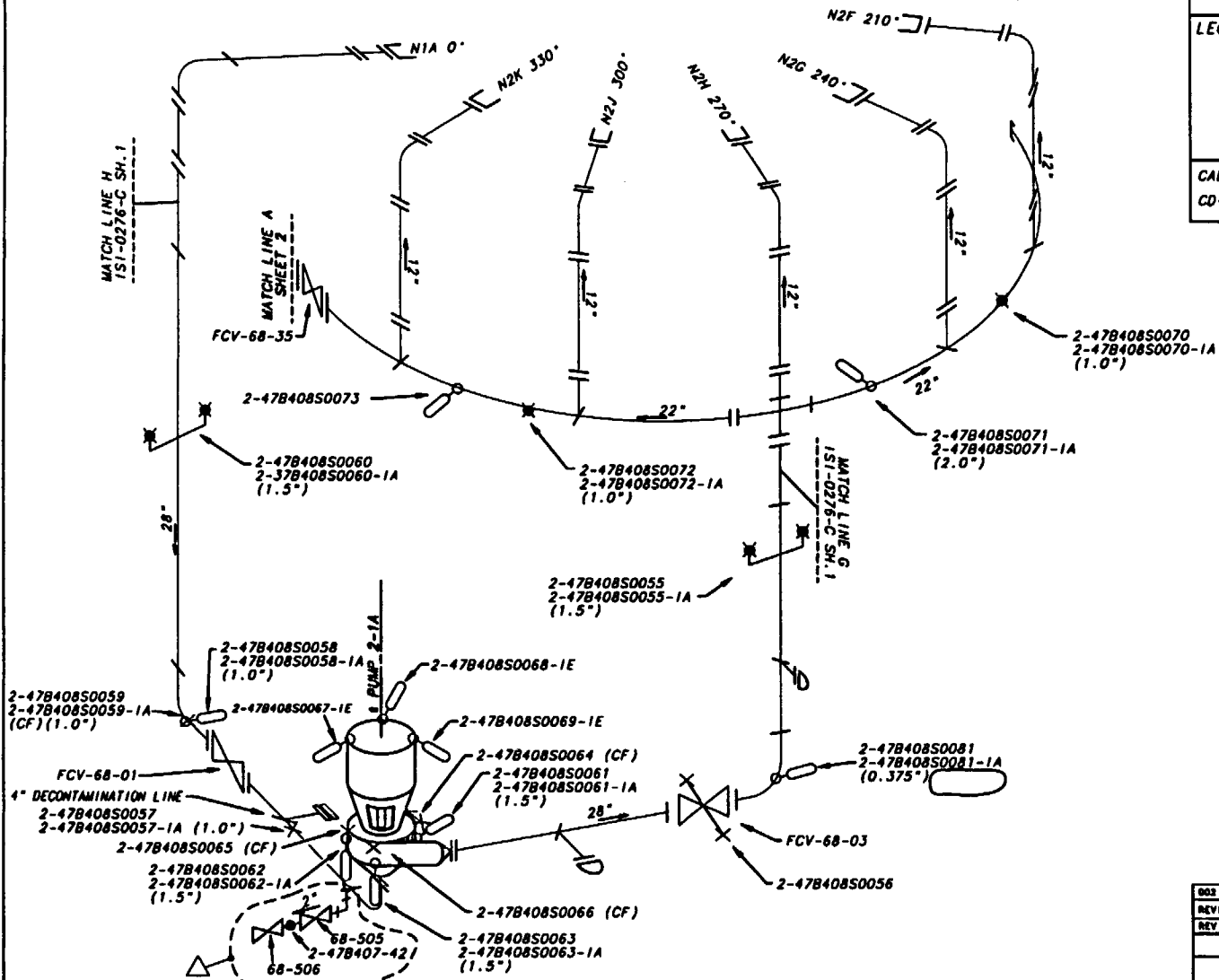
W.F.  
806  
207

003	ADMIN	REP	ALD	HHH	0-00-22
REVISED PER RING MEMO R21 000421 002					
REV	CHANGE	REF	PREPARED	CHECKER	APPROVED DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT #2					
FEEDWATER SYSTEM					
SUPPORT LOCATIONS					
DRAWN	WFB	SUPP	EDC	APPROVED	SCALE: 1/8\"/>
DATE: 11-1-88	DATE:	DATE:	DATE:	DATE:	DATE:
CHECKED: -	EDC	GLB	2-151-0277-C-0003	CCD	

CAD MAINTAINED DRAWING

ALL A/D HISTORY RESEARCHED AT R000

A - LOOP







△ EXEMPT PER DNE CALCULATION  
(MO-00999-950033)  
RIMS MEMO R14 950829 109

ALL A/D HISTORY RESEARCHED AT R000

**REFERENCE DRAWINGS:**

2-47W2408-B,9 (S.E. REPLACEMENT)  
GE 769E963 (S.E. REPLACEMENT)  
TVA 47K1544-2  
2-153F754  
KELLOGG BF 2-180  
NOTE: THIS DRAWING SUPERSEDES  
CHW-2068-C ALL SHEETS

**LEGEND:**

-  RIGID HANGER  
 VARIABLE SUPPORT  
 HYDRAULIC SNUBBER  
 CONSTANT FORCE SUPPORT (CF)

CALCULATION BRANCH/PROJECT IDENTIFIER:

CD-Q2068-871118

ASME CC-1 (EQUIVALENT)

003	ADMIN	RDL	MCN	HEH	10-20-74
REVISED PER TIME MEMO REF 000021 003					
REV	CHANGE REF	PREPARED	CHECKER	APPROVED	DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
RECIRCULATION SYSTEM					
SUPPORT LOCATIONS					
DRAWN: PHW	SUBMITTED	APPROVED	SCALE: NTS		
DATE: 9-27-74	DATE: 10-10-74	DATE: 10-10-74	SHEET 1 OF 2	SHEET(S)	
CHECKED: JLR	EDC	GLB	DRAWING NO.	REV	
DATE: 8-10-74			2-151-0278-C	003	

**CAD MAINTAINED DRAWING**

**CCD**

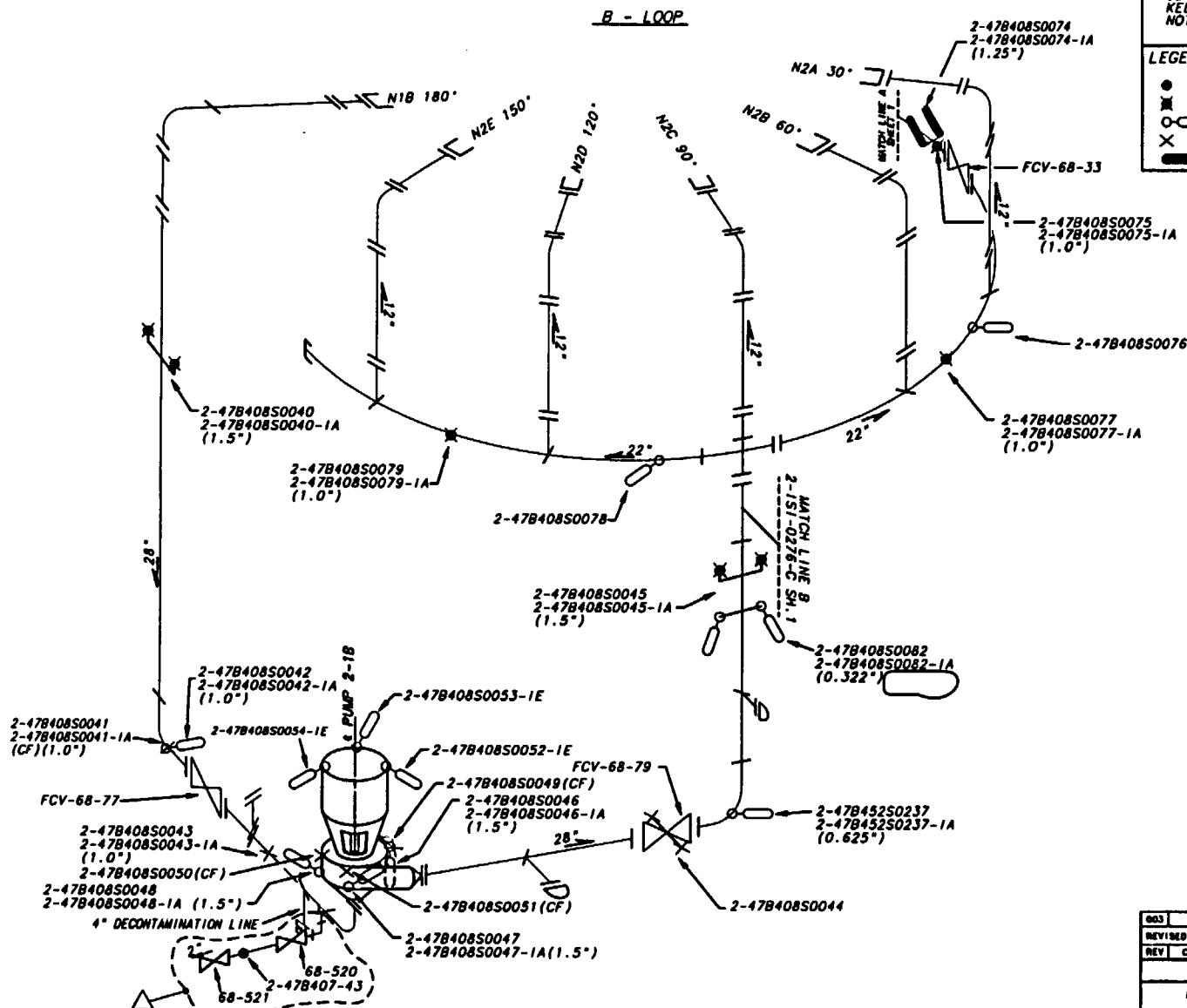
CLCUATION BRANCH/PROJECT  
IDENTIFIER: CD-Q2068-871118

REFERENCE DRAWINGS:

TVA 47K1544-2  
GE 2-153F754  
KELLOGG BF 2-180  
NOTE: THIS DRAWING SUPERSEDES  
CHM-2068-C ALL SHEETS

LEGEND:

- RIGID HANGER
  - VARIABLE SUPPORT
  - HYDRAULIC SNUBBER
  - × CONSTANT FORCE SUPPORT (CF)
  - RIGID STRUT
- ASME CC-1 (EQUIVALENT)



△ EXEMPT PER DNE CALCULATION  
(MD-00999-950033)  
RIMS MEMO R14 950829 109

ALL A/D HISTORY RESEARCHED AT R001

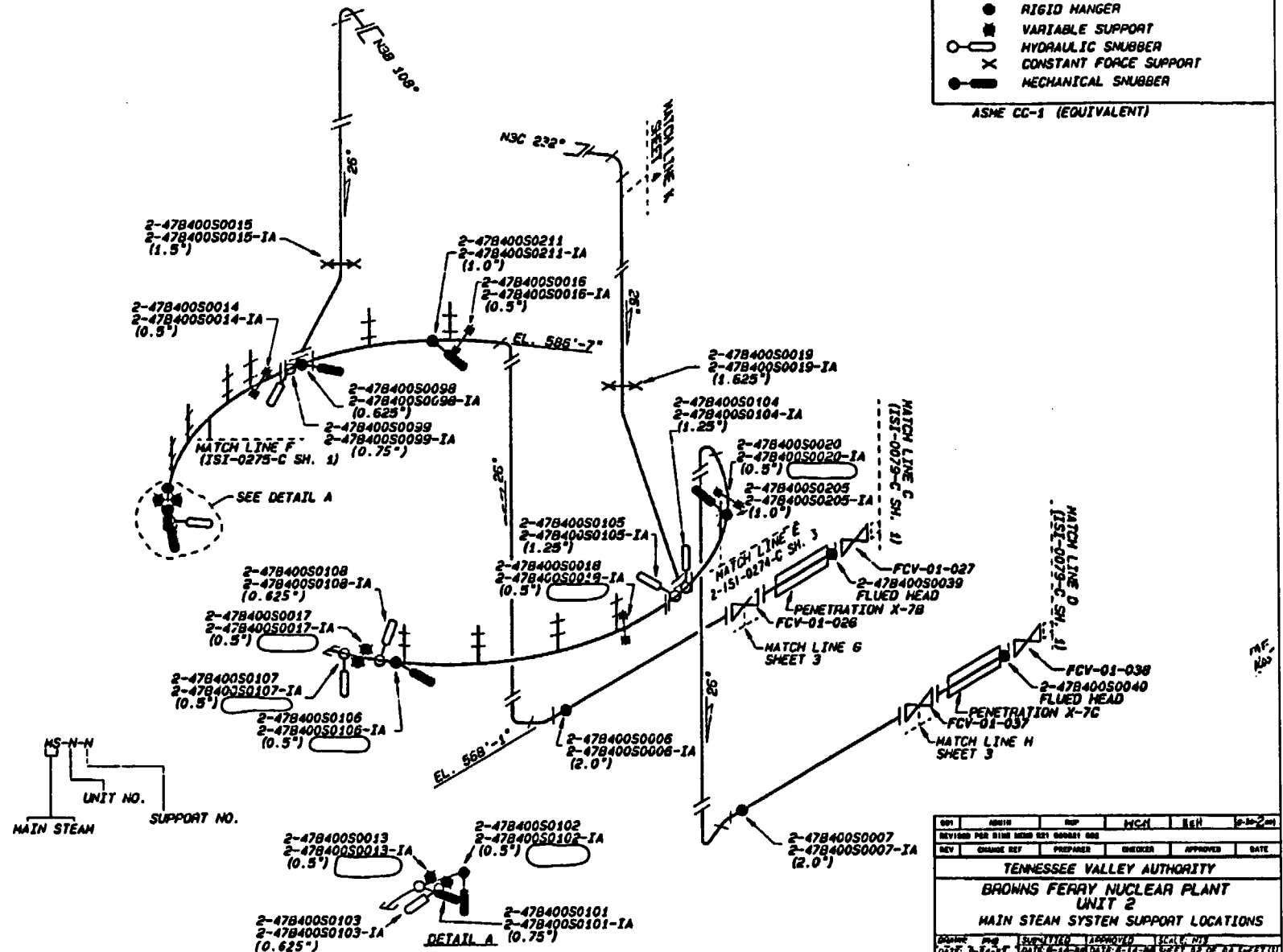
003	ADMIN	ROL	WCH	WEH	0-30-2
REVISED PER RIMS MEMO R14 950829 109					
REV	CHANGE	REF	PREPARED	CHECKER	APPROVED DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
RECIRCULATION SYSTEM					
SUPPORT LOCATIONS					
DRAWN: PWB	SUBMITTED	APPROVED	SCALE: NTS		
DATE: 7-16-89	DATE: 10-10-89	DATE: 11-11-89	SHEET 2 OF 2		
CHECKED: JES	EDC	GLB	DRAWING NO.	REV.	
DATE: 8-1-89			2-151-0278-C	R003	
CAD MAINTAINED DRAWING					CCD

CALCULATION BRANCH/PROJECT  
IDENTIFIERS: CD-02001-88972  
CD-02001-88970

REFERENCE DRAWINGS:  
GE 729E401 SH. 1 & 2  
ISI-0222-C SH. 2 (WELD MAP)  
NOTE: THIS DRAWING SUPERCEDES CWN-2087-C  
SH. 2

LEGEND:  
● RIGID HANGER  
\* VARIABLE SUPPORT  
○ HYDRAULIC SNUBBER  
X CONSTANT FORCE SUPPORT  
● MECHANICAL SNUBBER

ASME CC-1 (EQUIVALENT)



ALL A/D HISTORY RESEARCHED TO ROOT

REV	DATE	BY	CHKD	APPD	DATE
1	8-14-83	EDC	GLB		

TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT  
UNIT 2  
MAIN STEAM SYSTEM SUPPORT LOCATIONS

DATE	BY	CHKD	APPD	DATE	BY	CHKD	APPD
8-14-83	EDC	GLB		8-14-83	EDC	GLB	

CAD MAINTAINED DRAWING

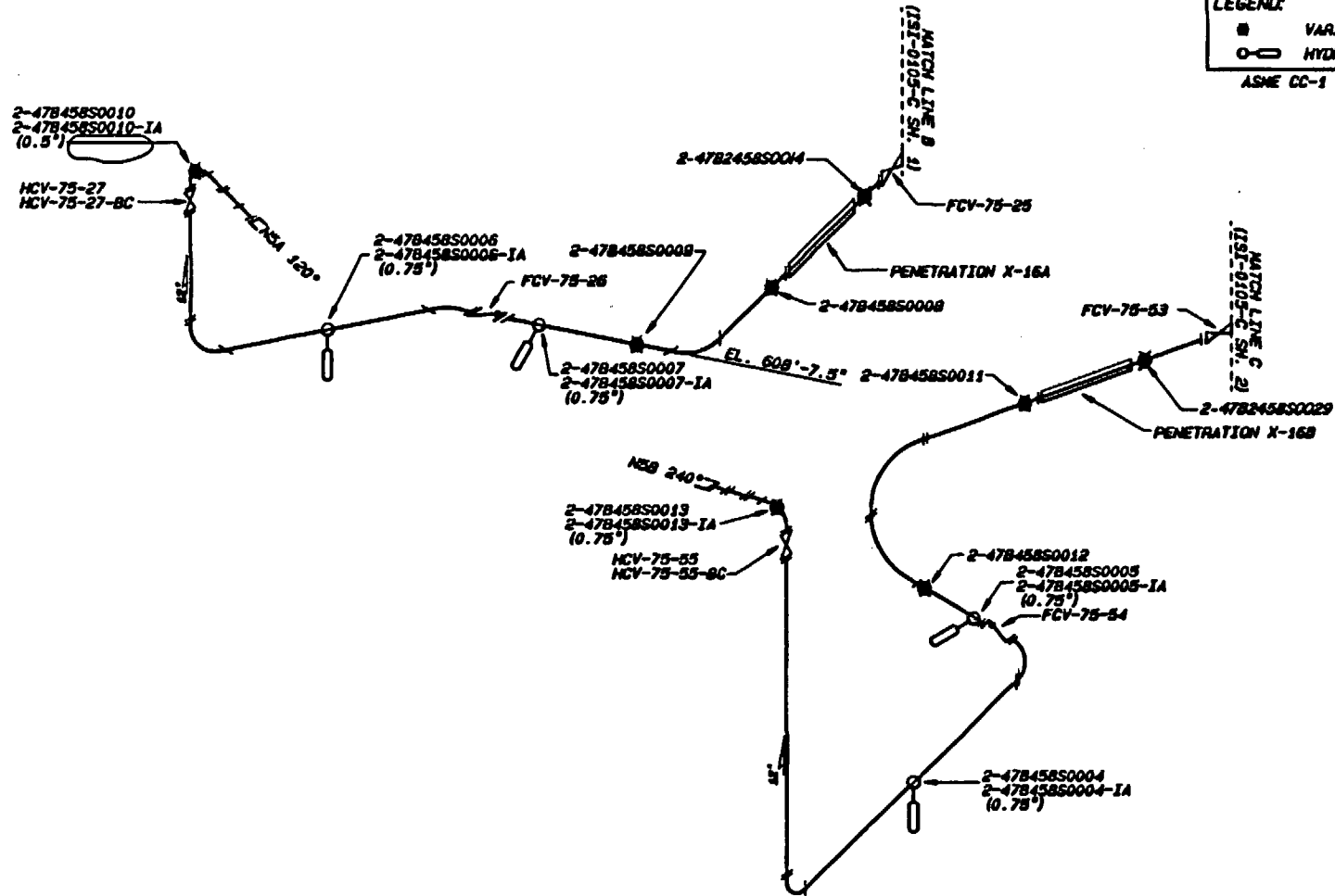
CCD 0001



REFERENCE DRAWINGS:  
 47N458-1B8  
 ISI-0271-C (SH. 1) WELD MAP  
 NOTE: THIS DRAWING SUPERCEDES CHN-2089-C  
 ALL SHEETS.

LEGEND:

- VARIABLE SUPPORT
- ○ HYDRAULIC STRUT
- ASME CC-1 (EQUIVALENT)



CS - N - N  
 CORE SPRAY UNIT NO.  
 SUPPORT NO.

DDT	ADMIN	NOL	WCH	WCH	DATE
REVISED PER RING MEMO R21 000821 002					
REV	CHANGE REF	PREPARED	CHECKED	APPROVED	DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
CORE SPRAY SYSTEM					
SUPPORT LOCATIONS					
DATE 7-24-87	EDC	GLB	2-151-0280-C-001	CCO	

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

2-47E801-1

The diagram shows an exploded view of a four-leaf clover-shaped component. The central hub has a crosshair and a 0° angle indicated. Four leaves, labeled A, B, C, and D, are arranged around the center. Each leaf has several circular features and slots. Callouts point to various parts, including PCV1-2-005-X, MSBC-2-04, MSBC-2-03, PCV1-2-179-X, MSBC-2-02, MSBC-2-01, PCV1-2-004-X, PCV1-2-019-X, PCV1-2-018-X, PCV1-2-023-X, PCV1-2-022-X, PCV1-2-034-X, MSBC-2-05, MSBC-2-07, MSBC-2-08, MSBC-2-09, PCV1-2-041-X, PCV1-2-031-X, PCV1-2-030-X, PCV1-2-042-X, MSBC-2-12, MSBC-2-11, and PCV1-2-180-X. A note on the right states: "PCV1-2-042-X (REFER TO NOTE 2 FOR 'X' SUFFIX, TYPICAL)".

ALL  
AR

NOTES:  
1. THIS  
FOR U  
2. SUBS  
EXAMI  
FOR  
BOLT

000	ISSUED TO DEPIC
000	RS2 3508
REV	CHANGE

ALL REVISION CIRCLES  
ARE ADMINISTRATIVE REVISION

NOTES:

1. THIS DRAWING SUPERSEDES ISI-0027-B FOR UNIT 2 ONLY.
2. SUBSTITUTE "VBC" FOR "X" WHEN EXAMINING VALVE BODY BOLTING AND "PBC" FOR "X" WHEN EXAMINING VALVE TO PIPE BOLTING.

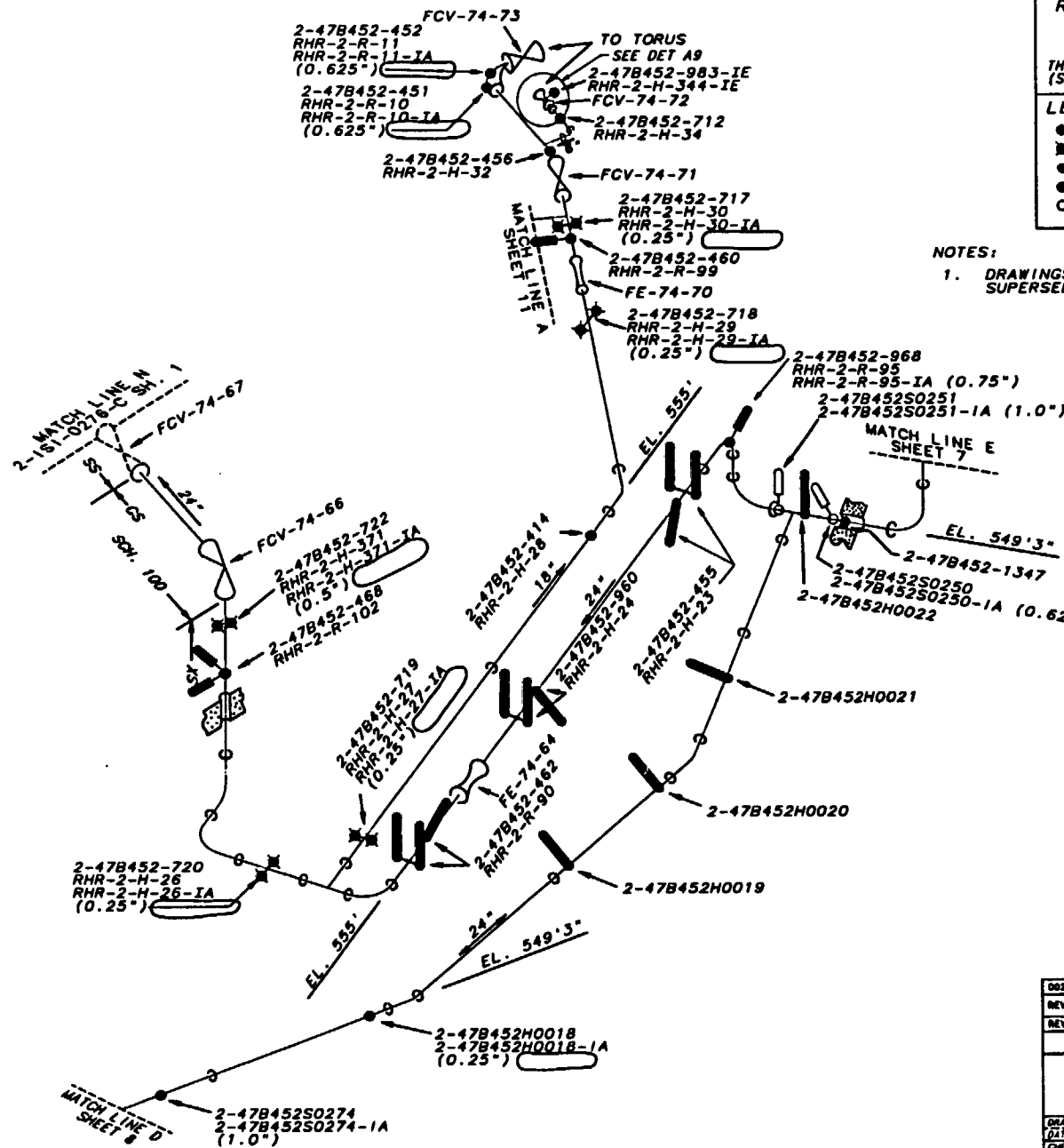
HARDWARE	TEKTRONIX 4129
SOFTWARE	TEKNICAD 8.2
FLOPPY OR TAPE	FLOPPY #8F4

**PROCAD**

\* FOR ORIGINAL SIGNATURES AND PREVIOUS  
REV. INFO. SEE "ORIGINAL".

000	CCO ADMIN	BCC	N/A	N/A	N/A	N/A	N/A
ISSUED TO CREATE CCO, SUPERSEDES AS-DESIGNED (SI-0312-B-1 R2 AND TO DEPICT AS-CONSTRUCTED STATUS PER A/D R0, R1; RIMS MEMO RS2 950604 050 (ADMINISTRATIVE REVISION))							
REV NO	CHANGE REF	DATE	DTFR	CHKR	DSGN	RVWR	1 APPD 2 APPD 3 APPD 1SSD
TENNESSEE VALLEY AUTHORITY							
S	BROWNS FERRY NUCLEAR PLANT UNIT 2 MAINSTEAM SYSTEM BOLTED CONNECTIONS						
DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS				
DATE: *	DATE: ---	DATE: ---	SHEET 1 OF 1 SHEET (S)				
CHECKED: ---	*	*	DRAWING NO.				
DATE: *			2-151-0312-B				
CHECKED AT R000			CCD				

ALL A/D HISTORY RESEARCHED AT R000



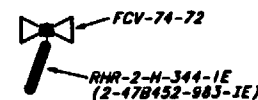
REFERENCE DRAWINGS  
47W452 SERIES  
47W335-6  
MSG-0018-C (SH. 9) WELD MAP  
THIS DRAWING SUPERSEDES MSG-0023-C SH. 3  
(SEE NOTE 1)

LEGEND  
● RIGID HANGER  
■ VARIABLE SUPPORT  
— RIGID STRUT  
○ MECHANICAL SNUBBER  
○ HYDRAULIC SNUBBER

ASME CC-2 (EQUIVALENT)

NOTES:

1. DRAWINGS ISI-0324-C SH. 8 AND 9 MAKE UP SUPERSEDED DRAWING MSG-0023-C (SH. 3)



DET A9

002	ADMIN	ROP	440	MSH	0-002-01
REVISED PER RING MEMO R21 000001 002					
REV	CHANGE REF	PREPARED	CHECKER	APPROVED	DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
RESIDUAL HEAT REMOVAL SYSTEM					
SUPPORT LOCATIONS					
DRAWN: PWB	SUBMITTED	APPROVED	SCALE: NTS	SHEET 10 OF 10	
DATE: 5-2-82	DATE: 5-2-82	DATE: 5-2-82	DATE: 5-2-82	SHEET 10 OF 10	
CHECKED: JLS	EDC	GLB	DRAWING NO.	2-151-0324-C-002	
DATE: 5-2-82	DATE: 5-2-82	DATE: 5-2-82	DATE: 5-2-82	2-151-0324-C-002	

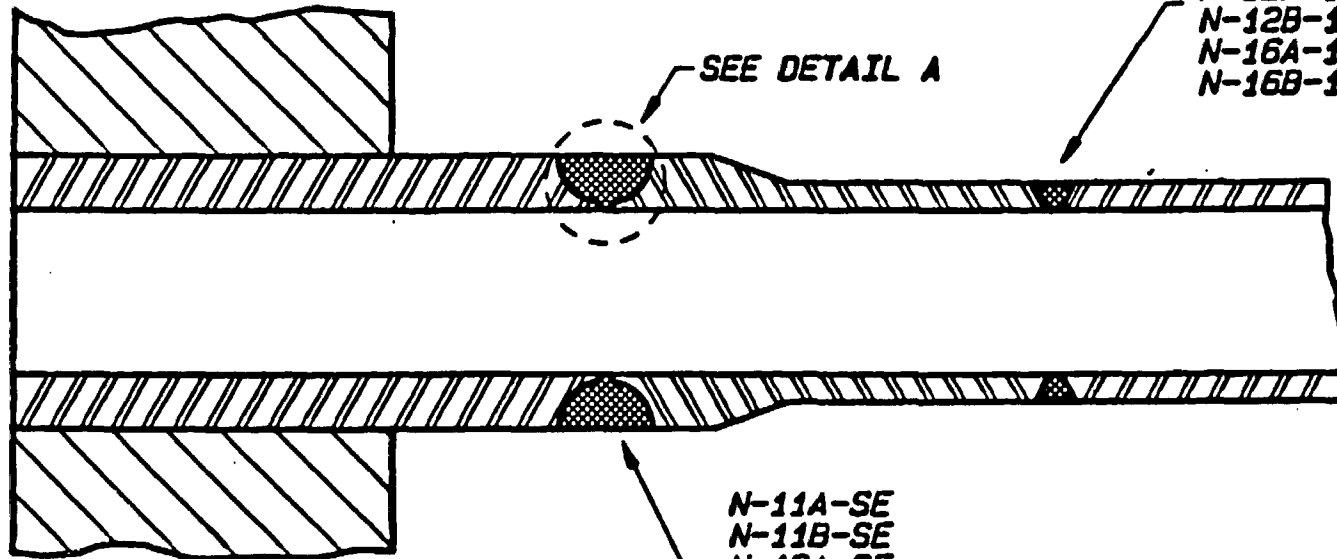
ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

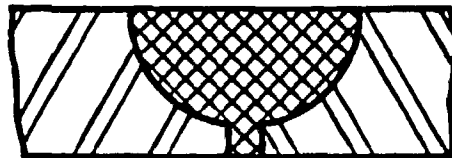
CCD

NOTE: THIS DRAWING SUPERSEDES  
ISI-0160-A (UNIT 2)

N-11A-1  
N-11B-1  
N-12A-1  
N-12B-1  
N-16A-1  
N-16B-1



N-11A-SE  
N-11B-SE  
N-12A-SE  
N-12B-SE  
N-16A-SE  
N-16B-SE



DETAIL A

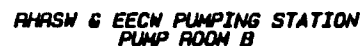
REV	00		
HARDWARE	TEKTRONIX 4129		
SOFTWARE	TEKNICAD 8.2		
FLOPPY OR TAPE #	FLOPPY #8F22		

REV.	BY	DATE	DESCRIPTION	CHK'D	DATE
TENNESSEE VALLEY AUTHORITY					
<b>BROWNS FERRY NUCLEAR PLANT</b>					
<b>UNIT 2</b>					
<b>INSTRUMENTATION NOZZLES</b>					
<b>WELD LOCATIONS</b>					
DRWING NO.	REV.	DATE	BY	DATE	BY
ISI-0351-A	00	10-11-88	EDC	5/10/91	WAB



378205-417  
378205-428  
0-378205S0011  
0-378205S0058  
0-378205S0059  
0-378205S0082  
178300-11

● RIGID HANGER  
ASME CC-3 (EQUIVALENT)



NO	6-3-92	REVISE SUPPORT NUMBERS TO MATCH REV. ENGINEERING P&ID	FILE	6-3-92
01	6-25-91	DEL SUPPORT MOTE. OLD SUPPORTS & H&M AND EQUIP., BPTS., AND SHEETS 8 - 25	JAA	JEB BLS
REV BY	DATE	DESCRIPTION	CR'D	BY
REWORKED:	TEX GLEB	SOFTWARE, TECHNICAN	B	FLORIP, 6-3-92

**TENNESSEE VALLEY AUTHORITY**

**BRONNS FERRY NUCLEAR PLANT**

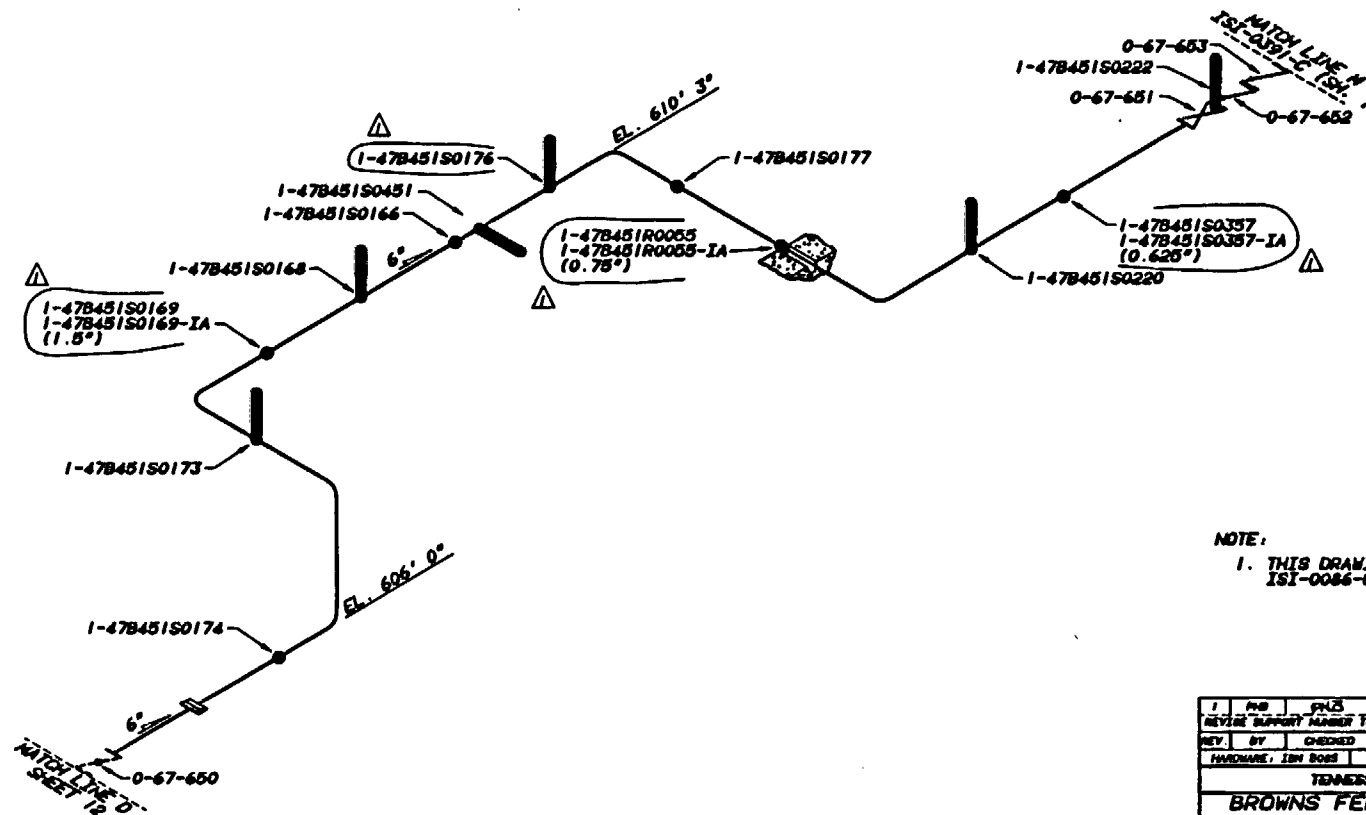
**UNIT 0**

**EMERGENCY EQUIPMENT COOLING SYSTEM**

**SUPPORT LOCATIONS**

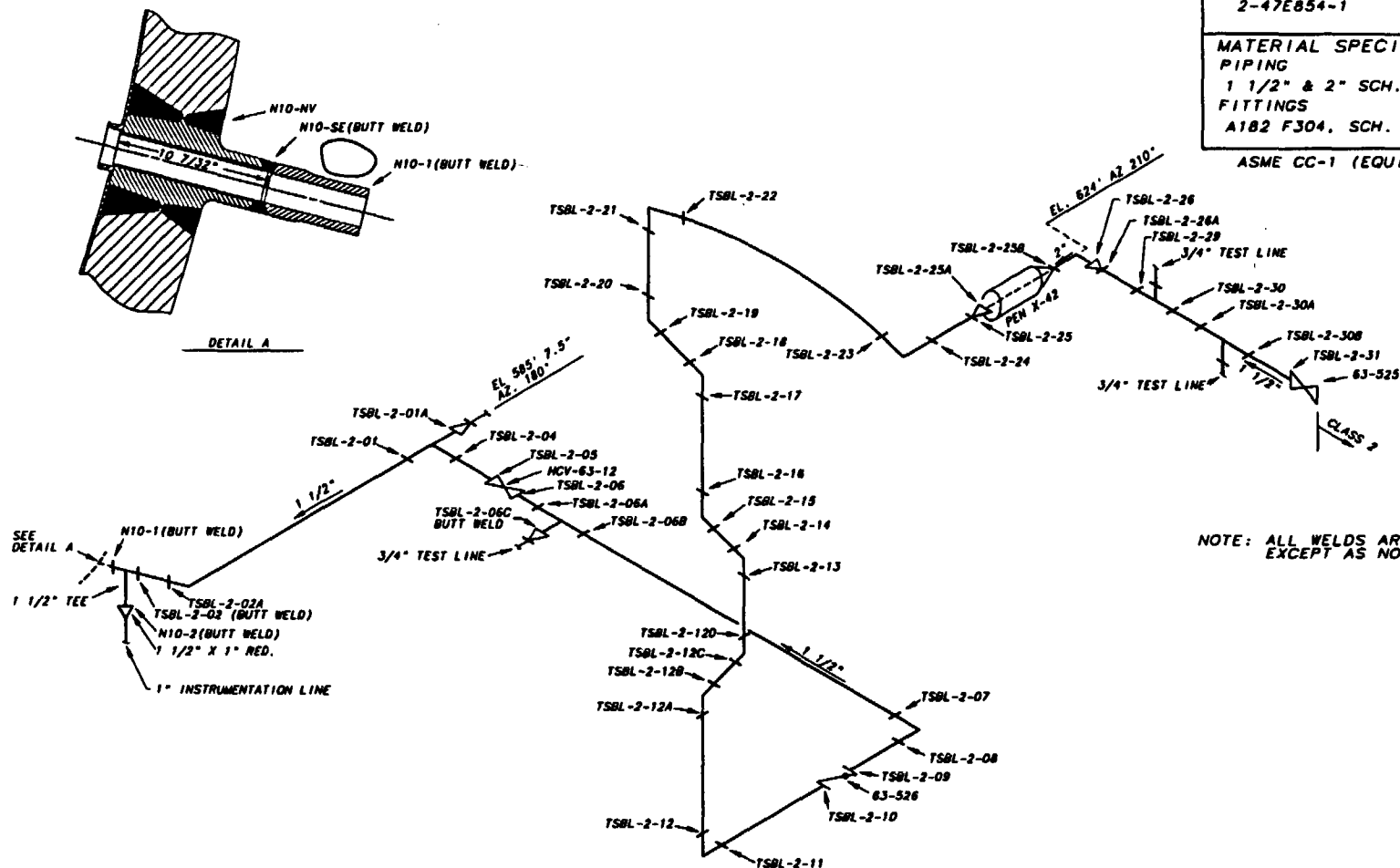
GRANT	REV	ISSUED	APPROVED	SCALE	BY
DATE	3-21-91	DATE	4-1-91	SHEET	2 OF 11 BRN IN
DATE	6-21-92	DATE	6-21-92	BRN IN	REV
		EDC	GLB	TSY-0368-C	02

**ASME CC-3 (EQUIVALENT)**



1. THIS DRAWING SUPERSEDES  
ISI-0086-C SH. 6 REV. 1

1	NO	FILE	YES	NO	1-3-92
REVIEW SUPPORT MEMBER TO MATCH NEW MEMBER FROM ENGINEERING					
REV. BY	CHECKED	REBUTTED	APPROVED	DATE	
HANDWARE, IIN BOBS		SOFTWARE, CADAN		USER, IETOP	
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 0					
EMERGENCY EQUIPMENT COOLING WATER SYSTEM					
SUPPORT LOCATIONS					
BRANCH, #	REBUTTED	APPROVED	SCALE NTS		
DATE, 2-16-91	DATE, 2-16-91	DATE, 2-16-91	DATE, 2-16-91		
CHECKED, JMA	YES	NO	DRAWING NO. REV		
DATE, 2-16-91			(SI-0368-C0)		



# REFERENCE DRAWINGS:

47W462 SERIES  
47B462 SERIES  
2-47E854-1

## MATERIAL SPECIFICATIONS:

PIPING  
1 1/2" & 2" SCH. 80 A-312 TP 304  
FITTINGS  
A182 F304, SCH. 80

ASME CC-1 (EQUIVALENT)

NOTE: ALL WELDS ARE SOCKET WELDED EXCEPT AS NOTED.

001	ADMIN	RDL	MCH	10/1	0-22/24
REVISED PER RING MEMO R21 000821 001					
REV	CHANGE REF	PREPARED	CHECKER	APPROVED	DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
STANDBY LIQUID CONTROL 1" TO 3"					
WELD LOCATIONS					
DRAWN:	PMB	DATE:	9-29-91	SCALE:	NIS
CHECKED:	JAA	APPROVED:	GLB	SHEET	01 OF 01
SUBMITTED:	JES			2-151-0380-C	001
CAD MAINTAINED DRAWING					CCD

ALL A/D HISTORY RESEARCHED AT 0000



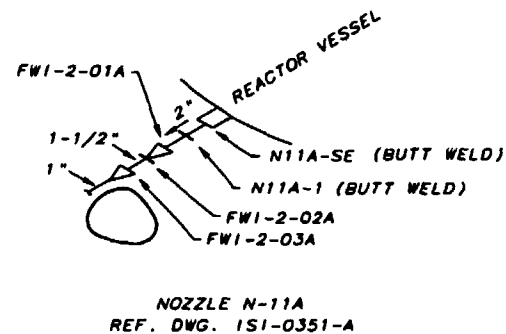
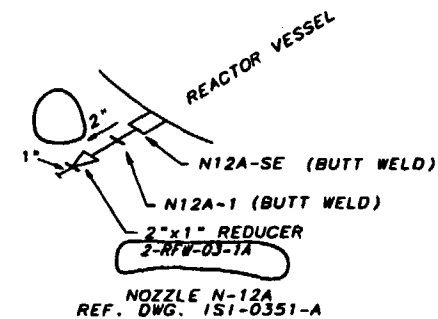
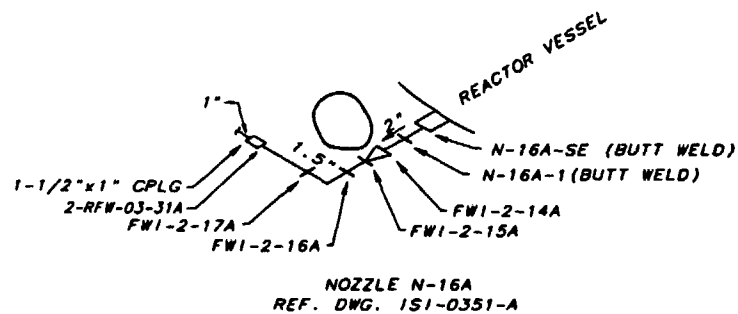
# REFERENCE DRAWINGS:

2-47E803-5  
2-47W2650-100  
2-47E600-602  
47BM600-SERIES  
0-47W600-20

## MATERIAL SPECIFICATIONS:

PIPING  
A312 OR A376 GR. TP-304 OR TP-316  
SCH. 80  
FITTINGS  
A182 GR. F-316

ASME CC-1 (EQUIVALENT)



001	ADMIN	RDL	RLO	RCH	6-29-74
REVISED PER RIMS MEMO R21 000621 001					
REV	CHANGE	REF	PREPARED	CHECKER	APPROVED DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
FEEDWATER INSTRUMENTATION					
WELD LOCATIONS					
DRAWN: JMB	SUBMITTED	APPROVED	SCALE: NTS	SHEET 01 OF 02 SHEETS	
DATE: 2-17-81	DATE: 2-17-81	DATE: 2-17-81	DATE: 2-17-81	DRAWING NO. 2-ISI-0353-C(001)	
CHECKED: JMB	DATE: 2-17-81	DATE: 2-17-81	DATE: 2-17-81	REV. 2-17-81	
CAD MAINTAINED DRAWING					
CCD					

ALL A/D HISTORY RESEARCHED AT R000

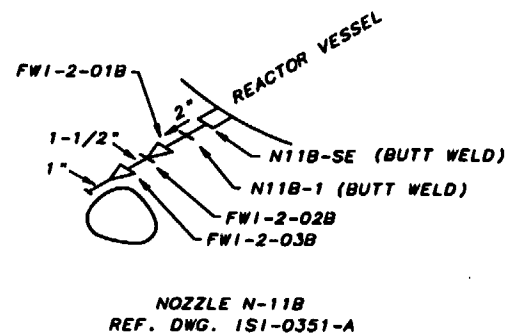
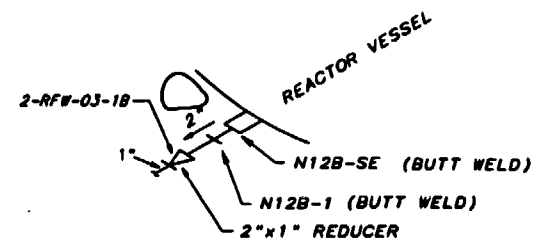
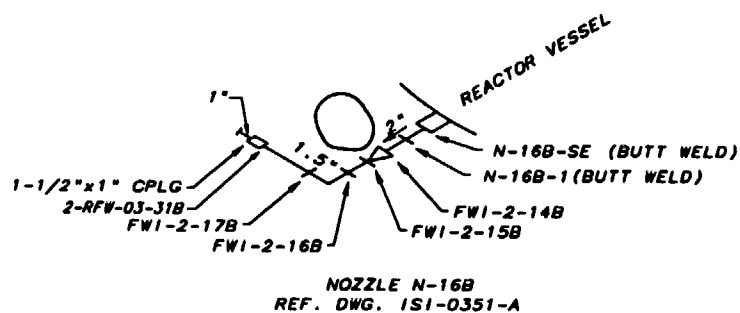
# REFERENCE DRAWINGS:

2-47E803-5  
2-47W2650-100  
2-47E600-601  
47BM600-SERIES  
0-47W600-20

## MATERIAL SPECIFICATIONS:

PIPING  
A312 OR A376 GR. TP-304 OR TP-316  
SCH. 80  
FITTINGS  
A182 GR. F-316

ASME CC-1 (EQUIVALENT)



001	ADMIN	RDL	RED	HEH	6-28-74
REVISED PER RIMS MEMO R21 000421 001					
REV	CHANGE	REF	PREPARED	CHECKER	APPROVED DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
FEEDWATER INSTRUMENTATION					
WELD LOCATIONS					
DRAWN BY	SUBMITTED	APPROVED	SCALE	NYS	
DATE: 2-11-71	DATE: 2-11-71	DATE: 2-11-71	DATE: 2-11-71	SHEET 02 OF 02 SHEETS	
CHECKED BY	JES	OLD	DATE: 2-10-71	DRAWING NO.	REV.
				2-151-0383-C1001	

ALL A/D HISTORY RESEARCHED AT R000

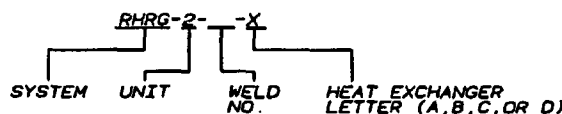
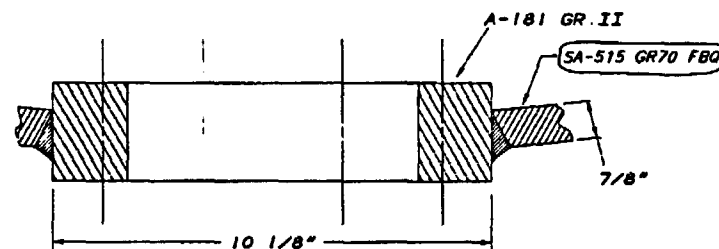
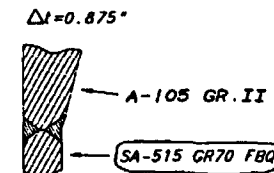
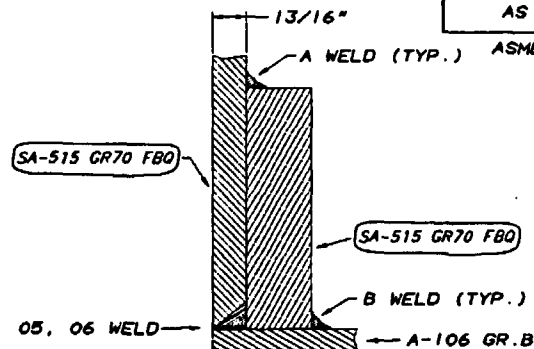
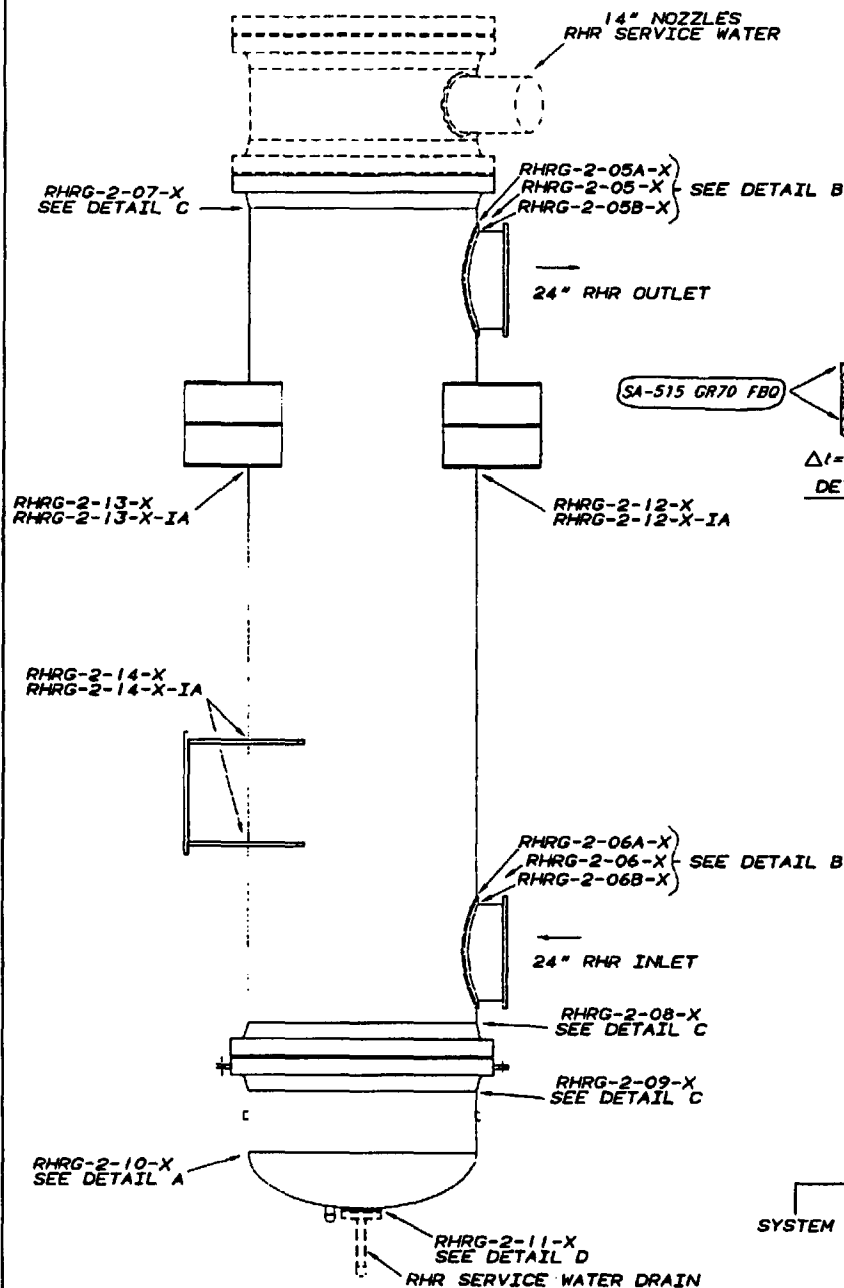
CAD MAINTAINED DRAWING

CCD

REFERENCE DRAWINGS  
 69-BF-165 PERFEX CORP.  
 69-D-160-05 PERFEX CORP.  
 NOTE: THIS DRAWING SUPERSEDES  
 ISI-0314-B

MATERIAL SPECIFICATIONS  
 AS NOTED

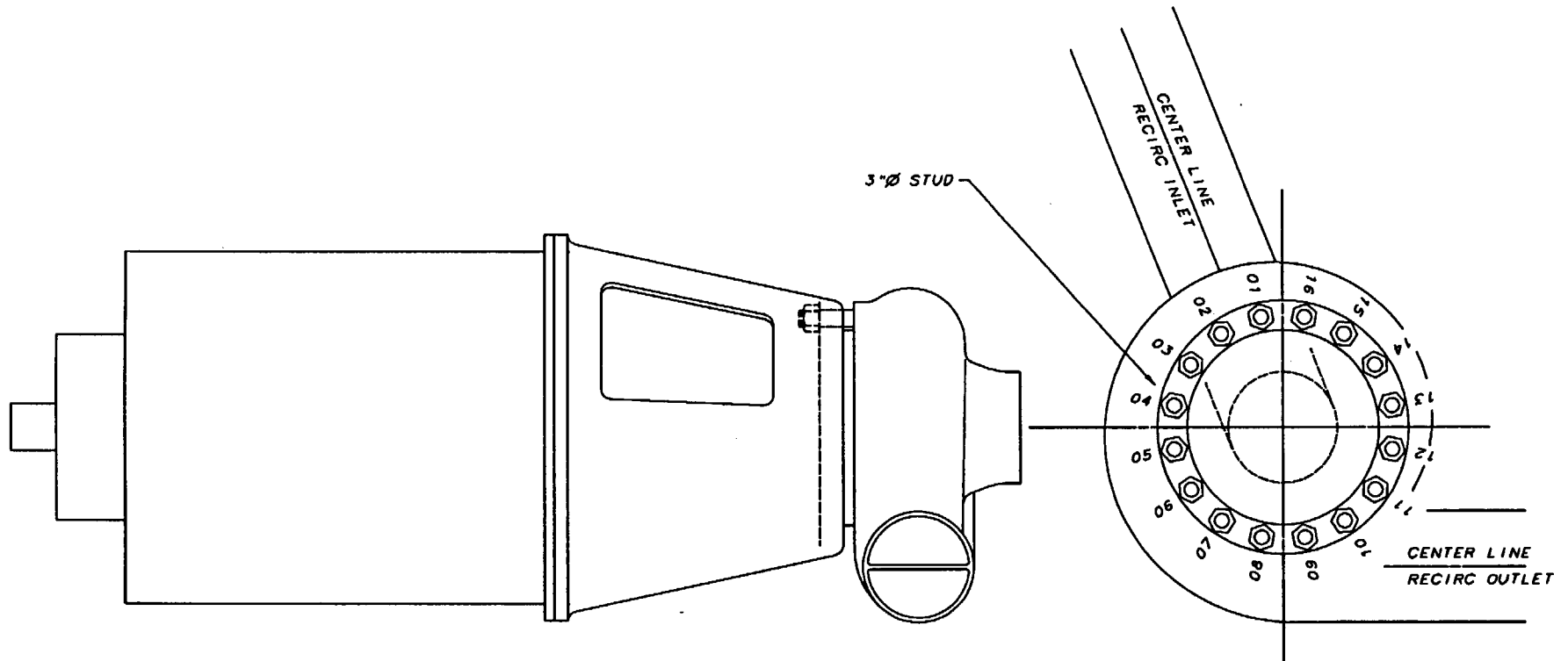
ASME CC-2 (EQUIVALENT)



001	ADMIN	BCP	JT	RLD/H	
REVISED FOR RINS MEMO R21 990504 007, REMOVED DRAWING CLASSIFICATION (ADMINISTRATIVE REVISION)					
REV	CHANGE REF	PREPARED	CHECKER	APPROVED	DATE
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
RESIDUAL HEAT REMOVAL HEAT EXCHANGER WELD LOCATIONS					
DRAWN: PWB	DATE: 3-13-92	SCALE: NTS	LEAD: NTS	CDP	
CHECKED: RPD	APPROVED: GLB	SHEET 01 OF 01		REV	
SUBMITTED: JES		2-151-0406-C		001	
CCD					

REFERENCE DRAWINGS  
 2F-1177 BYRON JACKSON DIV. BORG-WARNER  
 1E-3429 BYRON JACKSON DIV. BORG-WARNER  
 153F754 GENERAL ELECTRIC

ASME CC-1 (EQUIVALENT)



NOTE:  
 1. MATERIAL ASTM A540 GR B23.

PUMP A

NUMBERS (01-16) ARE PREFIXED BY:

PUMP A.....PMP-A-STUD-2-  
 PUMP A.....PMP-A-NUT-2-  
 PUMP A.....PMP-A-WASH-2-  
 PUMP A.....PMP-A-FLG-2-

PUMP B

NUMBERS (01-16) ARE PREFIXED BY:

PUMP B.....PMP-B-STUD-2-  
 PUMP B.....PMP-B-NUT-2-  
 PUMP B.....PMP-B-WASH-2-  
 PUMP B.....PMP-B-FLG-2-

PUMP A

PUMP INTERIOR IDENTIFIERS:

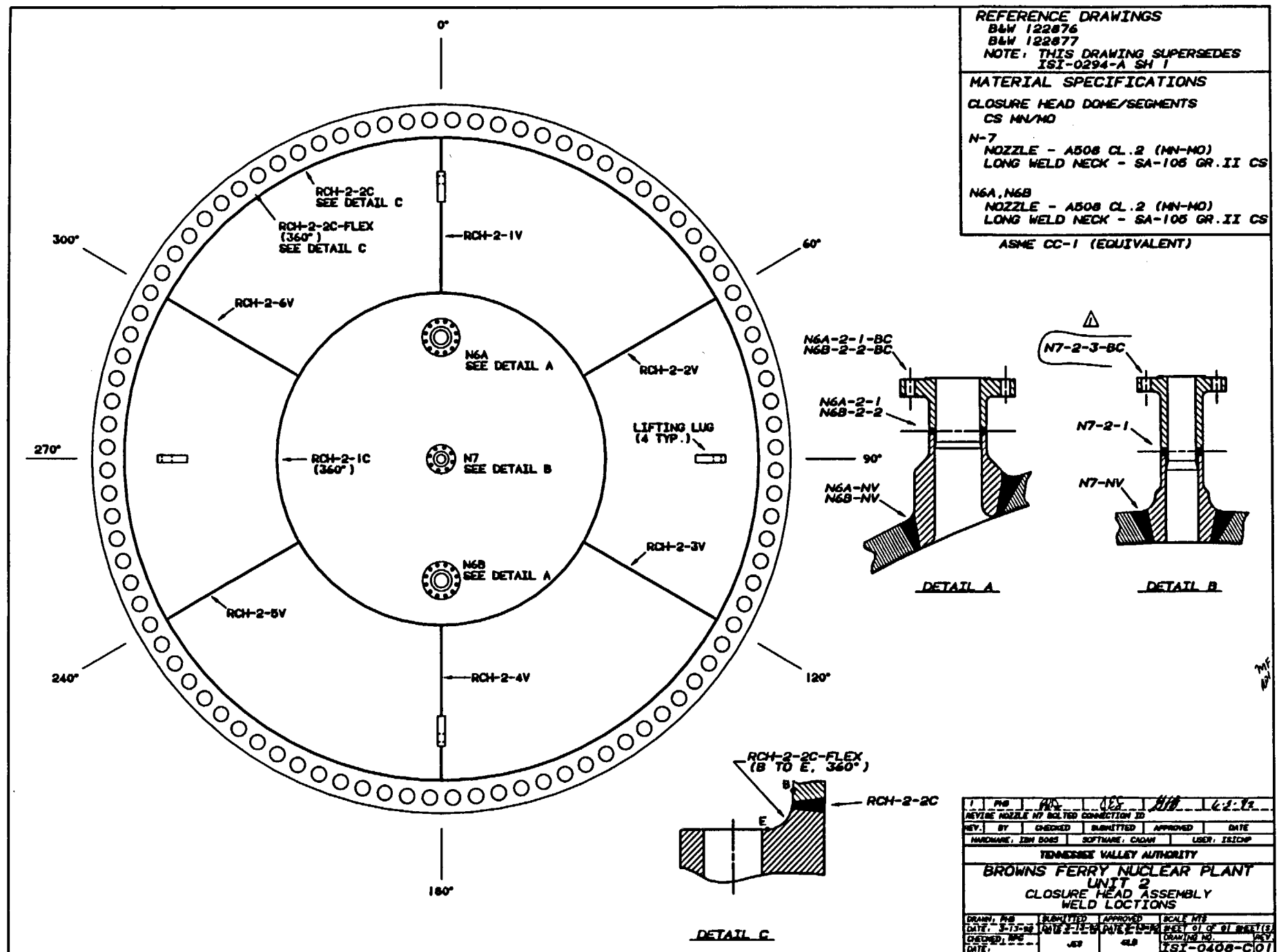
PUMP A.....PMP-2A-INTERIOR

PUMP B

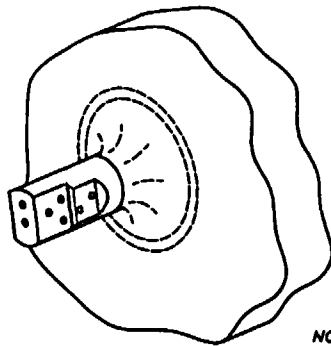
PUMP INTERIOR IDENTIFIERS:

PUMP B.....PMP-2B-INTERIOR

REV	DATE	BY	CHKD	DATE	BY	CHKD	DATE	BY	CHKD
1	01/15/97	WBL		01/15/97	WBL		01/15/97	WBL	
1. REVISED TO CREATE CCD SUPERSEDES AS-MEASURED 151-0407-C-1 AND TO DEPICT AS CONSTRUCTED STATUS PER BIRM 016 070000 001, 016 00									
TENNESSEE VALLEY AUTHORITY BROWNS FERRY NUCLEAR PLANT UNIT 2 RECIRCULATION PUMP BOLTING LOCATIONS & PUMP INTERIORS									
DRAWN: PMB		SUBMITTED		APPROVED		SCALE: NTS			
DATE: 3-13-97		DATE: 02/16/97		DATE: 02/16/97		SHEET 01 OF 01 SHEET(S)			
CHECKED: RUC		JES		IPB		DRAWING NO. 2-151-0407-C1000			
DATE:						CCD			



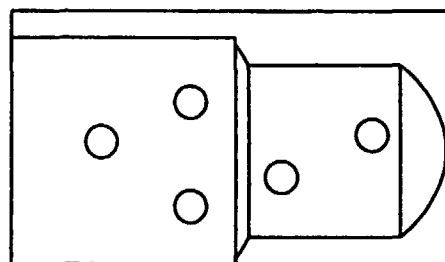
1	PH	PH	DES	PH	6-2-78
REVISE NOZZLE W/ BOLTED CONNECTION ID					
REV.	BY	CHECKED	SUBMITTED	APPROVED	DATE
HARDWARE, IDN 5065		SOFTWARE, CAGM		USER, TRICH	
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
CLOSURE HEAD ASSEMBLY					
WELD LOCTIONS					
DRAWN, MFG	SUBMITTED		APPROVED		LOCAL MFG
DATE, MFG	DATE, SUB		DATE, APP		DATE, LCL
CHECKED, MFG	DATE, MFG		DATE, SUB		DATE, LCL
DATE	JST		JST		ISI-0408-C01



NOZZLE A OR B

JP-2-1X

N8A OR N8B  
NOZZLE TO VESSEL WELD



EL. 589'6"

•N8A - AZIMUTH 105°  
•N8B - AZIMUTH 285°

•N8A-IR  
•N8B-IR

•N8A-IR  
•N8B-IR

APPROXIMATELY 10 3/4"

REFERENCE DRAWINGS  
0-11203838 GE (84P64-8835271)  
769E957 GE (84P64-8835271)  
CHM-2046-C (NOZZLE LOCATIONS)

NOTE:  
THIS DRAWING SUPERSEDES  
ISI-0156-A

MATERIAL SPECIFICATIONS  
DISSIMILAR METAL WELD

ASME CC-1 (EQUIVALENT)

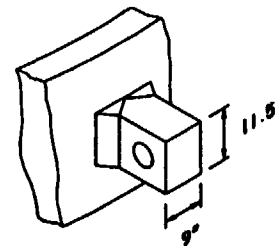
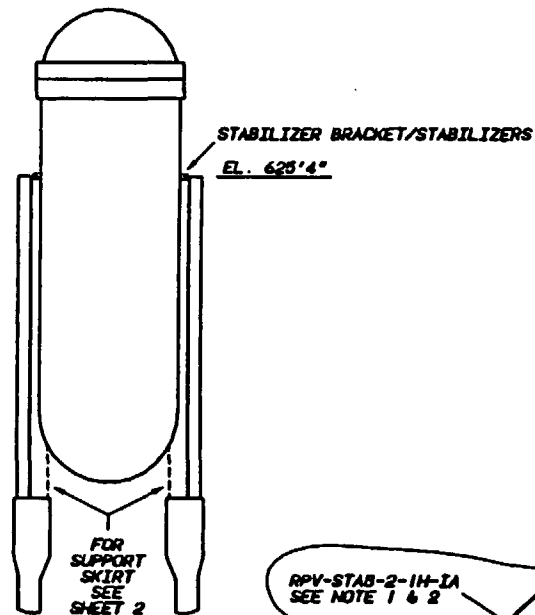


DATE	5/15/97	BY	J	CHKD	DATE	5/15/97	BY	J	CHKD
S TENNESSEE VALLEY AUTHORITY BROWNS FERRY NUCLEAR PLANT UNIT 2 JET PUMP INSTRUMENTATION NOZZLE WELD LOCATIONS									
DRAWN:	PHB	DATE:	3-13-83	SCALE:	NYS	CDRAWN/IST/CHP			
CHECKED:	RPO	APPROVED:	GLB	SHEET 01 OF 01		REV			
SUBMITTED:	JES					2-151-0410-C		DOC	
						CCD			

PCADAM

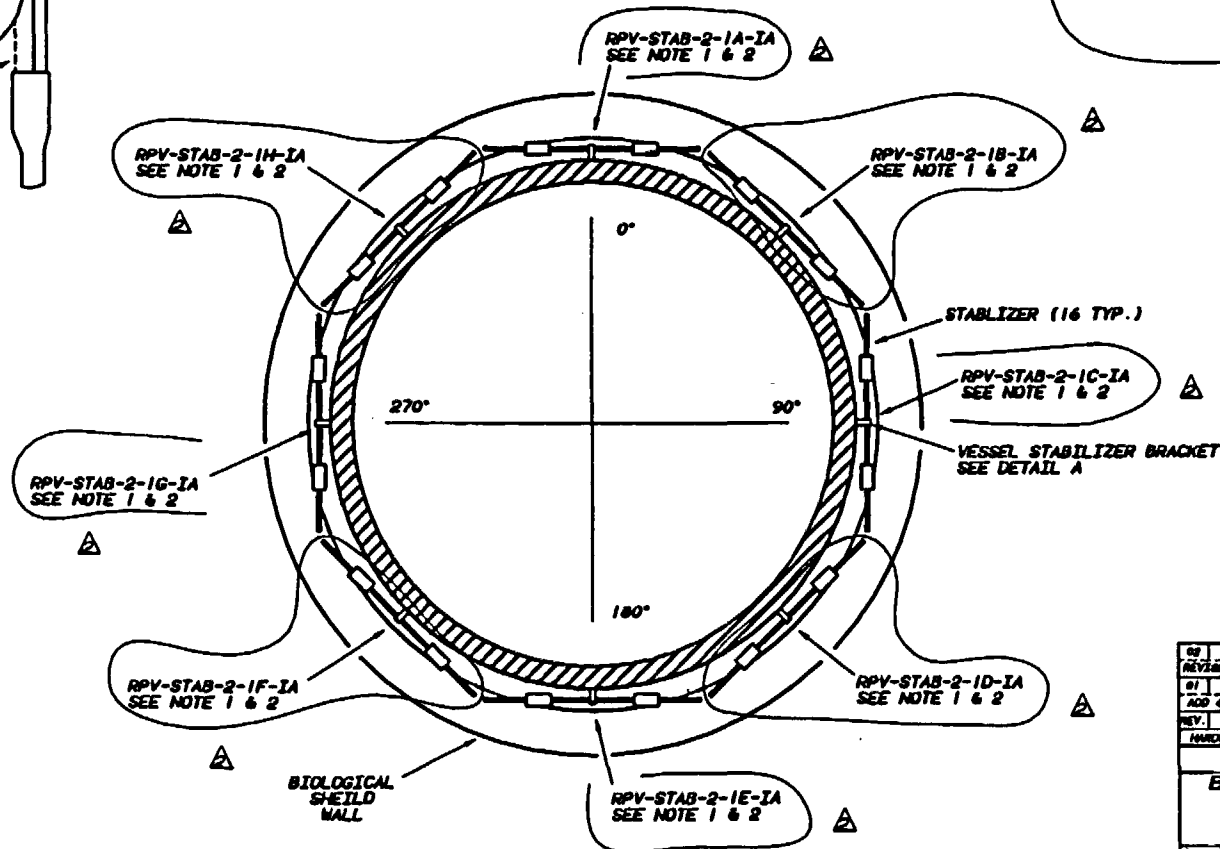
ALL A/D HISTORY RESEARCHED AT R000

ASME CC-1 (EQUIVALENT)



NOTE:

1. THE RPV STABILIZER IS CONSIDERED ONE SUPPORT (RPV-STAB-2-1) FOR PURPOSES OF ISI SCHEDULING.
2. LETTERS A THROUGH H ARE ASSIGNED FOR INTEGRAL ATTACHMENT EXAMINATION RECORD PURPOSES ONLY.



BY	REV	DATE	BY	DATE	02/17/93
REVISE SUPPORT NUMBER, REVISE NOTE SPECIFYING ALL ONE SUPPORT					
01	REV	JCB	GLE	REV	8-11-93
ADD 3 STABILIZERS, CHANGE STAB. NUMBERING, REV. NOTATION					
REV.	BY	CHECKED	SUBMITTED	APPROVED	DATE
NICHOLSON, JIM BOES	SOFTWANE, CADAN	USER, ISICH			
TENNESSEE VALLEY AUTHORITY					
BROWNS FERRY NUCLEAR PLANT					
UNIT 2					
REACTOR VESSEL					
VESSEL SUPPORTS					
DRAWN: PJB	SUBMITTED	APPROVED	SCALE	DATE	1 OF 1 SHEET(S)
DATE:	DATE:	DATE:	DATE:	DATE:	DATE:
CHECKED: PJB	REV	GLE			
DATE:					ISI-0418-C02

N3X	-	86.5°
N12X	-	146°
N11X	-	228°
N4X	-	246.5°
N5X	-	259.5°
N9	-	296.5°
N16X	-	379°
N2X	-	564°
N1X	-	583.5°
N8X	-	610°

**z**

Y

### MATING SURFACE

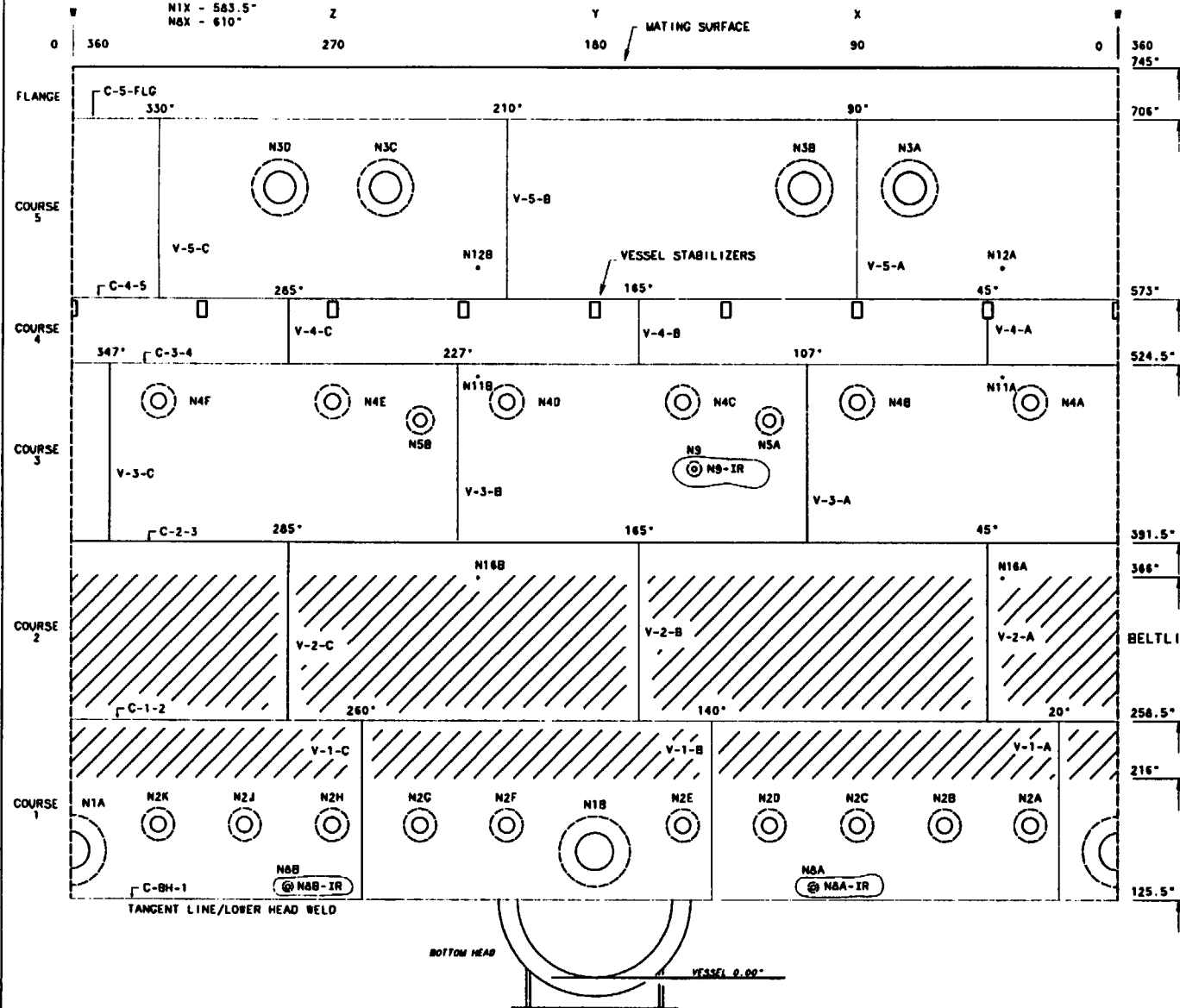
**x**

1

REFERENCE DRAWINGS (GE)  
 SKETCHES - RPV EXAMINATION PLAN (GE)  
 SK-B2001 SK-B2005 SK-B2010  
 SK-B2003 SK-B2007  
 SK-B2004 SK-B2006

○ VESSEL NOZZLE  
○ FULL PENETRATION NOZZLE WELD

ASME CC-1 (EQUIVALENT)



NOTES:

1. REFER TO RPV MANUAL FOR MATERIAL SPECIFICATION AND MATERIAL THICKNESS.
2. NOZZLES N-11A, N-11B, N-12A, N-12B, N-16A, AND N-16B ARE CATEGORY B-E.

### BELTLINE REGION

002	ADMIN	ROL	N/A	N/A	N/A	N/A
REVISED PER RIMS MEMO R14 970505 302						
37	CHANGE REF	DATE	01/17/89	CHWR	DSCN	RVRB
				APPD	APPD	APPD
					ISSC	
TENNESSEE VALLEY AUTHORITY						
S	BROWNS FERRY NUCLEAR PLANT					
	UNIT 2					
	REACTOR PRESSURE VESSEL (RPV)					
	SHELL COURSE WELD/NOZZLE LOCATIONS (OUTSIDE VIEW)					
DRAWN: N/A		DATE: N/A		SCALE: NIS (CADMAN/SICMP)		
CHECKED: N/A		APPROVED:		SHEET 01 OF 02		REV
SUBMITTED: N/A		GLB		2-CHM-2046-C		002
				CCD		

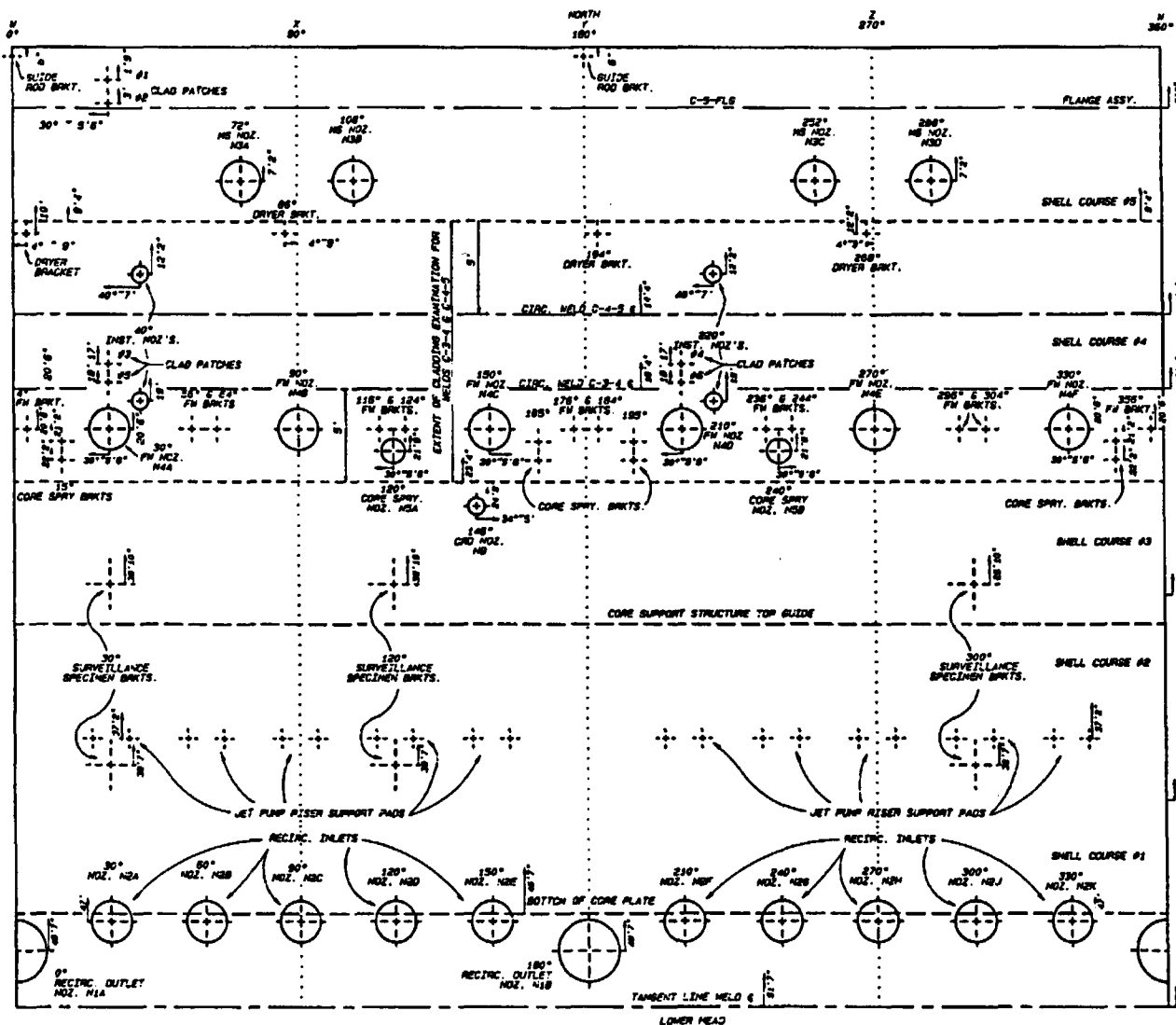
ALL A/D HISTORY RESEARCHED AT R000



500733-001C (MIRROR INSULATION)  
24187-F (BGW)  
122856E

**NOTES:**

1. FOUR (4) STEAM DRYER HOLDDOWN BRACKETS (NOT SHOWN) ARE LOCATED IN THE VESSEL CLOSURE HEAD 10" UP FROM THE FLANGE. THESE ARE AT AZIMUTH LOCATIONS 41°, 139°, 221°, AND 319°.
2. CODE CATEGORY B-N-1  
RPV INTERIOR  
CODE CATEGORY B-N-2  
RPV-INT ATT BLR①  
RPV-INT ATT NBLR②  
RPV-CORE SUPPORT
- ① INTEGRAL ATTACHMENT BELTLINE REGION  
② INTEGRAL ATTACHMENT NON BELTLINE REGION



977  
221

600	CCD ADPH	NOL	N/A	N/A	N/A
(ENTER TO CREATE CCD NUMBER AS DESIGNED ON 2046-C-2-22 AND TO DEFICI- ENTLY COMPLETED STATUS PER FORM NO. 814 970000 2017, AND SEE					
REV NO.	CHANGE REF	DATE	Q470	CDNR	CDXN
			INSTR	INSTR	INSTR
<b>TENNESSEE VALLEY AUTHORITY</b> <b>BROWNS FERRY NUCLEAR PLANT</b> <b>UNIT 2</b> <b>REACTOR VESSEL WELD AND NOZZLE</b> <b>LOCATIONS (INTERIOR WALL)</b>					
DRAWING: <b>W-2</b> DATE: <b>3-23-08</b> CHECKED: <b>JES</b> DATE: <b>3-23-08</b>	DESIGNED: <b>JES</b> DATE: <b>3-23-08</b> CHECKED: <b>JES</b> DATE: <b>3-23-08</b>	APPROVED: <b>GLB</b> DATE: <b>3-23-08</b> CHECKED: <b>GLB</b> DATE: <b>3-23-08</b>	SCALE: <b>1/8"</b> SHEET NO. OF <b>CG 2046-C-2-22</b> DRAWINGS NO. <b>1</b> OF <b>1</b>	<b>2-CHM-2046-C-100</b>  <b>CCO</b>	

OWNER: TENNESSEE VALLEY AUTHORITY	PLANT: BROWNS FERRY NUCLEAR PLANT
OFFICE OF NUCLEAR POWER	P.O. BOX 2000
1101 MARKET STREET	DECATUR, ALABAMA 35602
CHATTANOOGA, TENNESSEE 37402	

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## **APPENDIX VI**

### **SUMMARY OF INDICATIONS**

OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35602
--	--

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## Summary of Indications

Indications detected during the performance of examinations for Browns Ferry Nuclear Plant Unit 2/Cycle12 were evaluated in accordance with approved written procedures. Generally, examination results yielded either No Recordable Indications (NRI) or Recordable Indications.

Recordable Indications were evaluated to determine their origin. Indications determined to be of a geometric, metallurgical, or similar origin were typically dispositioned as non-relevant. Indications determined to be of a non-geometric, non-metallurgical, or similar origin were typically dispositioned as relevant. Such indications required additional measures such as further evaluation in accordance with ASME Section XI acceptance standards, engineering analysis, repair, or replacement.

The following is a summary indications detected and corrective measures taken during the Unit 2 Cycle 12 refueling Outage.

NOI No.	Code Cat.	Component Identifier	Indication Description	Resolution	Additional samples
U2C12-001	F-A	HPAS-2-H-02	BENT ROD	USE AS IS	NONE
U2C12-002	B-M-2	VALVE 2-FCV-074-47	CRACK IN VALVE DISC SEAT (ONE SIDE )	REPLACED VALVE DISC	NONE
U2C12-003	E-A	DW-LNR-2-1A	PITTING	ACCEPTABLE	NONE
U2C12-005	B-G-2	VALVE PCV-1-2-022	DEFORMED /MISSING THREADS ON BOLTING	REPLACE	NONE
U2C12-006	B-G-2	VALVE PCV-1-2-022	DAMAGED THREADS ON BOLTING	REPLACE	NONE
U2C12-007	E1.12	2-X-2, DW HD 2-1, DW LNR 2-1, DW LNR 2-2, DW LNR 2-3, DW LNR 2-4, DW LNR 2-5, DW LNR 2-6	STEEL CONTAINMENT VESSEL COATINGS (INSIDE DRYWELL)	REMOVED DELAMINATED COATINGS AND A VT-3 VISUAL EXAMINATION PERFORMED, RESULTS SATISFACTORY	NONE

## ADDITIONAL SAMPLES

There were no additional samples required this outage.

OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35602
--	--

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## **ATTACHMENT 1**

### **UNIT 2 CYCLE 12** **AUGMENTED EXAMINATION** **SUMMARY**

OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35602
--	--

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## **SECTION 1**

### **AUGMENTED SUMMARY**

OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35602
--	--

UNIT: TWO CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

This section includes augmented examinations performed to comply with NRC or TVA self-imposed requirements. Typical sources include generic letters, IE Bulletins, technical specifications, vendor recommendations, and industry experience. The following summarizes the augmented examinations performed during the Unit 2 Cycle 12 outage and references the corresponding paragraph in 2-SI-4.6.G and/or 0-TI-365.

**Paragraph 7.11.5 Augmented Examination of Austenitic Stainless Steel and Dissimilar Metal Welds Susceptible to IGSCC (BWRVIP-75)**

Austenitic stainless steel and dissimilar metal circumferential welds in piping four inches or larger in nominal pipe diameter which contain reactor coolant at temperatures above 200 degrees F during power operation shall be examined. There was no new IGSCC identified in Cycle 12.

Reference: *BWR Vessel and Internals Project, Technical Basis for Revisions to Generic Letter 88-01 Inspection Schedules, BWRVIP-75.*

NUREG-0313 CATEGORY	TOTAL NUMBER OF WELDS	WELDS EXAMINED DURING U2/C12 Outage
A	47	*0
B	N/A	N/A
C	115	9
D	7	0
E	15	0
F	N/A	N/A
G	2	2 (VT-2)

\*Category A Welds are sampled in accordance with the Unit 2 Risk - Informed ISI Program.

Examination Results: No indications of IGSCC cracking observed.



OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                              DECATUR, ALABAMA 35602  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

**Core Plate Plugs and Hold Down Bolts Visual (VT-3) Examinations: Total = 51**

36 - Hold Down Bolts, CPHDB L-10, 0 TO 90 Degrees, CPHDB L-10, 90 to 180 Degrees, CPHDB L-10, 180 to 270 Degrees, and CPHDB I-10, 270 to 360 Degrees.

15 - Core Plate Plugs at location # 13 - 30-27, 30-19, 30-11, 26-23, 26-39, 22-35, 22-27, 18-31, 34-23, 46-35, 42-31, 38-27, 38-35, 34-39, and 30-35

*Reference: 0-TI-365, Paragraph 7.14 and Appendix 9.2 and BWRVIP-25, BWR Core Plate Inspection and Flaw Evaluation Guidelines, EPRI TR-107284.*

Examination Results: No Recordable Indications noted.

**Top Guide Visual (VT-1 and EVT-1) Examinations: Total = 7**

Alignment Pins, Location 2/3 at Azimuth 0 and 90 Degrees  
Rim Welds, Location 11 at Azimuth 0, 90, 180, and 270 Degrees  
Socket/Bosses to Rim Welds, location 3 at Azimuth 0 and 90 Degrees  
Debris Inspection of Top Guide Area, Periphery  
Debris Inspection of Top Guide Area, General

*Reference: 0-TI-365, Paragraph 7.9 and Appendix 9.2 and BWRVIP-26, BWR Top Guide Inspection and Flaw Evaluation Guidelines, EPRI TR-107285.*

Examination Results: No indications of IGSCC cracking observed.

**Steam Dryer Visual (EVT-1) Examination: Total = 2**

Man Hole Covers: 90 Degree Side and 270 degree Side.

*Reference: 0-TI-365, Reactor Pressure Vessel Internals Inspection (RPVII) Units 1, 2 and 3.*

Examination Results: No Recordable Indications noted.

**Feedwater Spargers Visual (VT-1) Examinations: Total = 18**

FW Nozzle Inner Radius, Sparger Nozzles, Sparger End Brackets, on N4A, N4B, N4C, N4D, N4E, and N4F.

*Reference: 0-TI-365, Paragraph 7.17 and Appendix 9.2 and NUREG-0619 and BWR Owners Group(BWROG) Licensing Topical Report GE-NE-523-A71-0594, Revision 01, August 1999, Table 6-1.*

Examination Results: No Recordable Indications noted.



OWNER: TENNESSEE VALLEY AUTHORITY	PLANT: BROWNS FERRY NUCLEAR PLANT
OFFICE OF NUCLEAR POWER	P.O. BOX 2000
1101 MARKET STREET	DECATUR, ALABAMA 35602
CHATTANOOGA, TENNESSEE 37402	

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

**Jet Pump Assemblies and Riser Braces, Visual Inspections (VT-3, VT-1, and EVT-1) Examinations:**

**Total = 134\***

JP-13/14	JP-3/4	JP/11 Set Screw VS	JP/15 Set Screw SH	JP-17 MX-2	JP-20 DF-1
J-RS-1	B-RS-1	JP/12 Set Screw SH	JP/15 Set Screw VS	JP-17 DF-1	JP-20 WD-1*
RB 1a	B-RS-8	JP/12 Set Screw VS	JP/16 Set Screw SH	JP-17 WD-1*	JP/19 Set Screw SH
RB 1b	B-RS-9	JP/11 BB1-2	JP/16 Set Screw VS	JP-18-IN-4	JP/19 Set Screw VS
RB 1c	RB 1a	JP/12 BB1-2	JP/15 BB1-2	JP-18 MX-2	JP/20 Set Screw SH
RB 1d	RB 1b	J-RS-6	JP/16 BB1-2	JP-18 DF-1	JP/20 Set Screw VS
JP-13-WD-1	RB 1c	J-RS-7	G-RS-6	JP-18 WD-1	JP/19 BB1-2
JP-14-WD-1	RB 1d	J-RS-8	G-RS-7	JP/17 Set Screw SH	JP/20 BB1-2
JP-17/18	JP-4-WD-1	J-RS-9	G-RS-8	JP/17 Set Screw VS	JP-1 WD-1
G-RS-1	JP/ 4 Set Screw SH	JP-13-IN-4	G-RS-9	JP/18 Set Screw SH	JP-2 WD-1
RB 1a	JP/ 4 Set Screw VS	JP-13 MX-2	JP-13 WD-1*	JP/18 Set Screw VS	JP-3 WD-1
RB 1b	K-RS-6	JP-13 DF-1	JP-14-IN-4	JP/17 BB1-2	JP-4 WD-1*
RB 1c	K-RS-7	H-RS-7	JP-14 MX-2	JP/18 BB1-2	JP-5 WD-1
RB 1d	K-RS-8	H-RS-8	JP-14 DF-1	F-RS-6	JP-6 WD-1
JP-17-WD-1	K-RS-9	H-RS-9	JP-14 WD-1*	F-RS-7	JP-7 WD-1
JP-19/20	JP-11 MX-2	JP-15-IN-4	JP/13 Set Screw SH	F-RS-8	JP-8 WD-1
F-RS-1	JP-11 IN-4	JP-15 MX-2	JP/13 Set Screw VS	F-RS-9	JP-9 WD-1
RB 1a	JP-11 DF-1	JP-15 DF-1	JP/14 Set Screw SH	JP-19-IN-4	JP-10 WD-1
RB 1b	JP-11 WD-1	JP-15 WD-1	JP/14 Set Screw VS	JP-19 MX-2	
RB 1c	JP-12-IN-4	JP-16-IN-4	JP/13 BB1-2	JP-19 DF-1	
RB 1d	JP-12 MX-2	JP-16 MX-2	JP/14 BB1-2	JP-19 WD-1	
JP-20-WD-1	JP-12 DF-1	JP-16 DF-1	H-RS-6	JP-20-IN-4	
JP/11 Set Screw SH	JP-12 WD-1	JP-16 WD-1	JP-17- IN-4	JP-20 MX-2	

\* NOTE: Locations JP-4-WD-1, JP-13-WD-1, JP-14-WD-1, JP-17-WD-1, and JP-20-WD-1 are listed twice on the list above of inspections for the Jet Pump assemblies. The second inspection of each location was additional scope recommended by General Electric Nuclear Energy, and was to verify that the back surface of the wedge is in contact with the inlet-mixer belly band only.

\*\*Also a VT-3 examination performed for an Annulus Debris Inspection of Jet Pumps: 12/13, 13/14, 15/16, 17/18, and 19/20.

Reference: 0-TI-365, Paragraph 7.8 and Appendix 9.2 and BWRVIP-41, BWR Jet Pump Assembly Inspection and Flaw Evaluation Guidelines, EPRI TR-108728.

Examination Results: Reference next page and ISI Report R-169 for results.

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                              DECATUR, ALABAMA 35602  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

**Jet Pump Assemblies and Riser Braces, Visual Inspections (VT-3, VT-1, and EVT-1) Examination Results.**

Jet Pump # 17 shows wear on the wedge assembly between the wedge and restrainer bracket. Recordable Indication.

The IVVI Scope was expanded to inspect the wedge assemblies on the other jet pumps (1-10). Jet pumps # 1, 2, 3, 5, 6, 8, 9, and 10 No Recordable Indications noted. See below on JP # 4 and JP # 7.

Jet Pumps # 4, 13, 14, and 20 also showed signs of wear on the top and bottom of the wedge assembly. Jet Pump # 17 was determined to have the most severe condition.

Jet Pump # 7 indicated very minor signs of wear on the top and bottom of the wedge assembly and was noted for future comparison with Inservice Examinations.

The IVVI Scope was expanded to inspect the riser braces, RS-1, and Wedge assembly contact area between the Jet Pump bellybands and wedge area. (Jet Pumps 4, 13, 14, 17, and 20). No indications were found.

A GE evaluation justifying acceptability of the jet pump wedge assembly condition for a minimum of one cycle has been received from GE, on March 08, 2003. Reference EDMS No. R06 030308 881.

Jet Pump # 16 shows a gap on the Shroud side of the set screw. The set screw was back lighted and has a gap approximately 1/5<sup>th</sup> thread width (0.025 inches estimated). This condition was added to Problem Evaluation Report # BFN PER 03-004060-000.

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                      DECATUR, ALABAMA 35602  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

**Paragraph 7.11.8 Level Instrumentation Nozzle Safe Ends BWRVIP-49: 6 VT-2 (Visual) Examinations**

Perform a VT-2 Visual inspection of the Level Instrumentation safe end to nozzle weld of the N11A-SE, N11B-SE, N12A-SE, N12B-SE, N16-SE, and N16B-SE, nozzles in accordance with the recommendations of BWRVIP-49. The recommendations are to perform a visual leak check of the safe end to nozzle weld during the drywell leak check effort performed each outage. Insulation removal is not necessary to perform the leak check. The implementation interval shall start with the Unit 2 Cycle 12 Refueling Outage. Leakage inspections shall be performed as described during the Cycle 12 outage and during each subsequent refueling outage.

*Reference: O-TI-365, Paragraph 7.12 and BWRVIP-49, "Instrument Penetration Inspection and Flaw Evaluation Guidelines"*

**Examination Results: A VT-2 examination was performed on all six nozzle safe-end welds during the system leakage test and revealed no leakage.**

**Paragraph 7.11.9 Core Plate delta/P Standby Liquid Control (SLC) Nozzle BWRVIP-27: 1 VT-2 (Visual) Examination**

Perform a VT-2 Visual inspection of the Core Plate delta/P Standby Liquid Control (SLC), nozzle to safe end weld and safe end of the N10-SE in accordance with the recommendations of BWRVIP-27. The recommendations are to perform a visual leak check of the safe end to nozzle weld and safe end during the drywell leak check effort performed each outage. Insulation removal is not necessary to perform the leak check. The implementation interval shall start with the Unit 2 Cycle 12 Refueling Outage.

Leakage inspections shall be performed as described during the Cycle 12 outage and during each subsequent refueling outage.

*Reference: O-TI-365, Paragraph 7.16 and Appendix 9.2 and BWRVIP-27, "BWR Standby Liquid Control System/Core Plate delta/P Inspection and Flaw Evaluation Guidelines"*

**Examination Results: A VT-2 examination was performed on the nozzle to safe-end weld and safe end during the system leakage test and revealed no leakage.**

**Examination Results: No new MIC growth recorded.**

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                              DECATUR, ALABAMA 35602  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## **SECTION 2**

### **EXAMINATION SUMMARY**

### **EXAMINATIONS PERFORMED DURING**

### **UNIT 2 CYCLE 12 OUTAGE**

## EXAM REQUIREMENT

0TI365  
B01-02  
B02-02  
B04-02  
B07-02  
V01-01

OWNER: TENNESSEE VALLEY AUTHORITY  
NUCLEAR POWER GROUP  
1101 MARKET STREET  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO CYCLE: 12

PLANT: BROWNS FERRY NUCLEAR PLANT

PO BOX 2000  
DECATUR, ALABAMA 35609-2000

COMMERCIAL SERVICE DATE: MARCH 1, 1977

CERTIFICATION OF AUTHORIZATION: NOT REQUIRED  
NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED

System	Component Number	ISO Drawing	Exam Requirement	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
CSS	DCS-2-07	2-ISI-0271-C-01	B02-02	C	NU0313	UT	WB-83	20030304	R-127	P	
CSS	DCS-2-13A	2-ISI-0271-C-01	B02-02	C	NU0313	UT	WB-83	20030306	R-139	P	
CSS	DSCS-2-01	2-ISI-0271-C-01	B02-02	C	NU0313	UT	WB-83	20030227	R-075	P	
CSS	DSCS-2-02	2-ISI-0271-C-01	B02-02	C	NU0313	UT	WB-83	20030226	R-070	P	
CSS	TCS-2-407	2-ISI-0271-C-01	B04-02	B-J	TS3432	UT	WB-79	20030304	R-126	P	
FWS	GFW-2-15	2-ISI-0269-C-01	B04-02	B-J	TS3432	UT	WB-80	20030301	R-100	P	
FWS	KFW-2-38	2-ISI-0269-C-01	B04-02	B-J	TS3432	UT	WB-79	20030301	R-094	P	
FWS	KFW-2-39	2-ISI-0269-C-01	B04-02	B-J	TS3432	UT	WB-80	20030301	R-101	P	
HPCIS	THPCI-2-072	2-ISI-0273-C-01	B04-02	B-J	TS3432	UT	BF-50	20030304	R-123	P	
MSS	2-47B400S0098	2-ISI-0279-C-02	V01-02	F-A	F1.10D	VT-3		20030307	R-140	P	Voluntary exam for Civil Engr. VT-3 for support pin to pin. Perform VT-1 for IA 2-47B400S0098-IA per Civil Engr. request.
MSS	2-47B400S0098-IA	2-ISI-0279-C-02	V01-02	B-K	B10.20	VT-1		20030307	R-140	P	Voluntary exam for Civil Engr. Also performed a VT-3 on support 2-47B400S0098 pin to pin exam.
MSS	GMS-2-24	2-ISI-0222-C-02	B04-02	B-J	TS3432	UT	WB-80	20030227	R-076	P	
MSS	GMS-2-32	2-ISI-0222-C-01	B04-02	B-J	TS3432	UT	WB-80	20030228	R-088	P	
RECIR	KR-2-24	2-ISI-0270-C-02	B02-02	C	NU0313	UT	WB-83	20030225	R-064	P	
RECIR	KR-2-25	2-ISI-0270-C-02	B02-02	C	NU0313	UT	WB-83	20030226	R-066	P	
RECIR	KR-2-45	2-ISI-0270-C-01	B02-02	C	NU0313	UT	WB-83	20030228	R-087	P	
RHRS	DRHR-2-03B	2-ISI-0221-C-01	B02-02	G	NU0313	VT-2		20030313	R-158	P	
RHRS	DRHR-2-13B	2-ISI-0221-C-01	B02-02	G	NU0313	VT-2		20030313	R-158	P	
RHRS	DSRHR-2-07	2-ISI-0221-C-01	B04-02	B-J	TS3432	UT	WB-83	20030302	R-111	P	
RHRS	DSRHR-2-07	2-ISI-0221-C-01	B02-02	C	NU0313	UT	WB-83	20030302	R-111	P	

## EXAM REQUIREMENT

0T1365  
B01-02  
B02-02  
B04-02  
B07-02  
V01-01

OWNER: TENNESSEE VALLEY AUTHORITY  
NUCLEAR POWER GROUP  
1101 MARKET STREET  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO CYCLE: 12

COMMERCIAL SERVICE DATE: MARCH 1, 1977

## PLANT: BROWNS FERRY NUCLEAR PLANT

PO BOX 2000  
DECATUR, ALABAMA 35609-2000

CERTIFICATION OF AUTHORIZATION: NOT REQUIRED  
NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED

System	Component Number	ISO Drawing	Exam Requirement	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
RHRS	FCV-74-47	2-ISI-0221-C-01	V01-02	B-M-2	B12.50	VT-3		20030306	R-138	P	Voluntary VT-3 of new wedge after machining. Reference Report # R-118.
RHRS	FCV-74-47	2-ISI-0221-C-01	V01-02	B-M-2	B12.50	VT-3		20030303	R-118	P	voluntary VT-3 of smart stem and wedge. Reference Report # R-138.
RPV	N-16A-SE	2-ISI-0383-C-01	B07-02	BWRVIP-49	N/A	VT-2		20030313	R-158	P	
RPV	N-16B-SE	2-ISI-0383-C-02	B07-02	BWRVIP-49	N/A	VT-2		20030313	R-158	P	
RPV	N10-SE	2-ISI-0380-C-01	B07-02	BWRVIP-27	N/A	VT-2		20030313	R-158	P	
RPV	N11A-SE	2-ISI-0383-C-01	B07-02	BWRVIP-49	N/A	VT-2		20030313	R-158	P	
RPV	N11B-SE	2-ISI-0383-C-02	B07-02	BWRVIP-49	N/A	VT-2		20030313	R-158	P	
RPV	N12A-SE	2-ISI-0383-C-01	B07-02	BWRVIP-49	N/A	VT-2		20030313	R-158	P	
RPV	N12B-SE	2-ISI-0383-C-02	B07-02	BWRVIP-49	N/A	VT-2		20030313	R-158	P	
RPV	N4A-FW-SPARG	2-CHM-2046-C-02	B01-02	NU0619	N/A	VT-1		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00.
RPV	N4A-IR/NB	2-ISI-0277-C-01	B01-02	B-D	NU0619	UT	BF-18	20030302	R-141	P	Exam performed by Framatome
RPV	N4B-FW-SPARG	2-CHM-2046-C-02	B01-02	NU0619	N/A	VT-1		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00.
RPV	N4B-IR/NB	2-ISI-0277-C-01	B01-02	B-D	NU0619	UT	BF-18	20030304	R-142	P	Exam performed by Framatome
RPV	N4C-FW-SPARG	2-CHM-2046-C-02	B01-02	NU0619	N/A	VT-1		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00.
RPV	N4C-IR/NB	2-ISI-0277-C-01	B01-02	B-D	NU0619	UT	BF-18	20030301	R-143	P	Exam performed by Framatome
RPV	N4D-FW-SPARG	2-CHM-2046-C-02	B01-02	NU0619	N/A	VT-1		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00.
RPV	N4D-IR/NB	2-ISI-0277-C-01	B01-02	B-D	NU0619	UT	BF-18	20030304	R-144	P	Exam performed by Framatome
RPV	N4E-FW-SPARG	2-CHM-2046-C-02	B01-02	NU0619	N/A	VT-1		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00.
RPV	N4E-IR/NB	2-ISI-0277-C-01	B01-02	B-D	NU0619	UT	BF-18	20030302	R-145	P	Exam performed by Framatome
RPV	N4F-FW-SPARG	2-CHM-2046-C-02	B01-02	NU0619	N/A	VT-1		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00.
RPV	N4F-IR/NB	2-ISI-0277-C-01	B01-02	B-D	NU0619	UT	BF-18	20030304	R-146	P	Exam performed by Framatome

**EXAM REQUIREMENT**  
 0TI365  
 B01-02  
 B02-02  
 B04-02  
 B07-02  
 V01-01

**OWNER: TENNESSEE VALLEY AUTHORITY**  
**NUCLEAR POWER GROUP**  
**1101 MARKET STREET**  
**CHATTANOOGA, TENNESSEE 37402**

**UNIT: TWO CYCLE: 12**

**PLANT: BROWNS FERRY NUCLEAR PLANT**  
**PO BOX 2000**  
**DECATUR, ALABAMA 35609-2000**

**CERTIFICATION OF AUTHORIZATION: NOT REQUIRED**  
**NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED**

**COMMERCIAL SERVICE DATE: MARCH 1, 1977**

System	Component Number	ISO Drawing	Exam Requirement	Category	Item Number	Exam Scheduled	Calibration Standard	Exam Date	Exam Report	Exam Results	Comments
RPV	RPV CORE PLATE	2-CHM-2046-C-02	0TI365	N/A	N/A	VT-3		20030309	R-169	P	VENDOR PROCEDURE 54-ISI-363-00.
RPV	RPV CS PIPING	2-CHM-2046-C-02	0TI365	N/A	N/A	EVT		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00. CS PIPING, PIPING WELDS, T-BOX
RPV	RPV CS PIPING	2-CHM-2046-C-02	0TI365	N/A	N/A	VT-1		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00. CS SPARGER PIPING AND WELDS AND SPARGER BRACKET WELDS.
RPV	RPV JET PUMPS	2-CHM-2046-C-02	0TI365	N/A	N/A	EVT		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00. Reference Report # R-169 and BFN PER 03-004060-000 Jet Pump # 16 acceptable for one more cycle.
RPV	RPV JET PUMPS	2-CHM-2046-C-02	0TI365	N/A	N/A	VT-1		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00. Jet Pump # 4, 7, 13, 14, 17, and 20 show wear in the wedge assembly between the wedge and restrainer bracket.
RPV	RPV JET PUMPS	2-CHM-2046-C-02	0TI365	N/A	N/A	VT-3		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00. ANNULUS DEBRIS INSPECTION.
RPV	RPV STEAM DRYER	2-CHM-2046-C-02	0TI365	N/A	N/A	EVT		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00. MAN HOLE COVERS @ 90 Degrees and 270 Degrees.
RPV	RPV TOP GUIDE	2-CHM-2046-C-02	0TI365	N/A	N/A	EVT		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00.
RPV	RPV TOP GUIDE	2-CHM-2046-C-02	0TI365	N/A	N/A	VT-1		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00.
RPV	RPV TOP GUIDE	2-CHM-2046-C-02	0TI365	N/A	N/A	VT-3		20030307	R-169	P	VENDOR PROCEDURE 54-ISI-363-00. DEBRIS INSPECTION OF TOP GUIDE AREA.
RWCU	DSRWC-2-06	2-ISI-0272-C-01	B04-02	B-J	TS3432	UT	WB-83	20030302	R-109	P	
RWCU	DSRWC-2-06	2-ISI-0272-C-01	B02-02	C	NU0313	UT	WB-83	20030302	R-109	P	



OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35602
--	--

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## **ATTACHMENT 2**

### **IWE-BFN CONTAINMENT INSERVICE INSPECTION (CISI)** **PROGRAM**

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                      DECATUR, ALABAMA 35602  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

**BFN CONTAINMENT INSERVICE INSPECTION (CISI) PROGRAM U2C12 REFUELING OUTAGE  
SUMMARY REPORT**

Unit: BFN Unit 2  
Refueling Outage: U2C12  
Period/Interval: Second Period of the First Interval  
Code of Record: ASME Section XI, 1992 Edition/1992 Addenda  
Program Procedure: O-TI-376, Revision 3

**Summary of Examinations**

The records contained within the U2C12 Site Final Report comprise the Containment Inservice examinations performed to implement the requirements of ASME Section XI, Subsection IWE. The examinations are summarized as follows:

**Table IWE-2500-1, Examination Category E-A, Containment Surfaces**

The General Visual Examination of accessible containment surfaces was completed during U2C12. This examination was performed by procedure 2-TI-173; a copy of the examination is incorporated in the Site Final Report. This completes all examinations required by Code Category E-A Item Number E1.11 for the Second Period. Visual examination of the drywell liner below the Moisture Seal Barrier (MSB) was performed in areas where the MSB was excavated for replacement.

**Table IWE-2500-1, Examination Category E-C, Containment Surfaces Requiring Augmented Examination**

During U2C12, 100% of the Pressure Suppression Chamber exterior air/water interface area was examined. The air/water interface is the only area currently identified as an augmented area for BFN Unit 2. This completes 50% of the examinations required by Code Category E-C Item Number E4.11 for the Second Period.

**Table IWE-2500-1, Examination Category E-D, Seals, Gaskets, and Moisture Barriers**

No examinations were performed in this category.

**Table IWE-2500-1, Examination Category E-G, Pressure Retaining Bolting**

No examinations were performed in this category.

**Table IWE-2500-1, Examination Category E-P, Seals, Gaskets, and Moisture Barriers**

Appendix J testing was performed in accordance with the Containment Leak Rate Program. A VT-1 pre-service examination was performed for replaced bolting materials.

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                      DECATUR, ALABAMA 35602  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

## **BFN CONTAINMENT INSERVICE INSPECTION PROGRAM**

### **ASME SECTION XI SUBSECTION IWE**

The information contained in this Appendix is provided in accordance with the requirements of 10CFR 50.55a(b)(2)(ix)(A), evaluation of inaccessible areas, and 10CFR 50.55a(b)(2)(ix)(D), evaluation for additional examinations, as they pertain to containment inservice examinations performed during the BFN Unit 2 Cycle 12 refueling outage.

The subject examinations were performed in accordance with ASME Section XI Subsection IWE, 1992 Edition/1992 Addenda. BFN Unit 2 is in the second period of the first examination interval.

Report No:    CISI-212-015  
                  CISI-212-016

Component: Drywell Liner Below Moisture  
Seal Barrier

**Condition/Indication:** Discoloration, pitting, surface discontinuities, corrosion.

### **EVALUATION OF INACCESSIBLE AREAS 10CFR 50.55a(b)(2)(ix)(A)**

- (1) **Description of the type and estimated extent of degradation, and the conditions that led to the degradation:**

NOI U2C12-003 documents indication noted during a VT-3 examination of the steel containment vessel in areas where the moisture seal barrier was excavated for replacement. This examination was performed to determine the condition of this normally inaccessible area.

- (2) **Evaluation of each area, and the result of the evaluation:**

The subject indications have been evaluated to be acceptable. There is no degradation which affects the structural integrity or containment function of the steel containment vessel.

- (3) **Description of necessary corrective actions:**

The conditions noted are expected conditions with respect to the age and service conditions of the component. The moisture seal barrier has been examined and defective portions replaced. Therefore, no adverse condition exists that may be present in inaccessible areas.

### **ADDITIONAL EXAMINATIONS 10CFR 50.55a(b)(2)(ix)(D)**

- (1) **Description of each flaw or area, including the extent of degradation, and the conditions that led to the degradation:**

OWNER: TENNESSEE VALLEY AUTHORITY    PLANT: BROWNS FERRY NUCLEAR PLANT  
OFFICE OF NUCLEAR POWER                      P.O. BOX 2000  
1101 MARKET STREET                              DECATUR, ALABAMA 35602  
CHATTANOOGA, TENNESSEE 37402

UNIT: TWO                      CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

NOI U2C12-003 documents indication noted during a VT-3 examination of the steel containment vessel in areas where the moisture seal barrier was excavated for replacement. This examination was performed to determine the condition of this normally inaccessible area.

**(2) The acceptability of each flaw or area, and the need for additional examinations to verify that similar degradation does not exist in similar components:**

The subject indications have been evaluated to be acceptable. There is no degradation which affects the structural integrity or containment function of the steel containment vessel.

**(3) A description of the necessary corrective actions:**

The condition documented is not considered to be a defective condition with respect to the containment vessel. The condition of moisture intrusion into this area is being corrected by repair of the moisture seal barrier.

**(4) The number and type of additional examinations to ensure detection of similar degradation in similar components:**

The condition of moisture intrusion into this area is being corrected by repair of the moisture seal barrier. Therefore, additional exams are not warranted.

Report No: CISI-212-007, CISI-212-008,                      Component: Drywell Liner Interior Surface  
CISI-212-009, CISI-212-010, CISI-212-011,  
CISI-212-012, CISI-212-013, CISI-212-014.

Condition/Indication: Blistering, peeling, and mechanical damage.

#### **EVALUATION OF INACCESSIBLE AREAS 10CFR50.55a(b)(2)(ix)(A)**

**(1) Description of the type and estimated extent of degradation, and the conditions that led to the degradation:**

NOI-U2C12-007 documents the indications noted during VT-3 examination of the containment vessel surface in areas identified for coating removal. The indications noted consist of areas of coating delamination, peeling, and mechanical damage of the applied coating. These examinations were performed to satisfy the requirements of IWE 2500 (b), examination of coatings prior to removal.

**(2) Evaluation of each area, and the result of the evaluation:**

The exposed liner surface in these areas was inspected after coating removal and is in good condition with no reportable conditions. There is no degradation that affects the structural integrity or leak tightness of the containment vessel.

**(3) Description of necessary corrective actions:**

There is no degradation that affects the structural integrity or leak tightness of the containment vessel. The conditions are expected conditions based on age and service condition of the component. Therefore, no adverse condition exists that may be present in inaccessible areas.

OWNER: TENNESSEE VALLEY AUTHORITY OFFICE OF NUCLEAR POWER 1101 MARKET STREET CHATTANOOGA, TENNESSEE 37402	PLANT: BROWNS FERRY NUCLEAR PLANT P.O. BOX 2000 DECATUR, ALABAMA 35602
--	--

UNIT: TWO CERTIFICATE OF AUTHORIZATION: NOT REQUIRED.

COMMERCIAL SERVICE DATE: MARCH 1, 1975

NATIONAL BOARD NUMBER FOR UNIT: NOT REQUIRED.

**ADDITIONAL EXAMINATIONS 10CFR 50.55a(b)(2)(ix)(D)**

- (1) Description of each flaw or area, including the extent of degradation, and the conditions that led to the degradation:**

NOI-U2C12-007 documents the indications noted during VT-3 examination of the containment vessel surface I areas identified for coating removal. The indications noted consist of areas of coating delamination, peeling, and mechanical damage of the applied coating. These examinations were performed to satisfy the requirements of IWE 2500 (b), examination of coatings prior to removal.

- (2) The acceptability of each flaw or area, and the need for additional examinations to verify that similar degradation does not exist in similar components:**

There is no degradation that affects the structural integrity or leak tightness of the containment vessel. The conditions are expected conditions based on age and service condition of the component.

- (3) A description of the necessary corrective actions:**

Areas of coating failure (e.g. delamination, peeling, etc.) were scraped back until proper coating adhesion (sound coating) was obtained. In areas where the topcoat has been scraped back to sound coating, the zinc primer is intact and will provide corrosion protection for the primary containment boundary. Re-coating will be done in accordance with MAI-5.3 during future outage maintenance work.

- (4) The number and type of additional examinations to ensure detection of similar degradation in similar components:**

The condition noted is not considered a defective condition with respect to the containment vessel. The condition has been addressed by removal of the coating and examination of the liner in the affected areas. Therefore, additional examinations are not warranted.

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNIT 2  
AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME),  
SECTION XI, THIRD TEN-YEAR INSPECTION INTERVAL

REPAIR AND REPLACEMENTS PROGRAM

SUMMARY REPORT (NIS-2) FOR UNIT 2 CYCLE 12 OPERATION

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(SEE ATTACHED)

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**BROWNS FERRY**

**NUCLEAR PLANT**

**UNIT 2 CYCLE 12**

**ASME SECTION XI**

**NIS-2**

**OWNER'S SUMMARY REPORT**

## **OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**

**APPENDIX I** \_\_\_\_\_ **Summary of Repair and  
Replacement Activities**

**APPENDIX II** \_\_\_\_\_ **Form NIS-2 Owner's Report  
For Repairs or Replacements**



Owner: **TENNESSEE VALLEY AUTHORITY**  
1101 Market Street  
Chattanooga, TN 37402-2801

Plant: **Browns Ferry Nuclear Plant**  
P. O. Box 2000  
Decatur, AL 35609-2000

Unit: **Two**

Certificate of Authorization: **Not Required**

Commercial Service Date: **March 1, 1975**

National Board Number for Unit: **Not Required**

## **APPENDIX I**

### **SUMMARY OF REPAIR AND REPLACEMENT ACTIVITIES**

Owner: TENNESSEE VALLEY AUTHORITY  
1101 Market Street  
Chattanooga, TN 37402-2801

Plant: Browns Ferry Nuclear Plant  
P. O. Box 2000  
Decatur, AL 35609-2000

Unit: Two

Certificate of Authorization: Not Required

Commercial Service Date: March 1, 1975

National Board Number for Unit: Not Required

<u>WID</u>	<u>SYS</u>	<u>ORG</u>	<u>CLASS</u>	<u>ACTIVITY</u>
01-004322-000	74	MAINT	2	REPLACEMENT
01-012367-000	69	MAINT	1	REPAIR
02-010882-000 through 02-010882-011	85	MAINT	1	REPLACEMENT
03-004126-000	1	MAINT	1	REPLACEMENT
00-005306-000 02-006771-000 02-007272-000	3	MAINT	1	REPLACEMENT
03-003454-000	73	MAINT	1	REPLACEMENT
03-004119-000	74	MAINT	1	REPLACEMENT
03-002011-000 03-002012-000 03-006052-000	85	MAINT	2	REPLACEMENT
02-004844-000 02-010075-000	1	MAINT	2	REPLACEMENT
03-001972-000 03-003606-000	1	MAINT	2	REPLACEMENT
02-004442-000	1	MAINT	2	REPLACEMENT
02-006492-000	1	MAINT	1	REPLACEMENT
99-013131-000	74	MAINT	1	REPLACEMENT
DCN T40978A 98-014823-000	77	TVA	2	REPLACEMENT
DCN 51246A 02-006939-000 02-006939-001 02-006939-001	68	TVA	1	REPLACEMENT
DCN 51308A 02-009276-000	68	TVA	1	REPLACEMENT
DCN 50879A 02-009284-002 02-009284-003 02-009284-009	85	TVA	2	REPLACEMENT

**Owner:** TENNESSEE VALLEY AUTHORITY  
1101 Market Street  
Chattanooga, TN 37402-2801

**Plant:** Browns Ferry Nuclear Plant  
P. O. Box 2000  
Decatur, AL 35609-2000

**Unit:** Two

**Certificate of Authorization:** Not Required

**Commercial Service Date:** March 1, 1975

**National Board Number for Unit:** Not Required

## LEGEND

### **WID - Work Implementing Document**

**Example:** A99999 refers to a Design Change Notice  
99-999999-999 refers to a Work Order

### **SYS- System**

- |  |                                      |
|--|--------------------------------------|
| 1 - Main Steam                             | 69 - Reactor Water Cleanup           |
| 3 - Reactor Feedwater                      | 71 - Reactor Core Isolation Cooling  |
| 8 - Turbine Drains                         | 73 - High Pressure Coolant Injection |
| 10 - Reactor Drains, Vents<br>and Blowdown | 74 - Residual Heat Removal           |
| 12 - Auxiliary Boiler                      | 75 - Core Spray                      |
| 63 - Standby Liquid Control                | 77 - Radwaste                        |
| 68 - Reactor Water Recirculation           | 85 - Control Rod Drive               |
|  | 92 - Neutron Monitoring              |

### **ORG - Organization which performed the WID**

**MAINT** - TVA's Maintenance Organization

**GE** - General Electric Company

**TVA** - Work performed by Stone and Webster Engineering Corporation  
utilizing TVA's Quality Assurance Program and procedures

### **CLASS - Refers to ASME Code Class 1 or 2**

### **ACTIVITY - Classifies work activity as being repair or replacement**

Owner: **TENNESSEE VALLEY AUTHORITY**  
1101 Market Street  
Chattanooga, TN 37402-2801

Plant: **Browns Ferry Nuclear Plant**  
P. O. Box 2000  
Decatur, AL 35609-2000

Unit: **Two**

Certificate of Authorization: **Not Required**

Commercial Service Date: **March 1, 1975**

National Board Number for Unit: **Not Required**

## **APPENDIX II**

### **FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

1. Owner Tennessee Valley Authority (TVA) Date October 26, 2001  
1101 Market Street Name  
Chattanooga, TN 37402-2801 Address  
 Sheet 1 of 1
2. Plant Browns Ferry Nuclear Plant (BFN) Unit 2  
P. O. Box 2000, Decatur, AL 35609-2000 Name  
 Address Work Order (WO) 01-004322-000  
 Repair/Replacement Organization P.O. No., Job No., etc.
3. Work Performed by TVA-BFN Type Code Symbol Stamp N/A  
P. O. Box 2000, Decatur, AL 35609-2000 Name  
 Address Authorization No. N/A  
 Expiration Date N/A
4. Identification of System System 074, Residual Heat Removal (RHR) System (ASME Code Class 2 equivalent)
5. (a) Applicable Construction Code USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

## 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
RHR PUMP B DISCH CHECK VLV	Wm. Powell Co. 3061AWE	N/A	N/A	2-FCV-074-0559B	N/A	.	No
* - replaced valve disc							
Valve disc	Wm. Powell Co.	N/A	N/A	2-FCV-074-0559B	N/A	replaced	No
Valve disc	Wm. Powell Co.	N/A	N/A	2-FCV-074-0559B	1976	replacement	No

7. Description of Work Replaced valve disc.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐  
 Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in Contracts 75P52-49395 & 68C37-91062, Design Criteria BFN-50-7074 & BFN-50-C-7105,

## FORM NIS-2 (Back)

9. Remarks Replaced valve disc.

Applicable Manufacturer's Data Reports to be attached

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed

Stephen C. Wilford  
Owner or Owner's Designee, Title

System Engineer

Date

11/5

, 20 01

### 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 TENNESSEE and employed by HSA CT of HARTFORD, CT have inspected the components described in this Owner's Report during the period 4.27.01 to 4.30.01, 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.

Albert Ladd  
Inspector's Signature

Commissions

TN 3135

A B I N NS

National Board, State, Province, and Endorsements

Date

May 27 2003

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

1. Owner Tennessee Valley Authority (TVA) Date October 26, 2002  
Name  
1101 Market Street  
Address  
Chattanooga, TN 37402-2801  
Address
2. Plant Browns Ferry Nuclear Plant (BFN) Unit 2  
Name  
P. O. Box 2000, Decatur, AL 35609-2000  
Address Work Order (WO) 01-012367-000  
Repair/Replacement Organization P.O. No., Job No., etc.
3. Work Performed by TVA-BFN Type Code Symbol Stamp N/A  
Name  
P. O. Box 2000, Decatur, AL 35609-2000  
Address Authorization No. N/A  
Expiration Date N/A
4. Identification of System System 069, Reactor Water Cleanup (RWCU) System (ASME Code Class 1 equivalent)
5. (a) Applicable Construction Code USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

## 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
RWCU pipe weld	TVA	N/A	N/A	RWCU-2-3-41	N/A	Corrected	No

7. Description of Work Repaired weld.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ \* Exempt ☐ \* - Code Case N-416-1  
Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in Contract 117240, Design Criteria BFN-50-7069 & BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks Repaired weld. Reference Code Case N-416-1.

Applicable Manufacturer's Data Reports to be attached

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed

Stephen C. Williams  
Owner or Owner's Designee, Title

System Engineer

Date

5/13, 20 03

### 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 Tennessee and employed by HSB CT of Connecticut have inspected the components described

in this Owner's Report during the period 12.5.2001 to 12.8.2001, 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.

Albert Ladd  
Inspector's Signature

Commissions

TN 3135

A B I N NS  
National Board, State, Province, and Endorsements

Date

May 28 2003



# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

## As Required by the Provisions of the ASME Code Section XI

1. Owner Tennessee Valley Authority (TVA) Date April 29, 2003  
Name  
1101 Market Street  
Address  
Chattanooga, TN 37402-2801
2. Plant Browns Ferry Nuclear Plant (BFN) Unit 2  
Name  
P. O. Box 2000, Decatur, AL 35609-2000  
Address  
 Work Orders (WO) 02-010882-000 through 02-010882-011,  
Design Change Notice (DCN) S18883A  
Repair/Replacement Organization P.O. No., Job No., etc.
3. Work Performed by TVA-BFN Type Code Symbol Stamp N/A  
Name  
P. O. Box 2000, Decatur, AL 35609-2000  
Address  
 Authorization No. N/A  
 Expiration Date N/A
4. Identification of System System 085, Control Rod Drive (CRD) System (ASME Code Class 1 equivalent)
5. (a) Applicable Construction Code ASME Section III 19 74 Edition, Winter 1975 Addenda, N207 1361-2 Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

### 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Control Rod Drive Mechanism 42-23	General Electric Nuclear Energy	A5439	N/A	2-CRDM-085-42-23	1996	Removed	Yes
Control Rod Drive Mechanism 42-23	General Electric Nuclear Energy	A3421	N/A	2-CRDM-085-42-23	1996	Installed	Yes
Control Rod Drive Mechanism 02-23	General Electric Nuclear Energy	A5068	N/A	2-CRDM-085-02-23	1996	Removed	Yes
Control Rod Drive Mechanism 02-23	General Electric Nuclear Energy	A2120	N/A	2-CRDM-085-02-23	1996	Installed	Yes
Control Rod Drive Mechanism 02-31	General Electric Nuclear Energy	A4419	N/A	2-CRDM-085-02-31	1996	Removed	Yes
Control Rod Drive Mechanism 02-31	General Electric Nuclear Energy	A3469	N/A	2-CRDM-085-02-31	1996	Installed	Yes

Identification of Components continued on Page 2

7. Description of Work Replaced 12 Control Rod Drives (CRD) with new BWR/6 CRDs.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐  
 Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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 12 Control Rod Drives (CRD) with new BWR/6 CRDs under the following WOs. The N-2 data reports are attached.

Applicable Manufacturer's Data Reports to be attached

WO 02-010882-000 2-CRDM-085-42-23

WO 02-010882-001 2-CRDM-085-02-23

WO 02-010882-002 2-CRDM-085-02-31

WO 02-010882-003 2-CRDM-085-06-27

WO 02-010882-004 2-CRDM-085-14-15

WO 02-010882-005 2-CRDM-085-22-51

WO 02-010882-006 2-CRDM-085-30-07

WO 02-010882-007 2-CRDM-085-34-23

WO 02-010882-008 2-CRDM-085-42-27

WO 02-010882-009 2-CRDM-085-42-39

WO 02-010882-010 2-CRDM-085-46-19

WO 02-010882-011 2-CRDM-085-46-47

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed Stephen C. Willard, System Engineer  
Owner or Owner's Designee, Title

Date 5/5, 20 03

### 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 of Tennessee or Province of Connecticut and employed by HSB CT of Connecticut

have inspected the components described in this Owner's Report during the period 11-6-2002 to 3-24-2003, 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.

Albert Tash  
Inspector's Signature

Commissions TN 3132 "A" "B" "TN" "NS"  
National Board, State, Province, and Endorsements

Date May 14 2003

# FORM NIS-2 OWNER'S REPORT FOR REPAIRS/REPLACEMENT ACTIVITY SUPPLEMENTAL SHEET

1. Owner Tennessee Valley Authority (TVA) Date April 29, 2003  
1101 Market Street Name  
Chattanooga, TN 37402-2801 Address
2. Plant Browns Ferry Nuclear Plant (BFN) Sheet 2 of 2  
P. O. Box 2000, Decatur, AL 35609-2000 Name Unit 2  
P. O. Box 2000, Decatur, AL 35609-2000 Address
3. Work Performed by TVA-BFN Design Change Notice (DCN) S18883A,  
P. O. Box 2000, Decatur, AL 35609-2000 Name Work Orders (WO) 02-010882-000 through 02-010882-011  
P. O. Box 2000, Decatur, AL 35609-2000 Address Repair/Replacement Organization P.O. No., Job No., etc.  
Type Code Symbol Stamp N/A  
Authorization No. N/A  
Expiration Date N/A
4. Identification of System System 085, Control Rod Drive System (ASME Code Class 1 equivalent)
5. (a) Applicable Construction Code ASME Section III 19 74 Edition, Winter 1975 Addenda, N207 1361-2 Code Case  
Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95, 1996 Addenda
6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Control Rod Drive Mechanism 06-27	General Electric Nuclear Energy	A4276	N/A	2-CRDM-085-06-27	1996	Removed	Yes
Control Rod Drive Mechanism 06-27	General Electric Nuclear Energy	A3989	N/A	2-CRDM-085-06-27	1996	Installed	Yes
Control Rod Drive Mechanism 14-15	General Electric Nuclear Energy	A5424	N/A	2-CRDM-085-14-15	1996	Removed	Yes
Control Rod Drive Mechanism 14-15	General Electric Nuclear Energy	A5239	N/A	2-CRDM-085-14-15	1996	Installed	Yes
Control Rod Drive Mechanism 22-51	General Electric Nuclear Energy	A4239	N/A	2-CRDM-085-22-51	1996	Removed	Yes
Control Rod Drive Mechanism 22-51	General Electric Nuclear Energy	A4207	N/A	2-CRDM-085-22-51	1996	Installed	Yes
Control Rod Drive Mechanism 30-07	General Electric Nuclear Energy	A5300	N/A	2-CRDM-085-30-07	1996	Removed	Yes
Control Rod Drive Mechanism 30-07	General Electric Nuclear Energy	A3135	N/A	2-CRDM-085-30-07	1996	Installed	Yes
Control Rod Drive Mechanism 34-23	General Electric Nuclear Energy	A4690	N/A	2-CRDM-085-34-23	1996	Removed	Yes
Control Rod Drive Mechanism 34-23	General Electric Nuclear Energy	A4055	N/A	2-CRDM-085-34-23	1996	Installed	Yes
Control Rod Drive Mechanism 42-27	General Electric Nuclear Energy	A4425	N/A	2-CRDM-085-42-27	1996	Removed	Yes
Control Rod Drive Mechanism 42-27	General Electric Nuclear Energy	A4274	N/A	2-CRDM-085-42-27	1996	Installed	Yes
Control Rod Drive Mechanism 42-39	General Electric Nuclear Energy	A4683	N/A	2-CRDM-085-42-39	1996	Removed	Yes
Control Rod Drive Mechanism 42-39	General Electric Nuclear Energy	A4421	N/A	2-CRDM-085-42-39	1996	Installed	Yes
Control Rod Drive Mechanism 46-19	General Electric Nuclear Energy	A3828	N/A	2-CRDM-085-46-19	1996	Removed	Yes
Control Rod Drive Mechanism 46-19	General Electric Nuclear Energy	A3394	N/A	2-CRDM-085-46-19	1996	Installed	Yes
Control Rod Drive Mechanism 46-47	General Electric Nuclear Energy	A3806	N/A	2-CRDM-085-46-47	1996	Removed	Yes
Control Rod Drive Mechanism 46-47	General Electric Nuclear Energy	A3224	N/A	2-CRDM-085-46-47	1996	Installed	Yes

7. Description of Work Replaced 12 Control Rod Drives (CRD) with new BWR/6 CRDs.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐  
Other ☐ Pressure N/A psi Test Temp. N/A °F

H 58-CT  
5/14/03

**FORM NIS-2, SUPPLEMENTAL SHEET (Back)**

Remarks See back of sheet 1.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

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. 1

Manufactured & Certified by General Electric Company Nuclear Energy (GE-NE) **601667**  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
(Name and Address of NPT Certificate Holder)  
(b) Manufactured for TVA DECATUR, AL 35609-2000  
(Name and Address of R Certificate Holder for completed nuclear component)  
(c) Identification - Certificate Holder's S/N of Part A3421 Nat'l Bd. No. N/A  
(d) Constructed According to Drawing No. 768E534G008 Rev 9 Drawn By D. L. Fennerson  
(e) Description of Part Inspected Control Rod Drive, Model # 7AD6144FG005  
(f) Applicable ASME Code Section III, Edition 1974, Addenda Code W75, Case No. N207 1361.2 Class 1  
(g) Standard part for use with Reactor. Hydrostatically tested at 1925 ps. 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 Design Specification 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 10/08/96 Signed GE-NE By [Signature]  
(NPT Certificate Holder) (SC CA Representative)

Certificate of Authorization Expires 6/16/99 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 Rev 2  
Design specification certified by B.N. Sridhar Prof. Eng. State Calif. Reg. No. 18345

DC22A6254 Rev 1  
Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Eng. No. MD16646

**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 SLY, 1996 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.

1/8, 1996 [Signature] NC 1231, Ohio, W.C. 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".

(17/96)

## FORM M-2 ( back )

001668

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. \_\_\_\_\_  
(Ref. & Spec. No.) (Min. or 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.E. 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 <sup>2</sup> \_\_\_\_\_ psi at \_\_\_\_\_ ° F or temp of \_\_\_\_\_ ° F

Items 9 and 10 to be completed for tube sections

9. Tube Sheets: Stationary. Material \_\_\_\_\_ Dia. \_\_\_\_\_ Thickness \_\_\_\_\_ in. Attachment \_\_\_\_\_  
(Ref. & 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. \_\_\_\_\_  
(Ref. & Spec. No.) (Min. or 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 <sup>2</sup> \_\_\_\_\_ 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 (Vent, 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 corresponding temperature when applicable.



001394

**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. 1

1. Manufactured & Certified by: General Electric Company Nuclear Energy (GE-NE)  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for: TY6 DECATUR AL 35609-2000  
(Name and Address of Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part: A2120 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 768E534G008 Rev 9 Dwg. Prepared by D.L. Peterson
- (b) Description of Part Inspected: Control Rod Drive Model # 7RDB144FG005
- (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N297 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 10/08/96 Signed GE-NE By [Signature]  
(NPT Certificate Holder) (SC QA Representative)

Certificate of Authorization Expires: 6/16/99 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. 2  
Design specification certified by B.N. Sridhar Prof. Eng. State Calif. Reg. No. 18345

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 5/7, 1996 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.

Date 10/8, 1996 Inspector's Signature [Signature] National Board, State, Province And No. NC 1231, Ohio, WC 3686 PA

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".

(07/98)



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 Energy (GE-NE)

3801 Castle Home Road, Wilmington, North Carolina 28401

( Same and Address of NPT Certificate Holder )

001395

(b) Manufactured for : TVA DECATUR AL 35809-2000

( Same as Address of N Certificate Holder for completed nuclear component )

2 Identification - Certificate Holder: 1/8 of Part : A2120 Part Bd. No. N/A

(a) Constructed According to Drawin. No. 768E534G008 Rev. 9 Des. Prepared by D.L. Peterson

(b) Description of Part Inspected: Control Rod Drive, Model # 78DB144FG005

(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 2 of 2

1. Cap 186B8274P001  
SA182 - F316  
3/8" thick x 1 1/16" OD

2. Indicator Tube 186B9313P001  
SA312 - TP316  
3/4" sch 40 - seamless pipe  
0.113" wall thickness  
1.065" max. dia.

3. Plug 158A1178P001  
SA182 - F304  
1/4" thick x 0.812" OD

4. Flange 819D610P001 ( 719E474 )  
SA182 - F304  
3.37" thick x 8 5/8" OD

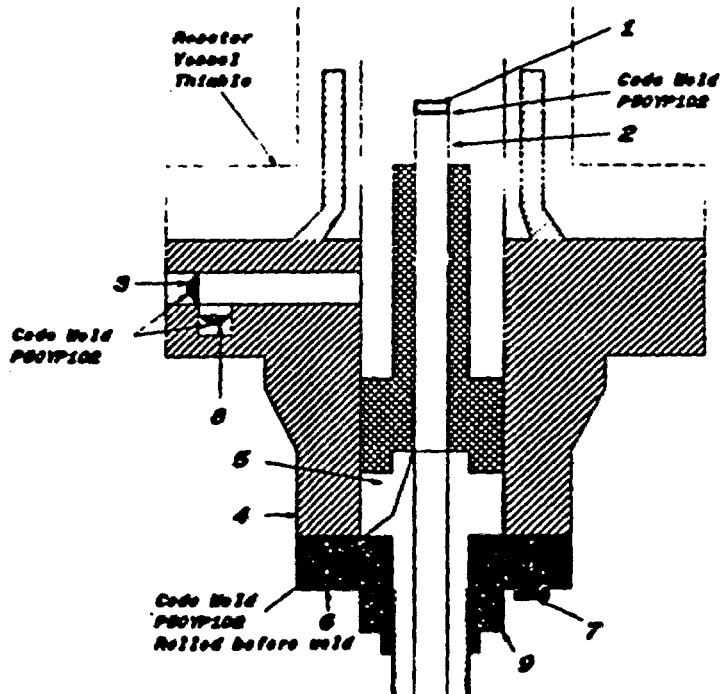
5. Base 137C5311P001  
SA182 - F304  
7/8" thick x 2.875" dia.

6. Ring Flange 114B5122P002, P003  
137C8151P001, P002  
SA182 - F304  
1" thick x 5.8" OD x 1.75" ID

7. Cap Screw 117C4518P002  
SA182 - B6  
6 ea. 1/2" dia. on 4 1/8" bolt circle

8. Plug 173A7881P001  
SA182 - F304  
0.38" thick x 1.307" dia.

9. Nut 137C5834P001  
XM - 18 SA479  
1.30" thick x 2.62" dia.



001690

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. 1

1. Manufactured & Certified by General Electric Company Nuclear Energy (GE-NE)  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for TVA DEC/TUR AL 35609-2000  
(Name and Address of Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of A3489 Part Bd. No. N/A
  - (a) Constructed According to Drawing No. 768E534G008 Rev 9 Des. Prepared by D.L. Peterson
  - (b) Description of Part Inspected: Control Rod Drive, Model # 79DB144FG005
  - (c) 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: (1) The applicable Designed Specification 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 10/08/96 Signed GE-NE By J. P. Rickett  
(NPT Certificate Holder) (SC QA Representative)

Certificate of Authorization Expires: 6/16/99 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. 2  
Design specification certified by B.N. Sridhar Prof. Eng. State Calif. Reg. No. 18345  
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 5/20/96 7992 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.

Date 10/8/1996 Inspector's Signature James P. Ennis National Board, State, Province And No. NC 1231, Ohio, WC 3686 PA

\*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)

2200 1797

## FORM M-2 ( back )

G01696

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. \_\_\_\_\_

(Hind & 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 all edges and weld, etc. if for girth dimensions, Position, describe or attach)

Drop Weight \_\_\_\_\_ ft-lb

Charpy Impact \_\_\_\_\_

8. Design pressure <sup>2</sup> \_\_\_\_\_ 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 \_\_\_\_\_

(Hind & Spec. No.) (Subject to pressure) (Welded, Bolted)

Floating. Material \_\_\_\_\_ Dia. \_\_\_\_\_ Thickness \_\_\_\_\_ in. Attachment \_\_\_\_\_

10. Tubes: Material \_\_\_\_\_ O.D. \_\_\_\_\_ in. Thickness \_\_\_\_\_ in. or gage. Number \_\_\_\_\_ Type \_\_\_\_\_

(Dr. 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. \_\_\_\_\_

(Hind & 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 \_\_\_\_\_

14. Design pressure <sup>2</sup> \_\_\_\_\_ 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 \_\_\_\_\_

Manholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

Threaded, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

18. Supports: Skirt \_\_\_\_\_ Lugs \_\_\_\_\_ Lugs \_\_\_\_\_ Other \_\_\_\_\_ Attached \_\_\_\_\_

(Type or No.) (Number) (Number) (Describe) (Where & How)

1. If Portland Cement Treated.

2. List other internal or external pressure with sustained temperature when applicable.

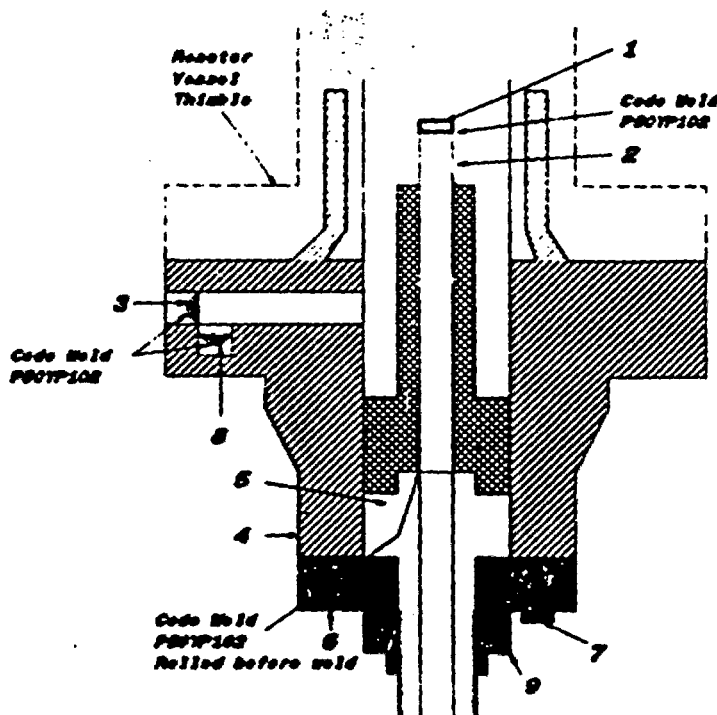
FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES\*  
As required by the Provision of the ASME Code Rules, Section III, Div. I

001697

1. Manufactured & Certified by : General Electric Company Nuclear Energy (GE-NE)  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
( Name and Address of NPT Certificate Holder )
- (b) Manufactured for : TVA DECATUR AL 35008-2000  
( Name and Address of N Certificate Holder for completed nuclear component )
2. Identification - Certificate Holder's S/N of Part : A3408 Part Bd No. N/A
- (a) Constructed According to Drawing No: 768E534G008 Rev 9 Des. Prepr. : D. L. Peterson
- (b) Description of Part Inspected: Control Rod Drive Model # TRDB144FG
- (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 2 of 2

1. Cap 166B0274P001  
SA182 - F316  
3/8" thick x 1 1/8" OD
2. Indicator Tube 166B0313P001  
SA312 - TP316  
3/4" sch 40 - seamless pipe  
0.113" wall thickness  
1.065" max. dia.
3. Plug 150A1178P001  
SA182 - F304  
1/4" thick x 0.812" OD
4. Flange 818D610P001 (718E474)  
SA182 - F304  
2.37" thick x 8 5/8" OD
5. Base 137C5311P001  
SA182 - F304  
7/8" thick x 2.875" dia.
6. Ring Flange 114B5123P002, P003  
137C8151P001, P002  
SA182 - F304  
1" thick x 5.6" OD x 1.75" ID
7. Cap Screw 117C4518P002  
SA182 - B8  
6 ea. 1/2" dia. on 4 1/8" bolt circle
8. Plug 175A7981P001  
SA182 - F304  
0.38" thick x 1.307" dia.
9. Nut 137C5834P001  
XM - 18 SA479  
1.30" thick x 2.62" dia.



001922

**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 Energy (GE-NE)  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
( Name and Address of NPT Certificate Holder )
- (b) Manufactured for : TVA DECATUR, AL 35800-2000  
( Name and Address of Certificate Holder for completed nuclear component )
- 2 Identification - Certificate Holder's S/N of Part : A3989 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 768E534G008 Rev 8 Dwg. Prepared by D.L. Peterson
- (b) Description of Part Inspected: Control Rod Drive, Model # 7RDB144FG005
- (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 Design 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: 10/08/89 Signed GE-NE By CL. Baggett  
( NPT Certificate Holder ) ( ASME QA Representative )

Certificate of Authorization Expires: 8/16/99 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. 2  
Design specification certified by B.N. Sridhar Prof. Eng. State Calif. Reg. No. 18345

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 5/7, 1996 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 damage or a loss of any kind arising from or connected with this inspection.

10/8, 1996 James P. Emme NC 1231, Ohio WC 3688 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)

001923

## FORM W-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.  
(Weld & Spec. No.) (Min. of Plugs 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 con.)  
(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 <sup>2</sup> \_\_\_\_\_ 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 \_\_\_\_\_  
(Weld & 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.  
(Weld & Spec. No.) (Min. of Plugs 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 <sup>2</sup> \_\_\_\_\_ 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 Manholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
Openings: Manholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
Threaded, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

18. Supports: Skirt \_\_\_\_\_ Lugs \_\_\_\_\_ Legs \_\_\_\_\_ Other \_\_\_\_\_ Attached \_\_\_\_\_  
(Type or No.) (Number) (Number) (Number) (Describe) (Where & How)

1. If Postweld Heat Treated.

2. List either internal or external pressure with maximum 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

001924

( Name and Address of NFI Certificate Holder )

( Name and Address of Certificate Holder for completed nuclear component )

2. Identification - Certificate Holder's S/N of Part : A3909 Nat'l Bd. No. N/A

(a) Constructed According to Drawing No: 76DE534G008 Rev 2 Desg. Prepared by: D.L. Peterson

(b) Description of Part Inspected: Control Rod Drive Model # 7RD8144FG005

(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 2 of 2

1. Cap 106B0274P001  
SA182-F316  
3/8" thick x 1 1/16" OD

2. Indicator Tube 166B9313\*001  
SA312-7P316  
3/4" sch 40 - seamless pipe  
0.113" wall thickness  
1.065" max dia.

2. Plug 150A1176P001  
SA182-F304  
1/4" thick x 6.625" OD

4. Flange 8190810P001 (719E474)  
SA182-F304  
3.37" thick x 8 5/8" OD

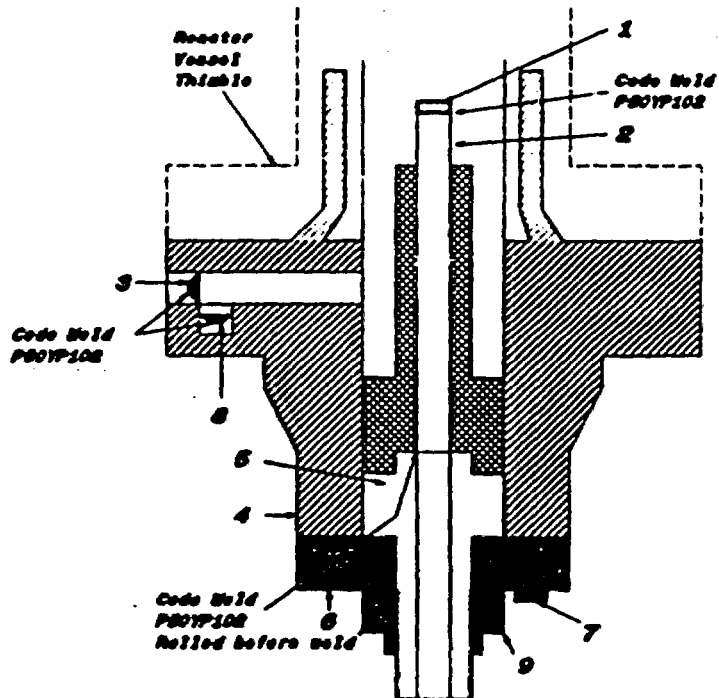
3. Base 137CSJ11P001  
SA182-F304  
7/8" thick x 2.875" dia.

6. Ring Flange 11483122P002, P003  
137C8151P001, P002  
SA182-F304  
1" Thick x 24" OD x 1.75" ID

7. Cap Screw 117C4510P002  
SA183-B8  
6 ea. 1/2" dia. on 4 1/8" bolt circle

- E. File # 175A7961A001  
 SA182-F304  
 (L) #182 = 1.307 cm.

8. NUT 137C3834P001  
XW - 18 SA478  
1.30" thick x 2.82" dia



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 Energy (GE-NE) 002649  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for: TVA DECATUR, AL 35609-2000  
(Name and Address of NPT Certificate Holder for completed nuclear component)
- 2 Identification - Certificate Holder's S/N of Part: A5239 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No. 768E534G008 Rev. 9 Dwg. Prepared by D.L. Peterson
- (b) Description of Part Inspected: Control Rod Drive, Model # 78DB144FG005
- (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: 10/08/96 Signed GE-NE By C. J. Ryznar  
(NPT Certificate Holder) (SC QA Representative)

Certificate of Authorization Expires: 8/16/99 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. 2  
Design specification certified by B.N. Sridhar Prof. Eng. State Calif. Reg. No. 18345

DC22A6254 Rev. 1  
Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. MO18646

**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 7/27, 1996 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.

Date: \_\_\_\_\_ Inspector's Signature: \_\_\_\_\_ NC 1231, Ohio, WC 3686 PA  
National Board, State, Province And No.

\*Supplemental sheets in form of lists, sketches or drawing may be used provided (1) size is 3-1/2" 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".

(07/96)



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 Energy (GE-NE)

**C02650**

3901 Castle Hayne Road, Wilmington, North Carolina 28401

(Name and Address of NPT Certificate Holder)

(b) Manufactured for : TVA DECATUR AL 35000-2000

(Name and Address of NPT Certificate Holder for completed nuclear component)

2. Identification - Certificate Holder's S/N of Part : A5239 Nat'l Bd. No. N/A

(a) Constructed According to Drawing No: 768E534G008 Rev. 8 Dwg. Prepared by D.L. Peterson

(b) Description of Part Inspected: Control Rod Drive, Model # 7RDB144EG005

(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 2 of 2

1. Cap 166B0274P001  
SA182 - F316  
3/8" thick x 1 1/16" OD

2. Indicator Tube 166B0313P001  
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 818D0810P001 (710E474)  
SA182 - F304  
3.37" thick x 8 5/8" OD

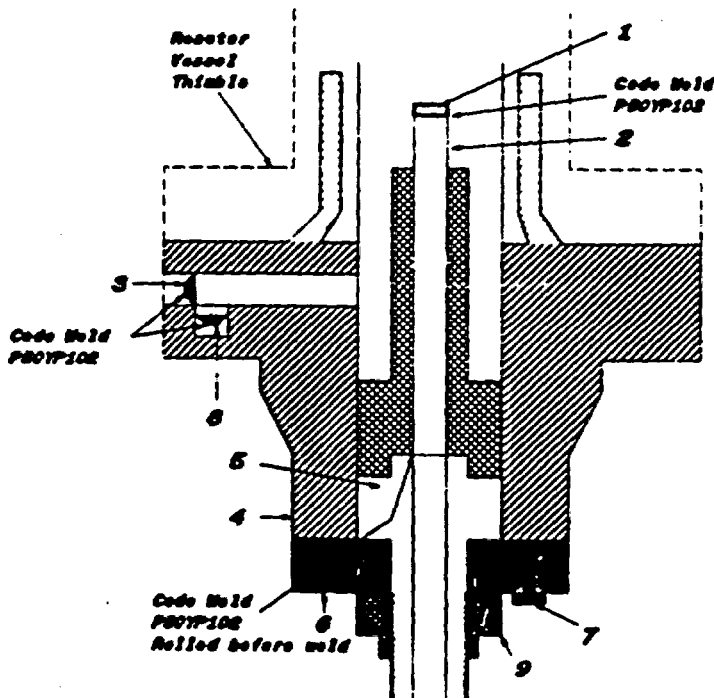
5. Base 137C5311P001  
SA182 - F304  
7/8" thick x 2.875" dia.

6. Ring Flange 114B5122P002, P003  
137C8151P001, P002  
SA182 - F304  
1" thick x 5.0" OD x 1.75" ID

7. Cap Screw 117C4516P002  
SA193 - B8  
8 ea. 1/2" dia. on 4 1/8" bolt circle

8. Plug 175A7961P001  
SA182 - F304  
0.38" thick x 1.307" dia.

9. Nut 137C5034P001  
XM - 19 SA479  
1.307" thick x 2.627" dia.



002005

**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 Energy (GE-NE)  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for: TVA DECATUR, AL 35608-2000  
(Name and Address of Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part: A4207 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No.: 768E534G008 Rev. 2 Dwg. Prepared by D.L. Peterson
- (b) Description of Part Inspected: Control Rod Drive, Model # 7ADB144FG005
- (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 Design Specification 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 10/08/96Signed GE-NE By El Sayed  
(NPT Certificate Holder)

(SC QA Representative)

Certificate of Authorization Expires: 8/16/99 Certification of Authorization No.: NPTN-1151

**Certification of Design for Appurtenance**

Design information on file at GE Company, San Jose, CaliforniaStress analysis report on file at GE Company, San Jose, California

DC22AS253 Rev. 2

Design specification certified by B.N. Sridhar Prof. Eng. State Calif. Reg. No. 18345

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 2/27, 1996, 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.

Date 10/8, 1996 James P. Evers  
Inspector's SignatureNC 1231, Ohio, WC 3688 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".

(97,00)

002006

## FORM M-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.

(Wind & Spec. Nos.) (Min. of Range Specified)

5. Seams: Long \_\_\_\_\_ M.T. \_\_\_\_\_ R.T. \_\_\_\_\_ Efficiency \_\_\_\_\_ %  
Girth \_\_\_\_\_ M.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 or give end view, bar, etc. If bar give dimensions, if bolts, describe or sketch)

Drop Weight \_\_\_\_\_  
Charpy Impact \_\_\_\_\_ ft.-lb

8. Design pressure <sup>2</sup> \_\_\_\_\_ 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 \_\_\_\_\_  
(Wind & Spec. Nos.) (Subject to pressure) (Welded, Bolted)

Floating. Material \_\_\_\_\_ Dia. \_\_\_\_\_ Thickness \_\_\_\_\_ in. Attachment \_\_\_\_\_

10. Tubes: Material \_\_\_\_\_ O.D. \_\_\_\_\_ in. Thickness \_\_\_\_\_ inches or gage. Number \_\_\_\_\_ Type \_\_\_\_\_  
(Dr. 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.

(Wind & Spec. Nos.) (Min. of Range Specified)

12. Seams: Long \_\_\_\_\_ M.T. \_\_\_\_\_ R.T. \_\_\_\_\_ Efficiency \_\_\_\_\_ %  
Girth \_\_\_\_\_ M.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 <sup>2</sup> \_\_\_\_\_ 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 \_\_\_\_\_  
Manholes, 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

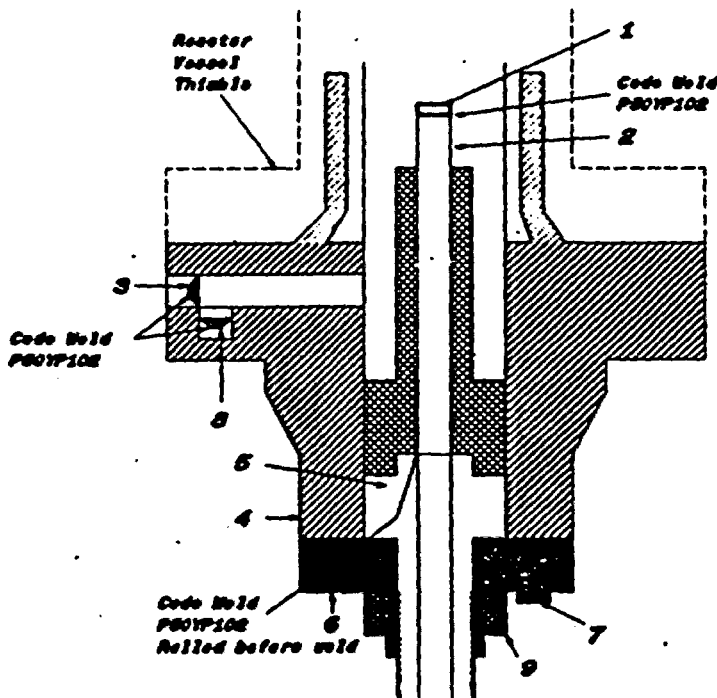
2. List either internal or external pressure with corresponding temperature when applicable

FORM N-3 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 Energy (GE-NE) **002007**  
3801 Castle Hayne Road, Wilmington, North Carolina 28401  
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for : TVA DECATUR AL 35008-2000  
(Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part : A4207 Matl Bd. No. N/A
- (a) Constructed According to Drawing No: 788E534G008 Rev. 9 Des. Prepared by D.L. Peterson
- (b) Description of Part Inspected: Control Rod Drive, Model # 78DB144EG005
- (c) Applicable ASME Code: Section III, Edition 1974, Addenda Data 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 2 of 2

1. Cap 146B8274P001  
SA182 - F316  
3/8" thick x 1 1/16" OD
2. Indicator Tube 162B8313P001  
SA312 - TP316  
3/4" sch 40 - seamless pipe  
0.112" wall thickness  
1.085" max. dia.
3. Plug 158A1175P001  
SA182 - F304  
1/4" thick x 0.812" OD
4. Flange 819D810P001 (718E474)  
SA182 - F304  
3.37" thick x 8.5/8" OD
5. Base 137C5311P001  
SA182 - F304  
7/8" thick x 2.875" dia.
6. Ring Flange 11483122P002, P003  
137C8151P001, P002  
SA182 - F304  
1" thick x 5.6" OD x 1.75" ID
7. Cap Screw 117C4518P002  
SA182 - B6  
6 ea. 1/2" dia. on 4 1/8" bolt circle
8. Plug 175A7D81P001  
SA182 - F304  
0.38" thick x 1.307" dia.
9. Nut 137C5634P001  
XM - 19 SA479  
1.307" thick x 2.62" dia.



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

001530

1. Manufactured & Certified by General Electric Company Nuclear Energy (GE-NE)  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for: TVA DECATUR, AL 35609-2000  
(Name and Address of Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder: S/N of Part: A3135 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No. 768E534G008 Rev. 2 Dwg. Prepared by D. L. Peterson
- (b) Description of Part Inspected: Control Rod Drive, Model # 7RDB144FG005
- (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 10/28/96 Signed GE-NE By clh  
(NPT Certificate Holder) (SC QA Representative)

Certificate of Authorization Expires 8/16/99 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. 2

Design specification certified by B.N. Sridhar Prof. Eng. State Calif. Reg. No. 18345

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 3/12, 1996, 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.

Date

10/3, 1996

Inspector's Signature

James P. Green

NC 1231, Ohio, WC 3686 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".

(07/90)

**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 Energy (GE-NE)

001531

3801 Castle Home Road, Wilmington, North Carolina 28401

( Name and Address of EPT Certificate Holder )

(b) Manufactured for : TVA DECATUR AL 35000-2000

( Name and Address of Certificate Holder for completed nuclear component )

2. Identification - Certificate Holder's S/N of Part : A-135 Nat'l Bd. No. N/A

(a) Constructed According to Drawing No: 768E5140 Rev. 9 Dig. Prepared by D.L. Peterson

(b) Description of Part Inspected: Control Rod Drive, Model # 7RDB144EG005

(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No. N207 1381-2 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 2 of 2

1. Cap 1A6BR2747001  
SA182 - F316  
3/4" Thick x 1 1/4" OD

2. Indicator Tube 1C858313P001  
SA312 - TP316  
3/4" sch 40 - seamless pipe  
0.113" wall thickness  
1.065" max. dia.

2. Plug 150A1176P001  
SA182-F304  
1/4" thick x 0.812" OD

4. Flange 8180610POG1 (718E474)  
SA182-F304  
3.37" thick x 8 S/S CO

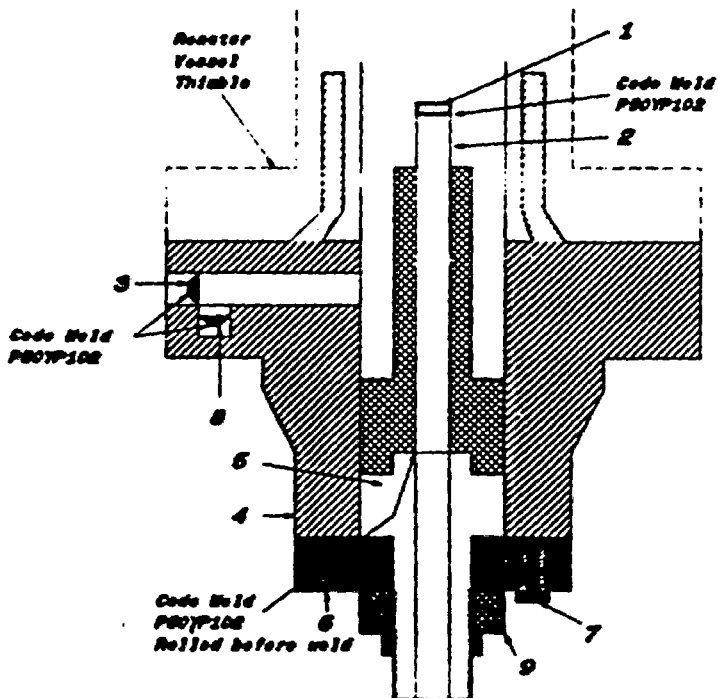
3. Base 137CS311P001  
SA182 - F304  
7/8" thick x 2.875" dia.

6. Ring Flange 11485122P002, P003  
13708151P001, P002  
SA182 - F304  
1" Thick x 3.6' OD = 1.75" ID

7. Cap Screw 117C4518P002  
SA18J-BM  
6 ea. 1/2" dia. on 4 1/8" bolt circle

2. Pkg 175A7081P001  
SA182 - F304  
0.30" thick x 1.307" dia.

9. AUR 137C5834P001  
XW - 1B SA479  
1.30" Puck x 2.62" dia.



001950

**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 Energy (GE-NE)  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for TVA DECATUR, AL 35609-2000  
(Name and Address of Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part: A4055 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 768E534G008 Rev 9 Des. Prepared by D.L. Peterson
- (c) Description of Part Inspected: Control Rod Drive, Model # 7RDB144FG005
- (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 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 10/08/96 Signed GE-NE By [Signature]  
(NPT Certificate Holder) (NRC QA Representative)

Certificate of Authorization Expires: 8/16/99 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. 2

Design specification certified by B.N. Sridhar Prof. Eng. State Calif. Reg. No. 18345

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 3/8, 1996 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.

10/8, 1996 [Signature] NC 1231, Ohio, WC 3688 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".

(97/98)

22AB 2A52

001951

## FORM M-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. \_\_\_\_\_

(Min. & Spec. No.) (Min. of Flange Specified)

5. Seams: Long \_\_\_\_\_ M.T. \_\_\_\_\_ R.T. \_\_\_\_\_ Efficiency \_\_\_\_\_ %

Girth \_\_\_\_\_ M.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 closed, bar, etc. If bar give dimensions, if bolts, describe or sketch)

Drop Weight \_\_\_\_\_ ft.-lb

Charpy Impact \_\_\_\_\_ ° F

8. Design pressure <sup>2</sup> \_\_\_\_\_ 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 \_\_\_\_\_

(Min. & 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 \_\_\_\_\_

(Dr. 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. \_\_\_\_\_

(Min. & Spec. No.) (Min. of Flange Specified)

12. Seams: Long \_\_\_\_\_ M.T. \_\_\_\_\_ R.T. \_\_\_\_\_ Efficiency \_\_\_\_\_ %

Girth \_\_\_\_\_ M.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 \_\_\_\_\_ ° F

14. Design pressure <sup>2</sup> \_\_\_\_\_ 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 Manholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

Openings: Manholes, 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 corresponding temperature when applicable.



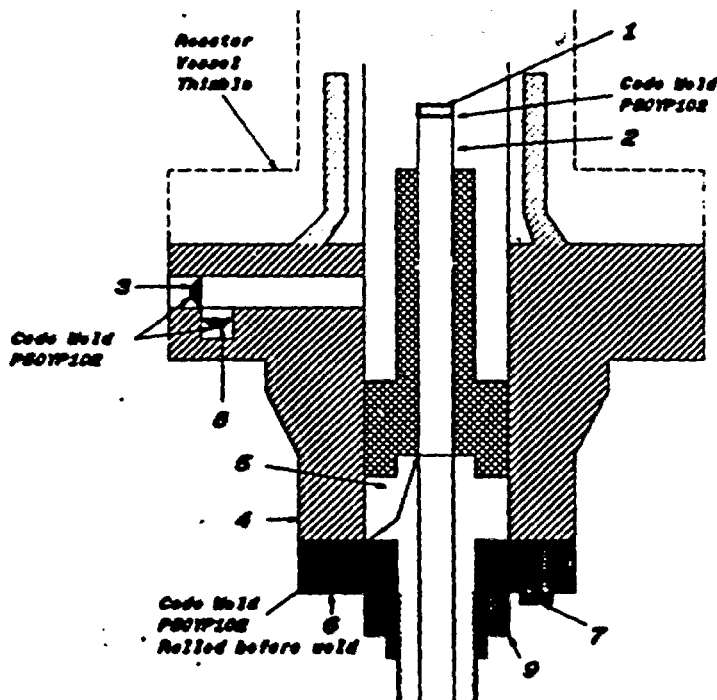
FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES\*  
As required by the Provision of the ASME Code Rules, Section III, Div. I

001952

1. Manufactured & Certified by : General Electric Company Nuclear Energy (GE-NE)  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
( Name and Address of NPT Certificate Holder )
- (b) Manufactured for : TVA DECATUR AL 35809-2000  
( Name and Address of N Certificate Holder for completed nuclear component )
2. Identification - Certificate Holder's S/R of Part : A1055 Nat'l Bd. No. N/A
  - (a) Constructed According to Drawing No: 788E534G008 Rev. 9 Des. Prepared by D. L. Peterson
  - (b) Description of Part Inspected: Control Rod Drive, Model # 7RDB144EG005
  - (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 2 of 2

1. Cap 166B9274P001  
SA182 - F316  
3/8" thick x 1 1/16" OD
2. Indicator Tube 166B6313P001  
SA312 - TP316  
3/4" sch 40 - seamless pipe  
6.113" wall thickness  
1.065" max. dia.
3. Plug 158A1178P001  
SA182 - F304  
1/4" thick x 0.812" OD
4. Flange 819D810P001 (71DE474)  
SA182 - F304  
3.37" thick x 8 5/8" OD
5. Base 137CS311P001  
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  
SA182 - B6  
6 ea. 1/2" dia. on 4 1/8" bolt circle
8. Plug 175A7961P001  
SA182 - F304  
0.38" thick x 1.307" dia.
9. Nut 137CS834P001  
XM - 18 SA479  
1.30" thick x 2.62" dia.



002061

**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 Energy (GE-NE)  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for: TVA DECATUR, AL 35609-2000  
(Name and Address of NPT Certificate Holder for completed nuclear component)
- 2 Identification - Certificate Holder's S/N of Part: A4274 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 788E534G008 Rev. 9 Des. Prepared by D.L. Peterson
- (b) Description of Part Inspected: Control Rod Drive, Model # TRDB144FG005
- (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: 10/04/96 Signed GE-NE By C. B. Baggett  
(NPT Certificate Holder) (NRC QA Representative)

Certificate of Authorization Expires: 5/18/99 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

DC22AE253 Rev. 2

Design specification certified by B.N. Sridhar Prof. Eng. State Calif. Reg. No. 18345

DC22AS254 Rev. 1

Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. M018648

**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 2/27, 1996 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.

10/8, 1996 James T. Ewert  
Date Inspector's Signature

NC 1231, Ohio, WC 3696 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".

(07/98)

# FORM M-2 ( back )

Items 4-8 incl. to be completed for single well vessels, jackets vessels, or shells of heat exchangers.

4. Shell Material            T.S.            Nominal Thickness            in. Corrosion Allowance            in. Dia.            ft.            in. Length            ft.  
(Kind & Spec. No.) (Min. of Plating 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 all edges and weld, bar, etc. If bar give dimensions, if bolts, describe or sketch)  
 Drop Weight            ft-lb  
 Charpy Impact            ° F

8. Design pressure <sup>2</sup>            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            ft.  
(Kind & Spec. No.) (Min. of Plating 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            ° F

14. Design pressure <sup>2</sup>            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 Manholes, No.            Size            Location             
 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.

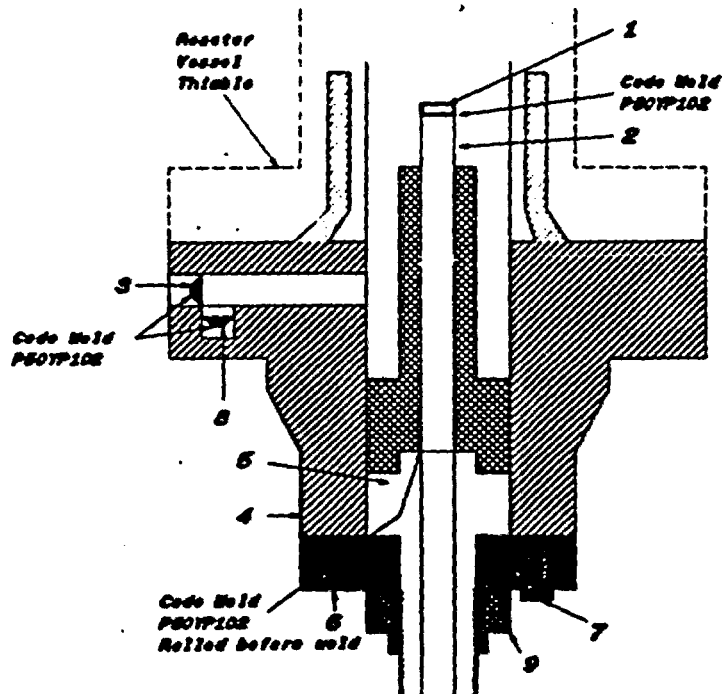
2. List other external or internal pressure with corrosion temperature when applicable.

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 Energy (GE-NE) **002062**  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
(Name and Address of NPT Certificate Holder)
- (b) Manufactured for : TVA DECATUR AL 35809-2000  
(Name and Address of N Certificate Holder for completed nuclear component)
2. Identification - Certificate Holder's S/N of Part : A4274 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 788ES34G008 Rev. 9 Des. Prepared by D.L. Peterson
- (b) Description of Part Inspected: Control Rod Drive, Model # 78DB144FG005
- (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 2 of 2

1. Cap 18806274P001  
SA182 - F316  
3/8" thick x 1 1/16" OD
2. Indicator Tube 16600313P001  
SA312 - TP316  
3/4" sch 40 - seamless pipe  
0.113" wall thickness  
1.063" max. dia.
3. Plug 156A1176P001  
SA182 - F304  
1/4" thick x 0.812" OD
4. Flange 8180610P001 (718E474)  
SA182 - F304  
3.37" thick x 8 5/8" OD
5. Base 137C5311P001  
SA182 - F304  
7/8" thick x 2.875" dia.
6. Ring Flange 114B5122P002, P003  
137C8191P001, P002  
SA182 - F304  
1" thick x 3.0" OD x 1.75" ID
7. Cap Screw 117C4516P002  
SA182 - B6  
6 ea. 1/2" dia. on 4 1/8" bolt circle
8. Plug 175A7961P001  
SA182 - F304  
0.38" thick x 1.307" dia.
9. Nut 137C5834P001  
XM - 19 SA479  
1.30" thick x 2.62" dia.



602200

**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. 1

- 1 Manufactured & Certified by : General Electric Company Nuclear Energy (GE-NE)  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
( Name and Address of NPT Certificate Holder )
- (b) Manufactured for : TVA DECATUR, AL 35609-2000  
( Name and Address of N Certificate Holder for completed nuclear component )
- 2 Identification - Certificate Holder's S/N of Part : A4421 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 768E534G008 Rev 9 Des. Prepared by D.L. Peterson
- (b) Description of Part Inspected: Control Rod Drive, Model # TRDB144FG005
- (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W75, Case No N207 136.1-2 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 10/08/96 Signed GE-NE By [Signature]  
( NPT Certificate Holder ) ( SC QA Representative )

Certificate of Authorization Expires: 6/16/99 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. 2  
Design specification certified by B.N. Sridhar Prof. Eng. State Calif. Reg. No 18345

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 10/9, 1996 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.

10/9, 1996 [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".

(07/88)

## FORM M-2 ( back )

G02201

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 Flange Stiffness)

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 above and vent, bar, etc. if bar give dimensions, if bolts, describe or sketch)  
Drop Weight \_\_\_\_\_  
Charpy Impact \_\_\_\_\_ ft-lb

8. Design pressure <sup>2</sup> \_\_\_\_\_ 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 \_\_\_\_\_ ft. \_\_\_\_\_ in.  
(Kind & Spec. No.) (Min. of Flange Stiffness)

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 <sup>2</sup> \_\_\_\_\_ 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 (Vent, Outlet, Drain) Number Dia. or Size Type Material Thickness Reinforcement Material Heat Affected

17. Inspection Openings: Manholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
Manholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
Threaded, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

18. Supports: Skirt \_\_\_\_\_ Lugs \_\_\_\_\_ Legs \_\_\_\_\_ Other \_\_\_\_\_ Attached \_\_\_\_\_  
(Yes or No) (Number) (Number) (Describe) (Where & How)

1 - If Protected Heat Treated

2 - List other internal or external pressure with corresponding temperature when applicable

As required by the Provision of the ASME Code Rules, Section III, Div. I

002202

( Name and Address of NPT Certificate Holder )

**DECATUR, AL 35609-2000**

( Name and Address of Certificate Holder for completed nuclear component )

Nat'l Bd. No. N/A

768E534G008 Rev 9 Dwg. Prepared by D.L. Peterson

**Control Rod Drive Model # 78DB144FG005**

Edition 1974. Addenda Date W75. Case No. N2071381-2 Class 1

**Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.**

( Brief description of service for which component was designed )

Sheet 2 of 2

1. Cap 16650274P001  
SA182 - F316  
3/8" thick x 1 1/8" OD

2. Indicator Tube 166BS313P001  
SA312-TP316  
3/4" sch 40 - seamless pipe  
0.113" wall thickness  
1.065" max dia.

3. Plug 150A1178P001  
SA182-F304  
1/8" Thick x 0.812" OD

4. Flange 8190810P001 (719E474)  
SA182-F304  
3.37" thick x 8 5/8" OD

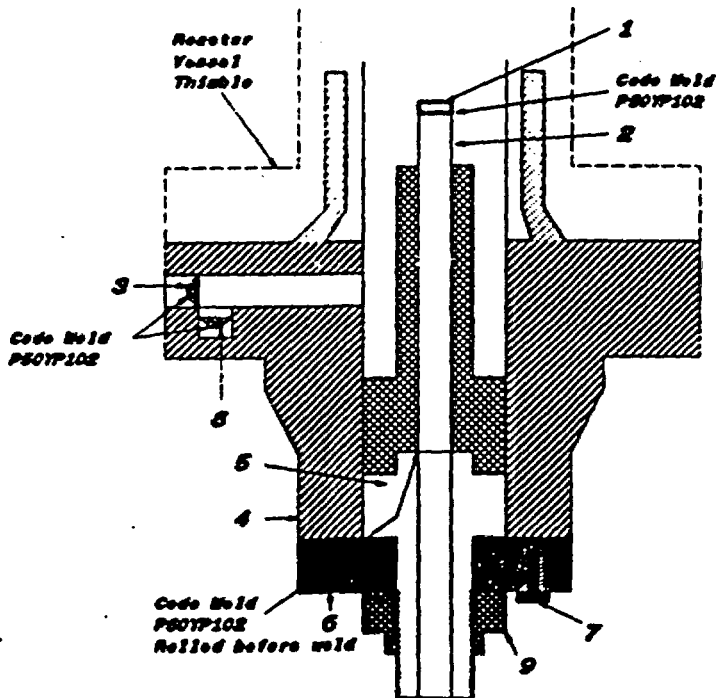
3. Base 137CS311P001  
SA182 - F304  
7/8" thick x 2.875" dia.

6. Ring Flange 11485122P002, P003  
137C8151P001, P002  
SA182-F304  
1" thick x 3.6" OD x 1.75" ID

7. Cap Screw 117C4516P002  
SA183-B8  
6 ea. 1/2 dia. on 4 1/8" bolt circle

2. Plug 17347841001  
SA182-F204  
0.38" thick x 1.307" dia.

9. NLR 137C5834P001  
XIV - 18 SA479  
1.30" thick x 2.62" dia



001640

**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 Energy (GE-NE)  
3901 Castle Hayne Road, Wilmington, North Carolina 28401  
( Name and Address of NPT Certificate Holder )
- (b) Manufactured for : TVA DECATUR, AL 35609-2000  
( Name and Address of R Certificate Holder for completed nuclear component )
- 2 Identification - Certificate Holder's S/N of Part : A3394 Nat'l Bd. No. N/A
- (a) Constructed According to Drawing No: 768E534G008 Rev 9 Des. Prepared by D. L. Peterson
- (b) Description of Part Inspected: Control Rod Drive, Model # TRDB144FG005
- (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: 10/08/96 Signed GE-NE By W. Bryant  
( NPT Certificate Holder ) ( SC QA Representative )

Certificate of Authorization Expires: 8/16/99 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. 2

Design specification certified by B.N. Sridhar Prof. Eng. State Calif. Reg. No. 18345

DC22A6254 Rev 1

Stress analysis report certified by Edward Yoshio Prof. Eng. State Calif. Reg. No. MD18646

**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 3/28, 1996 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.

10/8, 1996 James P. Lane  
Date Inspector's Signature

NC 1231, Ohio, WC 3686 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".

(07/00)

7200-1742



**FORM N-3 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES\***  
As required by the Provision of the ASMX Code Rules, Section III, Div. I

1. Manufactured & Certified by : General Electric Company Nuclear Energy (GE-NE)

001641

3901 Castle Hayne Road, Wilmington, North Carolina 28401

( Name and Address of ERT Certificate Holder )

(b) Manufactured for : JVA DECATUR AL 35009-2000

( Name and Address of Certificate Holder for completed nuclear component )

2. Identification - Certificate Holder's S/N of Part : A334 Part Bd. No. N/A

(a) Constructed According to Drawing No: 768E534G008 Rev 9 Des. Prepared by D. L. Peterson

(b) Description of Part Inspected: Control Rod Drive, Model # 7RD8144EG005

(c) Applicable ASME Code: Section III, Edition 1974, Addenda Data 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 consensus was designed )

Sheet 2 of 2

1. Cap 16689274P001  
SA122 - F316  
3/8" thick x 1 1/16" OD

2. Indicator Tube 166B9313P001  
SAJ12-TP316  
3/4" sch 40 - seamless pipe  
0.113" wall thickness  
1.065" max. dia.

2. Pkg 158A1178P001  
SA182-F304  
1/4" thick x 0.812" OD

4. Flange 818D610P001 (719E474)  
SA182-F304  
1 1/2" thick x 8.5" ID

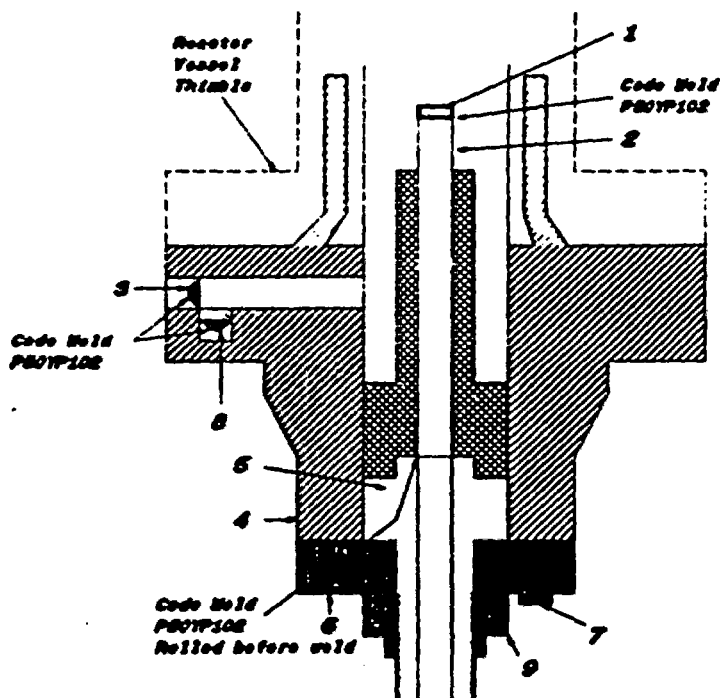
5. Base 137CS311POG1  
SA182-F304  
7/8" thick x 2.875" dia.

6. Ring Flange 114B5122P002, P003  
137C8151P001, P002  
SA182-F304  
1" thick x 5.6" OD x 1.75" ID

7. Cap Screw 117C4518P002  
SA183-B6  
6 ea. 1/2" dia. on 4 1/8" bolt circle

2. Pkg 17SA7261P001  
SA182-F304  
0.25" Thick x 1.307" dia

- B. NLR 137C5834P001  
XN - 19 SA478  
1.30" thick x 2.62" dia



001585

**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 Energy (GE-NE)

3901 Castle Hayne Road, Wilmington, North Carolina 28401

(Name and Address of NPT Certificate Holder)

Manufactured for TVA DECATUR AL 35609-2000

(Name and Address of Certificate Holder for completed nuclear component)

Identification - Certificate Holder's S-N of Part: A3224 Nat'l Bd No N/A

Constructed According to Drawing No. 7685534G008 Rev. 2 Prepared by D. L. Peterson

Description of Part Inspected Control Rod Drive Model # 7RDB144FG005

Applicable ASME Code Section III, Edition 1974, Addenda Date W75, Case No. NC07 1361-2 Class 1

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 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 10/08/96

Signed GE-NE

By

*[Signature]*

(NPT Certificate Holder)

(SC QA Representative)

Certificate of Authorization Expires 5/16/99 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. 2

Design specification certified by B. N. Sudhar Prof. Eng. State Calif. Reg. No. 18345

DC22A6254 Rev. 1

Stress analysis report certified by Edward Yoshida 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 3/12/96 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.

Date 12/3/96

*[Signature]*  
Inspector's Signature

NC 1231, Ohio, WC 3686 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".

(07/96)

## FORM H-2 ( back )

001586

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. \_\_\_\_\_  
(Mind & 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 vent, bar, etc. If bar give dimensions, if bolts, describe or sketch)  
Drop Weight \_\_\_\_\_ ft.-lb  
Charpy Impact \_\_\_\_\_ ° F

8. Design pressure <sup>2</sup> \_\_\_\_\_ 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 \_\_\_\_\_  
(Mind & 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 \_\_\_\_\_  
(B 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. \_\_\_\_\_  
(Mind & 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 \_\_\_\_\_ ° F

14. Design pressure <sup>2</sup> \_\_\_\_\_ 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 \_\_\_\_\_  
Hatches, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
Threaded, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

18. Supports: Skirt \_\_\_\_\_ Legs \_\_\_\_\_ Legs \_\_\_\_\_ Other \_\_\_\_\_ Attached \_\_\_\_\_  
(Yes or No) (Number) (Number) (Describe) (Where & How)

1. If Postweld Heat Treated

2. List other internal or external pressure with estimated temperature when applicable.

2200-1586

FORM N-2 MPT 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 Energy (GE-NE)

001587

3921 Castle Home Road, Wilmington, North Carolina 28401

( Date and Address of NPT Certificate Holder )

(b) Manufactured for : IYA DECATUR AL 35-00-2000

( Name and Address of Certificate Holder for completed nuclear component )

2. Identification - Certificate Holder's S/N of Part : A324 Nat'l Bd. No. N/A

(a) Constructed According to Drawing No: 762ES34G008 Rev. 2 Dwg. Prepared by D.L. Peterson

(b) Description of Part Inspected: Control Rod Drive Model # TRD9144EG005

(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date 1975, Case No. N207 1361-2 Class 1

J. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi/min.

( Brief Description of service for which component was designed )

Sheet 2 of 2

1. Cap 106B0274P001  
SA182 - F316  
3/8" thick x 1 1/16" OD

2. Indicator Tube 16689313P001  
SAJ12-TP316  
3/4" xh 40 - seamless pipe  
0.113" wall thickness  
1.065" max. dia.

3. Plug 150A1176P001  
SA182-F304  
1/4" thick = 0.812" OD

4. Flange 919DE10P001 (719E474)  
SA182-F304  
3.37" thick x 9 5/8" OD

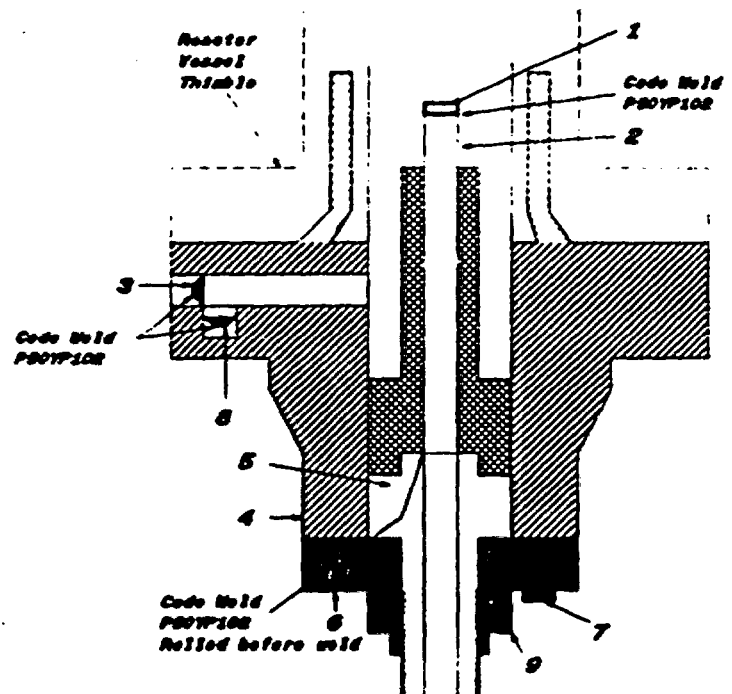
5. Base 137CS311P001  
SA182-F304  
7/8" thick x 2.875" dia.

- G. Ring Flange 11485122P002, P003  
137C8151P001, P002  
SA182-F304  
1" thick x 5.6" OD x 1.75" ID**

7. Cap Screw 117C4516P002  
SA193-B8  
6 ea. 1/2" dia. on 4 1/8" bolt circle

2. Plug 175A7981P001  
SA182-F304  
0.38" thick x 1.307" dia.

- B. AUF 137C3834P001  
XM - 19 SAM79  
1.30" thick x 2.62" dia.



# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

1. Owner Tennessee Valley Authority (TVA) Date April 30, 2003  
1101 Market Street Name  
Chattanooga, TN 37402-2801 Address  
 Sheet 1 of 1
2. Plant Browns Ferry Nuclear Plant (BFN) Unit 2  
P. O. Box 2000, Decatur, AL 35609-2000 Name  
 Address Work Orders (WO) 03-004126-000 and 03-004119-000  
 Repair/Replacement Organization P.O. No., Job No., etc.
3. Work Performed by TVA-BFN Type Code Symbol Stamp N/A  
P. O. Box 2000, Decatur, AL 35609-2000 Name  
 Address Authorization No. N/A  
 Expiration Date N/A
4. Identification of System System 001, Main Steam System (ASME Code Class 1 equivalent)
5. (a) Applicable Construction Code USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

## 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Support (Snubber) 2-47B400S0096	Bergen-Paterson	TVA Serial No. M0458	N/A	2-SNUB-001-5047	N/A	Removed	No
Support (Snubber) 2-47B400S0096	Bergen-Paterson	TVA Serial No. M0503	N/A	2-SNUB-001-5047	N/A	Installed	No

7. Description of Work Replaced snubber 2-SNUB-001-5047 with like for like rebuilt snubber.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐ Exempt ☐  
 Other ☒\*\* Pressure N/A psi Test Temp. N/A °F \*\* - See Remarks

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.

\*as amended by additional quality assurance requirements found in Contract 68C37-91602 and Design Criteria BFN-50-7001 and BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks WO 03-004126-000 - (2-SNUB-001-5047) -

Applicable Manufacturer's Data Reports to be attached

The original snubber (TVA Serial No. M0458) was removed and stored in the snubber room as a spare due fluid leakage at threaded plug.

The newly installed snubber (TVA Serial No. M0503) had been previously located in Unit 2 as 2-SNUB-074-5037 and was removed from Unit 2 under WO 03-004119-000. The new snubber (TVA Serial No. M0503) was rebuilt per MPI-0-000-SNB002,

Hydraulic Shock and Sway Arrestor Bergen-Paterson Unit Disassembly and Reassembly, and functionally tested per 2-SI-4.6.H-2B,

Functional Testing of Bergen-Paterson Snubbers, prior to installation at 2-SNUB-001-5047. M0503 had a new main cylinder tube installed as part of the rebuild.

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed

Stephen C. W. Smith  
Owner or Owner's Designee, Title

System Engineer

Date

5/7

, 20 03

### 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 of Tennessee and employed by HSB CT of Connecticut have inspected the components described

in this Owner's Report during the period 3.10.03 to 3.11.03, 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.

Albert Ladd  
Inspector's Signature

Commissions

TN 3135

AB 2 NNS

National Board, State, Province, and Endorsements

Date

May 29 2003

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

1. Owner Tennessee Valley Authority (TVA) Date April 30, 2003  
1101 Market Street Name  
Chattanooga, TN 37402-2801 Address  
 Sheet 1 of 1
2. Plant Browns Ferry Nuclear Plant (BFN) Unit 2  
P. O. Box 2000, Decatur, AL 35609-2000 Name  
Work Orders (WO) 00-005306-000, 02-006771-000 and 02-007272-000  
Repair/Replacement Organization P.O. No., Job No., etc. Address
3. Work Performed by TVA-BFN Type Code Symbol Stamp N/A  
P. O. Box 2000, Decatur, AL 35609-2000 Name  
Authorization No. N/A Address  
Expiration Date N/A
4. Identification of System System 003, Feedwater System (ASME Code Class 1 equivalent)
5. (a) Applicable Construction Code USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

## 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Support (Snubber) 2-47B415S0001	Bergen-Paterson	TVA Serial No. M0440	N/A	2-SNUB-003-5015	N/A	Removed	No
Support (Snubber) 2-47B415S0001	Shaw A/DE	ADH-1000-3414	N/A	2-SNUB-003-5015	N/A	Installed	No
Support (Snubber) 2-47B415S0002	Bergen-Paterson	TVA Serial No. M0406	N/A	2-SNUB-003-5016	N/A	Removed	No
Support (Snubber) 2-47B415S0002	Shaw A/DE	ADH-1000-3416	N/A	2-SNUB-003-5016	N/A	Installed	No
Support (Snubber) 2-47B415S0009	Pacific Scientific	5535	N/A	2-SNUB-003-5023	N/A	Removed	No
Support (Snubber) 2-47B415S0009	Pacific Scientific	5501	N/A	2-SNUB-003-5023	N/A	Installed	No

7. Description of Work Replaced snubbers with like for like new snubbers.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐ Exempt ☐  
 Other ☒ \*\* Pressure N/A psi Test Temp. N/A °F \*\* - See Remarks

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in Contract 68C37-91602 and Design Criteria BFN-50-7003 and BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks WO 00-005306-000 - (2-SNUB-003-5015) -

Applicable Manufacturer's Data Reports to be attached

The original snubber (TVA Serial No. M0440) was removed and tested as part of the 10 percent sample per the snubber program.

The replacement snubber (ADH-1000-3414) is a new snubber and was functionally tested per 2-SI-4.6.H-2B, Functional Testing of

Bergen-Paterson Snubbers, prior to installation.

WO 02-006771-000 - (2-SNUB-003-5016) -

The original snubber (TVA Serial No. M0406) was removed and tested as part of the 10 percent sample per the snubber program.

The replacement snubber (ADH-1000-3416) is a new snubber and was functionally tested by the manufacturer.

WO 02-007272-000 - (2-SNUB-003-5023) -

The original snubber (5535) was scheduled for testing and return to service but was damaged during removal.

The replacement snubber (5501) is a new snubber and was functionally tested by the manufacturer.

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed Stephen C. Wilbur, System Engineer  
Owner or Owner's Designee, Title

Date 5/7, 20 03

### 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 of Tennessee and employed by HSB CT of Connecticut have inspected the components described

in this Owner's Report during the period 12.11.00 to 3.16.03, 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.

Albert T. Ladd  
Inspector's Signature

Commissions TN3135 A I B N U S  
National Board, State, Province, and Endorsements

Date May 30 2003



# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

1. Owner Tennessee Valley Authority (TVA) Date April 30, 2003  
1101 Market Street Name  
Chattanooga, TN 37402-2801 Address  
 Sheet 1 of 1
2. Plant Browns Ferry Nuclear Plant (BFN) Unit 2  
P. O. Box 2000, Decatur, AL 35609-2000 Name  
 Address Work Order (WO) 03-003454-000  
 Repair/Replacement Organization P.O. No., Job No., etc.
3. Work Performed by TVA-BFN Type Code Symbol Stamp N/A  
P. O. Box 2000, Decatur, AL 35609-2000 Name  
 Address Authorization No. N/A  
 Expiration Date N/A
4. Identification of System System 073, High Pressure Coolant Injection (HPCI) System (ASME Code Class 1 equivalent)
5. (a) Applicable Construction Code USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

## 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Support (Snubber) 2-47B455S0023	Bergen-Paterson	TVA Serial No. M07??	N/A	2-SNUB-073-5008	N/A	*	No
* - Only the bolting of this support was replaced							
Pipe Clamp bolting	Bergen-Paterson	N/A	N/A	2-SNUB-073-5008	N/A	Removed	No
Pipe Clamp bolting	NOVA	N/A	N/A	2-SNUB-073-5008	N/A	Installed	No

7. Description of Work Replaced pipe clamp bolting.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐ Exempt ☐  
 Other ☒ \*\* Pressure N/A psi Test Temp. N/A °F \*\* - See Remarks

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in Contract 68C37-91602 and Design Criteria BFN-50-7073 and BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks Bolting damaged during removal of pipe clamp for ISI inspections. VT-3 of snubber and bolting following installation.  
Applicable Manufacturer's Data Reports to be attached

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed *Stephen C. Wilford*, System Engineer  
Owner or Owner's Designee, Title

Date 5/6, 2003

### 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 of Tennessee and employed by Connecticut HSB CT of Connecticut have inspected the components described in this Owner's Report during the period 3.3.03 to 3.6.03, 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.

*Albert Ladd*  
Inspector's Signature

Commissions

TN B135 AB N1 NS  
National Board, State, Province, and Endorsements

Date May 29 2003

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

1. Owner Tennessee Valley Authority (TVA) Date April 30, 2003  
Name  
1101 Market Street  
Address  
Chattanooga, TN 37402-2801
2. Plant Browns Ferry Nuclear Plant (BFN) Unit 2  
Name  
P. O. Box 2000, Decatur, AL 35609-2000  
Address  
Work Order (WO) 03-004119-000  
Repair/Replacement Organization P.O. No., Job No., etc.
3. Work Performed by TVA-BFN Type Code Symbol Stamp N/A  
Name  
P. O. Box 2000, Decatur, AL 35609-2000  
Address  
 Authorization No. N/A  
 Expiration Date N/A
4. Identification of System System 074, Residual Heat Removal (RHR) System (ASME Code Class 1 equivalent)
5. (a) Applicable Construction Code USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

## 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Support (Snubber) 2-47B452S0235	Bergen-Paterson	TVA Serial No. M0503	N/A	2-SNUB-074-5037	N/A	Removed	No
Support (Snubber) 2-47B452S0235	Shaw Fronek A/DE	ADH-2000-1591	N/A	2-SNUB-074-5037	N/A	Installed	No

7. Description of Work Replaced snubber 2-SNUB-074-5037 with new snubber.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐ Exempt ☐  
 Other ☒ \*\* Pressure N/A psi Test Temp. N/A °F \*\* - See Remarks

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in Contract 68C37-91602 and Design Criteria BFN-50-7074 and BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks WO 03-004119-000 - (2-SNUB-074-5037) -

Applicable Manufacturer's Data Reports to be attached

The original snubber (TVA Serial No. M0503) was removed due hydraulic fluid leakage.

The original snubber (TVA Serial No. M0503) was rebuilt. Rebuild included replacement of a main cylinder tube.

The replacement snubber (ADH-2000-1591) is a new snubber and was functionally tested satisfactorily by the vendor.

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed

Stephen C. Williams  
Owner or Owner's Designee, Title

System Engineer

Date

5/7

, 20 03

### 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 Tennessee and employed by HSB CT of Connecticut

have inspected the components described in this Owner's Report during the period 3.7.03 to 3.12.03, 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.

Albert T. Ladd  
Inspector's Signature

Commissions

TN 3135

AB IN NS

National Board, State, Province, and Endorsements

Date

May 30 20 03

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

1. Owner Tennessee Valley Authority (TVA) Date May 7, 2003  
Name  
1101 Market Street  
Address  
Chattanooga, TN 37402-2801
2. Plant Browns Ferry Nuclear Plant (BFN) Unit 2  
Name  
P. O. Box 2000, Decatur, AL 35609-2000 Work Orders (WO) 03-002011-000, 03-002012-000 and 03-006052-000  
Address Repair/Replacement Organization P.O. No., Job No., etc.
3. Work Performed by TVA-BFN Type Code Symbol Stamp N/A  
Name  
P. O. Box 2000, Decatur, AL 35609-2000 Authorization No. N/A  
Address Expiration Date N/A
4. Identification of System System 085, Control Rod Drive System (ASME Code Class 2 equivalent)
5. (a) Applicable Construction Code USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

## 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
CRD Hydraulic Control Unit Accumulator	General Electric	H3855	N/A	2-ACC-085-718/5043	Unknown	Removed	Yes
CRD Hydraulic Control Unit Accumulator	General Electric	H0638	N/A	2-ACC-085-718/5043	1977	Installed	Yes
CRD Hydraulic Control Unit Accumulator	General Electric	None Found	N/A	2-ACC-085-718/3823	Unknown	Removed	Unknown
CRD Hydraulic Control Unit Accumulator	General Electric	H0613	N/A	2-ACC-085-718/3823	1977	Installed	Yes
CRD Hydraulic Control Unit Accumulator	General Electric	A4704	N/A	2-ACC-085-718/5843	Unknown	Removed	Yes
CRD Hydraulic Control Unit Accumulator	General Electric	H0785	N/A	2-ACC-085-718/5843	1977	Installed	Yes

7. Description of Work Replaced 3 CRD Hydraulic Control Unit accumulators with new accumulators
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐  
Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in Contract 73C60-75210, HAR-03-0410, 93185033, PEG pkg 030221-CHM653HA0 and Design Criteria BFN-50-7085 and BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks Replaced 3 CRD Hydraulic Control Unit accumulators with new accumulators. Manufacturers' Data Reports attached.

Applicable Manufacturer's Data Reports to be attached

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed *Stephen C. L. Williams*, System Engineer  
Owner or Owner's Designee, Title

Date 5/9, 20 03

### 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 of Tennessee or Province of Connecticut and employed by HSB CT of Connecticut have inspected the components described in this Owner's Report during the period 2-28-03 to 5-29-03, 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.

*George Deaton*  
Inspector's Signature

Commissions TN 3178  
National Board, State, Province, and Endorsements

Date 5/29 20 03

**FORM U-1A MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS**  
(Alternate Form for Single Chamber, Completely Shop-Fabricated Vessels Only)  
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured by General Electric Company, P.O. Box 780, Wilmington, N.C.  
2. Manufactured for Same as Above  
3. Location of Installation \_\_\_\_\_  
4. Type Vertical H0638 105D6138 G001 N/R (Year Built) 1977  
(HORIZ. OR VERT. TANK) (Mfg's Serial No.) (CRN) (Drawing No.) (Nat'l Bld No.)  
5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1, 1974 and Addenda to S-75 and Code Case Nos. \_\_\_\_\_  
(Year) (Date)  
Special Service per UG-120(d) As Per This Data Report - See Remarks Below  
Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: N/A

6. Shell: Matl. SA-106 Gr. B Nom. .55 In. Allow. \_\_\_\_\_ In. Diam. 8.70 In. Lgth. 3 ft 2.38 In.  
(Spec. No., Grade)  
7. Seams: Long. N/A Seamless R.T. N/A Efficiency \_\_\_\_\_ % H.T. Temp. \_\_\_\_\_ F Time \_\_\_\_\_ hr  
(Welded, Dbl, Sngl, Lap, Butt) (Spot or Full)  
Girth No Welding Performed R.T. \_\_\_\_\_ No. of Courses \_\_\_\_\_  
(Welded, Dbl, Sngl, Lap, Butt) (Spot, Partial, or Full)  
8. Heads: (a) Material SA-182-F304 (b) Material SA-182-F304  
(Spec. No., Grade) (Spec. No., Grade)

Location (Top, Bottom, Ends)	Min. Thk.	Corr. Allow.	Crown Radius	Knuckle Radius	Ellipse Ratio	Conical Apex Angle	Hemiph. Radius	Flat Diam.	Side to Pressure (Convex or Concave)
(a) <u>Top</u>	<u>2.5"</u>							<u>7.230</u>	<u>Flathead</u>
(b) <u>Bottom</u>	<u>2.5"</u>							<u>7.230</u>	<u>Flathead</u>

If removable, bolts used (describe other fastenings) 500-13 Bolts-ASME-SA193-B7 for Split Flanges (4)  
(Material, Spec. No., Gr., Size, No.)

9. Constructed for max. allowable working pressure 2100 psi at max. temp. 400° F. Min. temp. (when less than -20 F) \_\_\_\_\_ F. Hydrostatic, pneumatic, or combination test pressure 3200 psi.  
10. Safety Valve Outlets: Number NONE Size \_\_\_\_\_ Location \_\_\_\_\_

11. Nozzles and Inspection Openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
<u>Gas Port</u>	<u>1</u>	<u>75"</u>	<u>Split Flng.</u>	<u>30455</u>	<u>1.060</u>	<u>None</u>	<u>Bolts (4)</u>	<u>Bottom</u>
<u>Water Port</u>	<u>1</u>	<u>.97"</u>	<u>Split Flng.</u>	<u>30455</u>	<u>1.300</u>	<u>None</u>	<u>Bolts (4)</u>	<u>Top</u>

12. Supports: Skirt No Lugs No Legs No Other \_\_\_\_\_ Attached \_\_\_\_\_  
(Yes or no) (No.) (No.) (Describe) (Where and how)

13. Remarks: Complete Mechanical Assembly with No Welded Joints.

Although A Differential Pressure Exists on each side of the Internal Piston, the Accumulator Cylinder is Hydrostatically tested with the Piston removed. The Hydro Test pressure is based on the higher design pressure.

**CERTIFICATE OF COMPLIANCE**

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

Date 9-7-77 Signed General Electric Co. by J. H. H. H. H.  
(Manufacturer) (Representative)

"U" Certificate of Authorization No. 10,572 expires June 10, 19 78

**CERTIFICATE OF SHOP INSPECTION**

Vessel made by General Electric Company at Wilmington, N.C.

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N. Carolina and employed by Dept of Labor have inspected the pressure vessel described in this Manufacturers' Data Report on 9-7-77 and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in the Manufacturers' 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.

Signed J. H. H. H. H. Date 9-7-77 Commission NC 723, PA. WC1766, Ohio  
(Inspector) (Nat'l Board, State, Province and No.)

**FORM U-1A MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS**  
 (Alternate Form for Single Chamber, Completely Shop-Fabricated Vessels Only)  
 As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured by General Electric Company, P.O. Box 780, Wilmington, N.C.  
 2. Manufactured for Same as Above  
 3. Location of Installation \_\_\_\_\_  
 4. Type Vertical H0613 105D6138G001 N/R (Year Built) 1977  
 (Horiz or vert tank) (Mfg's Serial No.) (CRN) (Drawing No.) (Nat'l Bld No.)  
 5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 197A and Addends to S-175 and Code Case Nos. \_\_\_\_\_  
 (Year) (Date)  
 Special Service per UG-120(d) As Per This Data Report - See Remarks Below  
 Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: N/A

6. Shell: Matl. SA-106 Gr. B Thk. .55 in. Allow. 8.70 in. 3 ft 2.38 in.  
 (Spec. No., Grade) (Nom.) (Corr.) (In. Diam.) (In. Lgth.)

7. Seams: Long. N/A Seamless R.T. N/A Efficiency --- % H.T. Temp. --- F Time --- hr  
 (Welded, Dbl, Sngl, Lap, Butt) (Spot or Full) (No. of Courses)  
 Girth No Welding Performed R.T. (Spot, Partial, or Full)

8. Heads: (a) Material SA-182-F304 (b) Material SA-182-F304  
 (Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Min. Thk.	Corr. Allow.	Crown Radius	Knuckle Radius	Ellipse Ratio	Conical Apex Angle	Hemisp. Radius	Flat Diam.	Side to Pressure (Convex or Concave)
(a)	Top	2.5"							7.230	Flathead
(b)	Bottom	2.5"							7.230	Flathead

If removable, bolts used (describe other fastenings) 500-13 Bolts-ASME-SA193-B7 for Split Flanges (4)  
 (Material, Spec. No., Gr., Size, No.)

9. Constructed for max. allowable working pressure 2100 psi at max. temp. 400 F. Min. temp. (when less than -20 F) --- F. Hydrostatic, pneumatic, or combination test pressure 3200 psi.

10. Safety Valve Outlets: Number None Size --- Location ---

11. Nozzles and Inspection Openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
Gas Port	1	.75"	Split Flng.	30455	1.060	None	Bolts	(4) Bottom.
Water Port	1	.97"	Split Flng.	30455	1.300	None	Bolts	(4) Top

12. Supports: Skirt No Lugs --- Legs --- Other --- Attached ---  
 (Yes or no) (No.) (No.) (Describe) (Where and how)

13. Remarks: Complete Mechanical Assembly with No Welded Joints.

Although A Differential Pressure Exists on each side of the Internal Piston, the Accumulator Cylinder is Hydrostatically tested with the Piston removed. The Hydro Test pressure is based on the higher design pressure.

**CERTIFICATE OF COMPLIANCE**

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

Date 9-23-77 Signed General Electric Co. by [Signature]  
 (Manufacturer) (Representative)

"U" Certificate of Authorization No. 10,572 expires June 10, 1978

**CERTIFICATE OF SHOP INSPECTION**

Vessel made by General Electric Co. at Wilmington, N. C.

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N. Carolina and employed by Dept. Of Labor have inspected the pressure vessel described in this Manufacturers' Data Report on 9/24 19 77, and state that to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in the Manufacturers' 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.

Signed [Signature] Date 9/24/77 Commissions NC 723 PA WC1766 OHIO  
 (Inspector) (Nat'l Board, State, Province and No.)



**FORM U-1A MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS**  
(Alternate Form for Single Chamber, Completely Shop-Fabricated Vessels Only)  
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured by General Electric Company, P.O. Box 780, Wilmington, N.C.  
 2. Manufactured for Same as Above  
 3. Location of Installation \_\_\_\_\_  
 4. Type Vertical H0785 105D6138G001 N/R (Year Built) 1977  
(Horiz. or vert. tank) (Mfg's Serial No.) (CRN) (Drawing No.) (Nat'l Bld No.)  
 5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1974 and Addenda to S 75 and Code Case Nos. ---  
(Year) (Date)  
 Special Service per UG-120(d) As Per This Data Report - See Remarks Below  
 Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: N/A

6. Shell: Matl. SA-106 Gr. B .55 in. Thk. --- in. Diam. 8.70 in. Lgth. 3 ft 2.38 in.  
(Spec. No., Grade) (Nom. Thk. Allow.)  
 7. Seams: Long. N/A Seamless R.T. N/A Efficiency --- % H.T. Temp. --- F Time --- hr  
(Welded, Dbl, Sngl, Lap, Butt) (Spot or Full)  
 Girth No Welding Performed R.T. --- No. of Courses ---  
(Welded, Dbl, Sngl, Lap, Butt) (Spot, Partial, or Full)  
 8. Heads: (a) Material SA-182-F304 (b) Material SA-182-F304  
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Min. Thk.	Corr. Allow.	Crown Radius	Knuckle Radius	Ellipse Ratio	Conical Apex Angle	Hemisph. Radius	Flat Diam.	Side to Pressure (Convex or Concave)
(a)	<u>Top</u>	<u>2.5"</u>							<u>7.230</u>	<u>Flathead</u>
(b)	<u>Bottom</u>	<u>2.5"</u>							<u>7.230</u>	<u>Flathead</u>

If removable, bolts used (describe other fastenings) 500-13 Bolts-ASME-SA193-B7 for Split Flanges (4)  
(Material, Spec. No., Gr., Size, No.)

9. Constructed for max. allowable working pressure 2100 psi at max. temp. 400 F. Min. temp. (when less than -20 F) --- F. Hydrostatic, pneumatic, or combination test pressure 3200 psi.

10. Safety Valve Outlets: Number None Size --- Location ---

11. Nozzles and Inspection Openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
<u>Gas Port</u>	<u>1</u>	<u>.75"</u>	<u>Split Flng.</u>	<u>30455</u>	<u>1.060</u>	<u>None</u>	<u>Bolts</u>	<u>(4) Bottom.</u>
<u>Water Port</u>	<u>1</u>	<u>.97"</u>	<u>Split Flng.</u>	<u>30455</u>	<u>1.300</u>	<u>None</u>	<u>Bolts</u>	<u>(4) Top</u>

12. Supports: Skirt No Lugs --- Legs --- Other --- Attached ---  
(Yes or no) (No.) (No.) (Describe) (Where and how)

13. Remarks: Complete Mechanical Assembly with No Welded Joints.

Although A Differential Pressure Exists on each side of the Internal Piston, the Accumulator Cylinder is Hydrostatically tested with the Piston removed. The Hydro Test pressure is based on the higher design pressure.

**CERTIFICATE OF COMPLIANCE**

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

Date 11-15-77 Signed General Electric Co. by [Signature]  
(Manufacturer) (Representative)

"U" Certificate of Authorization No. 10,572 expires June 10, 1978

**CERTIFICATE OF SHOP INSPECTION**

Vessel made by General Electric Co. at Wilmington, N. C.

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N. Carolina and employed by Dept Of Labor have inspected the pressure vessel described in this Manufacturers' Data Report on 11-15-19 77 and state that to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in the Manufacturers' 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.

Signed [Signature] Date 11-15-77 Commissions NC 723, PA. WC1766, OHIO  
(Inspector) (Nat'l Board, State, Province and No.)

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

1. Owner <u>Tennessee Valley Authority (TVA)</u> Name <u>1101 Market Street</u> Address <u>Chattanooga, TN 37402-2801</u> Address 2. Plant <u>Browns Ferry Nuclear Plant (BFN)</u> Name <u>P. O. Box 2000, Decatur, AL 35609-2000</u> Address 3. Work Performed by <u>TVA-BFN</u> Name <u>P. O. Box 2000, Decatur, AL 35609-2000</u> Address	Date <u>May 7, 2003</u> Sheet <u>1</u> of <u>1</u> Unit <u>2</u> Work Orders (WO) <u>02-004844-000 and 02-010075-000</u> Repair/Replacement 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 System 001, Main Steam System (ASME Code Class 2 equivalent)

5. (a) Applicable Construction Code ASME III CL.2 '89 (VALVE) USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A Code Case 5C W 5/28/03

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Off-gas Preheater CKV	FLOWERVE	E966A-1-1	N/A	2-CKV-001-0742	2000	*	No
* - replaced valve disc and bolting							
disc	FLOWERVE	N/A	N/A	2-CKV-001-0742		Removed	No
disc	FLOWERVE	N/A	N/A	2-CKV-001-0742		Replaced	No
bolting	FLOWERVE	N/A	N/A	2-CKV-001-0742		Removed	No
bolting	NOVA	N/A	N/A	2-CKV-001-0742		Replaced	No
Off-gas Preheater CKV	FLOWERVE	E966A-1-2	N/A	2-CKV-001-0744	2000	**	No
** - replaced valve disc							
disc	FLOWERVE	N/A	N/A	2-CKV-001-0744		Removed	No
disc	FLOWERVE	N/A	N/A	2-CKV-001-0744		Replaced	No

7. Description of Work Replaced valve disc on both check valves and flange bolting on 2-CKV-001-0742.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐  
 Other ☐ Pressure N/A psi Test Temp. N/A °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.

\*as amended by additional quality assurance requirements found in Contract 1474286, PO 1721/Release 176, PO 1827/Release 445, and Design Criteria BFN-50-7001 and BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks Replaced valve disc on both check valves and flange bolting on 2-CKV-001-0742.

Applicable Manufacturer's Data Reports to be attached

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed

Stephen C. Willard  
Owner or Owner's Designee, Title

System Engineer

Date

5/9, 20 03

### 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 of Tennessee and employed by HSB CT of Connecticut

have inspected the components described in this Owner's Report during the period 3-7-03 to 3-16-03, 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.

Robert Tash  
Inspector's Signature

Commissions

TN3135 A B I N N S  
National Board, State, Province, and Endorsements

Date

May 20, 20 03

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

## As Required by the Provisions of the ASME Code Section XI

1. Owner Tennessee Valley Authority (TVA) Date May 12, 2003  
Name  
1101 Market Street  
Address  
Chattanooga, TN 37402-2801
2. Plant Browns Ferry Nuclear Plant (BFN) Unit 2  
Name  
P. O. Box 2000, Decatur, AL 35609-2000  
Address  
Work Orders (WO) 03-001972-000 and 03-003606-000  
Repair/Replacement Organization P.O. No., Job No., etc.
3. Work Performed by TVA-BFN Type Code Symbol Stamp N/A  
Name  
P. O. Box 2000, Decatur, AL 35609-2000  
Address  
 Authorization No. N/A  
 Expiration Date N/A
4. Identification of System System 001, Main Steam System (ASME Code Class 2 equivalent)
5. (a) Applicable Construction Code USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

### 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
RFPT 2C HP Steam Stop Valve	General Electric	N/A	N/A	2-FCV-001-0143	N/A	*	No
* - Replaced valve disc							
Valve disc	General Electric	N/A	N/A	2-FCV-001-0143	N/A	Removed	No
Valve disc	General Electric	N/A	N/A	2-FCV-001-0143	N/A	Installed	No
RFPT 2B HP Steam Stop Valve	General Electric	N/A	N/A	2-FCV-001-0135	N/A	*	No
* - Replaced valve disc							
Valve disc	General Electric	N/A	N/A	2-FCV-001-0135	N/A	Removed	No
Valve disc	General Electric	N/A	N/A	2-FCV-001-0135	N/A	Installed	No

7. Description of Work Replaced the valve disc on both valves.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐  
 Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in VTM-G080-6870 and Design Criteria BFN-50-7001 and BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks Replaced the valve disc on both valves.

Applicable Manufacturer's Data Reports to be attached

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed

Stephen C. Williams  
Owner or Owner's Designee, Title

System Engineer

Date

5/12, 20 03

### 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 Tennessee and employed by HSB CT of Connecticut have inspected the components described in this Owner's Report during the period 3.7.03 to 5.9.03, 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.

Albert Ladd  
Inspector's Signature

Commissions

TN 3135 ABENNS  
National Board, State, Province, and Endorsements

Date

May 29 20 03

BFPER 03-004029

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

## As Required by the Provisions of the ASME Code Section XI

1. Owner Tennessee Valley Authority (TVA) Date May 12, 2003  
Name  
1101 Market Street  
Address  
Chattanooga, TN 37402-2801
2. Plant Browns Ferry Nuclear Plant (BFN) Unit 2  
Name  
P. O. Box 2000, Decatur, AL 35609-2000  
Address  
Work Order (WO) 02-004442-000  
Repair/Replacement Organization P.O. No., Job No., etc.
3. Work Performed by TVA-BFN Type Code Symbol Stamp N/A  
Name  
P. O. Box 2000, Decatur, AL 35609-2000  
Address  
 Authorization No. N/A  
 Expiration Date N/A
4. Identification of System System 001, Main Steam System (ASME Code Class 2 equivalent)
5. (a) Applicable Construction Code USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

### 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Main Steam Drain Piping	Dravo	N/A	N/A	N/A	N/A	Removed	No
Main Steam Drain Piping	Consolidated / US Steel/ Bonney Forge	N/A	N/A	N/A	N/A	Installed	No

7. Description of Work Replaced a section of 1½" Main Steam drain piping an fittings
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐  
\*- Reference Code Case N-416-1  
 Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in Contract 68C37-91602 and Design Criteria BFN-50-7001 and BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks Replaced a section of 1 1/2" Main Steam drain piping an fittings. Reference Code Case N-416-1

Applicable Manufacturer's Data Reports to be attached

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed Stephen C. Wilbur, System Engineer

Owner or Owner's Designee, Title

Date 5/12, 20 03

### 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 Tennessee and employed by HSB CT of  
Connecticut have inspected the components described

in this Owner's Report during the period 4.24.02 to 5.1.02, 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.

Albert T. Feld  
Inspector's Signature

Commissions

TN 3BS A B F N NS  
National Board, State, Province, and Endorsements

Date May 23 2003

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

<b>1. Owner</b> <u>Tennessee Valley Authority (TVA)</u> <div style="text-align: center; font-size: small;">Name</div> <u>1101 Market Street</u> <u>Chattanooga, TN 37402-2801</u> <div style="text-align: center; font-size: small;">Address</div>	<b>Date</b> <u>May 12, 2003</u>  <b>Sheet</b> <u>1</u> <b>of</b> <u>1</u>  <b>Unit</b> <u>2</u> <b>Work Order (WO)</b> <u>02-006492-000 and 01-007381-001</u> <div style="text-align: center; font-size: small;">Repair/Replacement Organization P.O. No., Job No., etc.</div>
<b>2. Plant</b> <u>Browns Ferry Nuclear Plant (BFN)</u> <div style="text-align: center; font-size: small;">Name</div> <u>P. O. Box 2000, Decatur, AL 35609-2000</u> <div style="text-align: center; font-size: small;">Address</div>	<b>Type Code Symbol Stamp</b> <u>N/A</u> <b>Authorization No.</b> <u>N/A</u> <b>Expiration Date</b> <u>N/A</u>
<b>3. Work Performed by</b> <u>TVA-BFN</u> <div style="text-align: center; font-size: small;">Name</div> <u>P. O. Box 2000, Decatur, AL 35609-2000</u> <div style="text-align: center; font-size: small;">Address</div>	

**4. Identification of System** System 001, Main Steam System (ASME Code Class 2 equivalent)

ASME Section III, Article 9, 1965 and

**5. (a) Applicable Construction Code** ASME Section III 19 68 Edition, Summer 1970 Addenda, N/A Code Case

**(b) Applicable Edition of Section XI Utilized for Repairs or Replacements** 19 95 Edition, 1996 Addenda

**6. Identification of Components**

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Main Steam Relief Valve	Target Rock Corp. 7567F-000-10	1070	N/A	2-PCV-001-0022	1968	Removed	No
Main Steam Relief Valve	Target Rock Corp. 7567F-000-10	1059	N/A	2-PCV-001-0022	1968	Installed	No

**7. Description of Work** Replaced Main Steam Relief valve main body. Replaced the inlet and outlet bolting.

---

**8. Tests Conducted:** Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐

Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in GE P. O. 205AJ600, and Design Criteria BFN-50-7001 and BFN-50-C-7105.



## FORM NIS-2 (Back)

9. Remarks The main valve body was replaced with rebuilt valve body previously used on Unit 3 (same manufacturer/model number).  
Applicable Manufacturer's Data Reports to be attached  
As a part of the Tech Spec required valve inspections WO 02-006492-000 replaced 2-PCV-001-0022 with a rebuilt valve previously used  
in BFN Unit 3 (3-PCV-001-0019, S/N 1059) and installed new inlet and outlet flange studs and nuts. The replacement valve was removed  
from Unit 3 by WO 01-007381-000 and refurbished by WO 01-007381-001 (A pressure retaining bolt was replaced under WO 01-007381-001).  
Inlet studs and outlet studs and nuts were replaced for ease of maintenance and ALARA considerations.

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

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

Signed Stephen C. Withers, System Engineer Date 5/12, 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 Tennessee and employed by HSB CT of Connecticut

have inspected the components described  
 in this Owner's Report during the period 9.20.02 to 3.13.03, 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.

Albert Ladd Commissions TN 3135 "A" "B" "I" "N" "NS"  
Inspector's Signature National Board, State, Province, and Endorsements

Date May 23 20 03

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

## As Required by the Provisions of the ASME Code Section XI

1. Owner Tennessee Valley Authority (TVA) Date May 12, 2003  
1101 Market Street Name  
Chattanooga, TN 37402-2801 Address  
 Sheet 1 of 1
2. Plant Browns Ferry Nuclear Plant (BFN) Unit 2  
P. O. Box 2000, Decatur, AL 35609-2000 Name  
 Address Work Order (WO) 99-013131-000  
 Repair/Replacement Organization P.O. No., Job No., etc.
3. Work Performed by TVA-BFN Type Code Symbol Stamp N/A  
P. O. Box 2000, Decatur, AL 35609-2000 Name  
 Address Authorization No. N/A  
 Expiration Date N/A
4. Identification of System System 074, Residual Heat Removal (RHR) System (ASME Code Class 1 equivalent)
5. (a) Applicable Construction Code USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A Code Case  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 Edition, 1996 Addenda

### 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
RHR Shutdown Cooling Outbd Vlv	Walworth 20" 5232PSB 600# Gate Vlv	N/A	N/A	2-FCV-074-0047	Unknown	*	No
* - Replaced valve disc							
valve disc	Walworth	Unknown	N/A	2-FCV-074-0047	Unknown	Removed	No
valve disc	Crane Aloyco	A6331	N/A	2-FCV-074-0047	1989	Installed	No

7. Description of Work Replaced valve disc.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐  
 Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in Contract 87NNR-375838, Dwg A-12332-M-1-C and Design Criteria BFN-50-7074 and BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks Replaced valve disc.

Applicable Manufacturer's Data Reports to be attached

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed

Stephen C. Willard  
Owner or Owner's Designee, Title System Engineer

Date

5/13, 20 03

### 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 Tennessee and employed by HSB CT of Connecticut have inspected the components described

in this Owner's Report during the period 3.7.03 to 3.14.03, 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.

Albert Ladd  
Inspector's Signature

Commissions

TN 3135 ABEN NS  
National Board, State, Province, and Endorsements

Date

May 22 2003

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

<p>1. Owner <u>Tennessee Valley Authority (TVA)</u>  <small>Name</small>  <u>1101 Market Street</u>  <small>Address</small>  <u>Chattanooga, TN 37402-2801</u></p>	<p>Date <u>May 13, 2003</u></p> <p>Sheet <u>1</u> of <u>2</u></p>
<p>2. Plant <u>Browns Ferry Nuclear Plant (BFN)</u>  <small>Name</small>  <u>P. O. Box 2000, Decatur, AL 35609-2000</u>  <small>Address</small></p>	<p>Unit <u>2</u></p> <p>Design Change Notice (DCN) T40978A,          Work Plan T40978-003, Work Order (WO) 98-014823-000  <small>Repair/Replacement Organization P.O. No., Job No., etc.</small></p>
<p>3. Work Performed by <u>TVA-BFN</u>  <small>Name</small>  <u>P. O. Box 2000, Decatur, AL 35609-2000</u>  <small>Address</small></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>

4. Identification of System System 077, Radwaste System (ASME Code Class 2 equivalent)  
(valves) ASME Section III, Class 2, 1989 Edition (Equivalent)

5. (a) Applicable Construction Code (piping) USAS B31.1.0 19 67 \* Edition, N/A Addenda, N/A 5/23/03 AT 5/23/03  
Code Case

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 95 Edition, 1996 Addenda

6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Drywell Floor Drain Sump Inbd Isolation Valve	Velan B10-064B-2TS	N/A	N/A	2-FCV-077-0002A	Unknown	Removed	No
Drywell Floor Drain Sump Inbd Isolation Valve	Worcester Controls	99-0048-1	N/A	2-FCV-077-0002A	2000	Installed	No
Drywell Floor Drain Sump Outbd Isolation Valve	Velan B10-064B-2TS	N/A	N/A	2-FCV-077-0002B	Unknown	Removed	No
Drywell Floor Drain Sump Outbd Isolation Valve	Worcester Controls	99-0048-2	N/A	2-FCV-077-0002B	2000	Installed	No
piping	Unknown	N/A	N/A	N/A	N/A	Removed	No
piping	Consolidated Power Supply	N/A	N/A	N/A	N/A	Installed	No

Identification of Components continued on Page 2

7. Description of Work Replaced the Drywell Floor Drain Sump Inbd and Outbd Isolation Valves and the piping in between the valves.  
Modified a support and removed four snubbers.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐  
\*\* - Reference Code Case N-416-1  
 Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in Contracts 250534 & 1364025 and Design Criteria BFN-50-7064 Att 5, BFN-50-7077 and BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks Replaced the Drywell Floor Drain Sump Inbd and Outbd Isolation Valves (2-FCV-077-0002A & -0002B and  
Applicable Manufacturer's Data Reports to be attached  
and the piping in between the valves. Modified pipe support 2-47B482S0025 and permanently removed snubbers 2-SNUB-077-5001, .  
2-SNUB-077-5002, 2-SNUB-077-5007 and 2-SNUB-077-5008. Reference Code Case N-416-1. VT-2 performed during 2-SI-3.3.2.A.

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed Stephen C. Wilford, System Engineer  
Owner or Owner's Designee, Title

Date 5/19, 2003

### 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 Tennessee and employed by HSB CT of  
Connecticut have inspected the components described

in this Owner's Report during the period 02-07-01 to 3-10-03, 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.

Albert Ladd  
Inspector's Signature

Commissions TN 3135 "A" "B" "T" "N" "NS"  
National Board, State, Province, and Endorsements

Date May 23 2003

# FORM NIS-2 OWNER'S REPORT FOR REPAIRS/REPLACEMENT ACTIVITY

## SUPPLEMENTAL SHEET

1. Owner Tennessee Valley Authority (TVA) Date May 13, 2003  
1101 Market Street Name  
Chattanooga, TN 37402-2801 Address
2. Plant Browns Ferry Nuclear Plant (BFN) Sheet 2 of 2  
P. O. Box 2000, Decatur, AL 35609-2000 Name Unit 2  
P. O. Box 2000, Decatur, AL 35609-2000 Address
3. Work Performed by TVA-BFN Design Change Notice (DCN) T40978A,  
P. O. Box 2000, Decatur, AL 35609-2000 Name Work Plan T40978-003, Work Order (WO) 98-014823-000  
P. O. Box 2000, Decatur, AL 35609-2000 Address Repair/Replacement Organization P.O. No., Job No., etc.  
Type Code Symbol Stamp N/A
4. Identification of System System 077, Radwaste System (ASME Code Class 2 equivalent) Authorization No. N/A  
Expiration Date N/A
5. (a) Applicable Construction Code USAS B31.1.0 19 67\* Edition, N/A Addenda, N/A Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 85, 1996 Addenda
6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Pipe Support	TVA	N/A	N/A	2-47B482S0025	N/A	Corrected	No
Pipe Support Snubber	Pacific Scientific	10668	N/A	2-SNUB-077-5001 2-47B482S0133L	N/A	Removed	No
Pipe Support Snubber	Pacific Scientific	17828	N/A	2-SNUB-077-5002 2-47B482S0133N	N/A	Removed	No
Pipe Support Snubber	Pacific Scientific	10539	N/A	2-SNUB-077-5007 2-47B482S0134L	N/A	Removed	No
Pipe Support Snubber	Pacific Scientific	12066	N/A	2-SNUB-077-5008 2-47B482S0134S	N/A	Removed	No

**FORM NIS-2, SUPPLEMENTAL SHEET (Back)**

Remarks See Remarks on the back of Page 1.

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

<b>1. Owner</b> <u>Tennessee Valley Authority (TVA)</u> <div style="text-align: center;"><small>Name</small></div> <u>1101 Market Street</u> <div style="text-align: center;"><small>Address</small></div> <u>Chattanooga, TN 37402-2801</u> <div style="text-align: center;"><small>Address</small></div>	<b>Date</b> <u>May 15, 2003</u>  <b>Sheet</b> <u>1</u> <b>of</b> <u>2</u>  <b>2. Plant</b> <u>Browns Ferry Nuclear Plant (BFN)</u> <div style="text-align: center;"><small>Name</small></div> <u>P. O. Box 2000, Decatur, AL 35609-2000</u> <div style="text-align: center;"><small>Address</small></div>
<b>3. Work Performed by</b> <u>TVA-BFN</u> <div style="text-align: center;"><small>Name</small></div> <u>P. O. Box 2000, Decatur, AL 35609-2000</u> <div style="text-align: center;"><small>Address</small></div>	<b>Unit</b> <u>2</u>  <b>Design Change Notice (DCN) 51246A,</b> <b>Work Orders (WO) 02-006939-000, -001 and -003</b> <div style="text-align: center;"><small>Repair/Replacement Organization P.O. No., Job No., etc.</small></div> <b>Type Code Symbol Stamp</b> <u>N/A</u>  <b>Authorization No.</b> <u>N/A</u>  <b>Expiration Date</b> <u>N/A</u>
<b>4. Identification of System</b> <u>System 068, Reactor Recirculation System (ASME Code Class 1 equivalent)</u> <div style="text-align: center;"><small>(valves) ASME Section III, 1986 Edition (less N-stamp)</small></div>	
<b>5. (a) Applicable Construction Code</b> <u>(piping) USAS B31.1.0 19 67 * Edition, N/A Addenda, N/A Code Case</u>  <b>(b) Applicable Edition of Section XI Utilized for Repairs or Replacements</b> <u>19 95 Edition, 1996 Addenda</u>	

## 6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Recirc Pump A Suction Drain	Hancock 7150W1XMY3	N/A	N/A	2-DRV-068-0505	N/A	Removed	No
Recirc Pump A Suction Drain	FLOWERVE W0226005	E663-T-1-4	N/A	2-DRV-068-0505	2002	Installed	No
Recirc Pump A Suction Drain	Hancock 7150W1XMY3	N/A	N/A	2-DRV-068-0506	N/A	Removed	No
Recirc Pump A Suction Drain	FLOWERVE W0226005	E663-T-1-3	N/A	2-DRV-068-0506	2002	Installed	No
Recirc Pump B Suction Drain	Hancock 7150W1XMY3	N/A	N/A	2-DRV-068-0520	N/A	Removed	No
Recirc Pump B Suction Drain	FLOWERVE W0226005	E663-T-1-1	N/A	2-DRV-068-0520	2002	Installed	No

Identification of Components continued on Page 2

**7. Description of Work** Replaced four 2" drain valves and piping.

**8. Tests Conducted:** Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐  
\*\* - Reference Code Case N-416-1.  
 Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in Contract 1721-00154 and Design Criteria BFN-50-7068 and BFN-50-C-7105.



FORM NIS-2 (Back)

9. Remarks Replaced four 2" drain valves and piping. Reference Code Case N-416-1

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed Stephen G. Willard, System Engineer  
Owner or Owner's Designee, Title

Date 5/19, 2003

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 Tennessee and employed by HSB CT of Connecticut have inspected the components described

in this Owner's Report during the period 2.6.03 to 3.13.03, 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.

Albert Todd  
Inspector's Signature

Commissions TN 3135 "A" "B" "I" "N" "S"  
National Board, State, Province, and Endorsements

Date May 23 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS/REPLACEMENT ACTIVITY  
SUPPLEMENTAL SHEET**

1. Owner Tennessee Valley Authority (TVA)

Date May 15, 2003

1101 Market Street

Sheet 2 of 2

Chattanooga, TN 37402-2801

Unit 2

2. Plant Browns Ferry Nuclear Plant (BFN)

...and the fact that the ...

**Design Change Notice (DCN) 51246A,**

Work Orders (W/O) 02-006939-000, .001 and .003

Type Code Symbol Stamp N/A

3. Work Performed by TVA-BFN Address

P. O. Box 2000, Decatur, AL 35609-2000

Authorization No. N/A

Expiration Date	N/A
-----------------	-----

4. Identification of System, System 068, Reactor Recirculation System (ASME Code Class 1 equivalent)

5. (a) Applicable Construction Code	(valves) ASME Section III, 1986 Edition (less N-stamp) (piping) USAS 831.1.0, 1986 Edition	N/A	Addenda	N/A	Code Case
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5. (a) Applicable Construction Code (b) (4) USAS B31.10 19 67 Edition, N/A Addenda, N/A Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95 1996 Addenda

6. Identification of Components

[illegible]

**FORM NIS-2, SUPPLEMENTAL SHEET (Back)**

Remarks See Remarks on the back of Page 1.

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

## As Required by the Provisions of the ASME Code Section XI

<p>1. Owner <u>Tennessee Valley Authority (TVA)</u>  <small>Name</small>  <u>1101 Market Street</u>  <small>Address</small>  <u>Chattanooga, TN 37402-2801</u>  <small>Address</small></p> <p>2. Plant <u>Browns Ferry Nuclear Plant (BFN)</u>  <small>Name</small>  <u>P. O. Box 2000, Decatur, AL 35609-2000</u>  <small>Address</small></p> <p>3. Work Performed by <u>TVA-BFN</u>  <small>Name</small>  <u>P. O. Box 2000, Decatur, AL 35609-2000</u>  <small>Address</small></p>	<p>Date <u>May 15, 2003</u></p> <p>Sheet <u>1</u> of <u>1</u></p> <p>Unit <u>2</u></p> <p>Design Change Notice (DCN) <u>51308A</u>,          Work Order (WO) <u>02-009276-001</u>  <small>Repair/Replacement Organization P.O. No., Job No., etc.</small></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>System 068, Reactor Recirculation System (ASME Code Class 1 equivalent)</u></p>	
<p>5. (a) Applicable Construction Code <u>USAS B31.1.0</u> 19 <u>67</u> * Edition, <u>N/A</u> Addenda, <u>N/A</u> Code Case</p> <p>(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 <u>95</u> Edition, 1996 Addenda</p>	

6. Identification of Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Strain Gauge	HITEC Products Inc NBW2-35-125-9-20F6-FB-FSM	N/A	N/A	N/A	N/A	Installed	No
Strain Gauge	HITEC Products Inc NBW2-35-125-9-20F6-FB-FSM	N/A	N/A	N/A	N/A	Installed	No
Strain Gauge	HITEC Products Inc NBW2-35-125-9-20F6-FB-FSM	N/A	N/A	N/A	N/A	Installed	No
Strain Gauge	HITEC Products Inc NBW2-35-125-9-20F6-FB-FSM	N/A	N/A	N/A	N/A	Installed	No

7. Description of Work Installed four strain gauges on Recirc piping.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐ Exempt ☒ \*\*

\*\* - welding did not penetrate pressure boundary.

Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in DCN 51308A and Design Criteria BFN-50-7068 and BFN-50-C-7105.

## FORM NIS-2 (Back)

9. Remarks Installed four strain gauges on Recirc piping. Welding did not penetrate the pressure boundary therefore this activity was exempt  
Applicable Manufacturer's Data Reports to be attached  
from a hydrostatic pressure however this piping was examined during the Class 1 Primary System Pressure Test at the end  
of the U2C12 refueling outage.

### CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed

Stephen C. Williams  
Owner or Owner's Designee, Title

System Engineer

Date

5/19, 2003

### 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 Tennessee and employed by HSB CT of  
Connecticut

have inspected the components described  
 in this Owner's Report during the period 01/25/03 to 02/24/03 to 3-9-03, 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.

Albert T. Hall  
Inspector's Signature

Commissions

TN 3135 "A" "B" "I" "N" "NS"  
National Board, State, Province, and Endorsements

Date

May 27 2003

# FORM NIS-2 OWNER'S REPORT FOR REPAIR/REPLACEMENT ACTIVITY

As Required by the Provisions of the ASME Code Section XI

<b>1. Owner</b> <u>Tennessee Valley Authority (TVA)</u> <div style="text-align: center; font-size: small;">Name</div> <u>1101 Market Street</u> <div style="text-align: center; font-size: small;">Address</div> <u>Chattanooga, TN 37402-2801</u> <div style="text-align: center; font-size: small;">Address</div>	<b>Date</b> <u>May 13, 2003</u>  <b>Sheet</b> <u>1</u> <b>of</b> <u>2</u>  <b>Unit</b> <u>2</u>  <b>Work Orders (WO)</b> <u>02-009284-002, 02-009284-003 and 02-009284-009</u> <b>Design Change Notice (DCN)</b> <u>50729 Stage 1</u> <div style="text-align: center; font-size: small;">Repair/Replacement Organization P.O. No., Job No., etc.</div>
<b>2. Plant</b> <u>Browns Ferry Nuclear Plant (BFN)</u> <div style="text-align: center; font-size: small;">Name</div> <u>P. O. Box 2000, Decatur, AL 35609-2000</u> <div style="text-align: center; font-size: small;">Address</div>	<b>3. Work Performed by</b> <u>TVA-BFN</u> <div style="text-align: center; font-size: small;">Name</div> <u>P. O. Box 2000, Decatur, AL 35609-2000</u> <div style="text-align: center; font-size: small;">Address</div>
<b>Type Code Symbol Stamp</b> <u>N/A</u> <b>Authorization No.</b> <u>N/A</u> <b>Expiration Date</b> <u>N/A</u>	

**4. Identification of System** System 085, Control Rod Drive System (ASME Code Class 2 equivalent)

(valves) ASME Sec. III 1989 Edition (less N-stamp)

**5. (a) Applicable Construction Code** (piping) USAS B31.1.0 19 67<sup>th</sup> Edition, N/A Addenda, N/A Code Case

**(b) Applicable Edition of Section XI Utilized for Repairs or Replacements** 19 95 Edition, 1996 Addenda

**6. Identification of Components**

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Corrected, Removed, or Installed	ASME Code Stamped (Yes or No)
Root Valve to LS-85-45D (Bottom)	Kerotest	HAA 24-21	N/A	2-RTV-085-0277	N/A	Removed	No
Root Valve to LS-85-45D (Bottom)	Dresser/Hancock 2"-950W-3-XNC049	H594AAD	N/A	2-RTV-085-0277	1978	Installed	No
Root Valve to LS-85-45C (Bottom)	Kerotest	HAA 28-18	N/A	2-RTV-085-0278	N/A	Removed	No
Root Valve to LS-85-45C (Bottom)	Dresser/Hancock 2"-950W-3-XNC049	H572AAD	N/A	2-RTV-085-0278	1978	Installed	No

See Sheet 2 for continuation of component listing

**7. Description of Work** Replaced valves and piping on inlet side of level switches with larger diameter components

**8. Tests Conducted:** Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ Exempt ☐

\*\* - Reference Code Case N-416-1

Other ☐ Pressure N/A psi Test Temp. N/A °F

NOTE: Supplemental Sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.

\*as amended by additional quality assurance requirements found in Contract 68C37-91602 and Design Criteria BFN-50-7085 and BFN-50-C-7105.

FORM NIS-2 (Back)

9. Remarks Replaced valves and piping on inlet side of level switches 2-LS-085-45C, -45D, -45E and -45F with larger diameter components.

Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp N/A

Certificate of Authorization No. N/A

Expiration Date N/A

Signed Stephen C. Wilk, System Engineer  
Owner or Owner's Designee, Title

Date 5/19, 20 03

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 of Province of Tennessee and employed by HSB CT of Connecticut

have inspected the components described in this Owner's Report during the period 12-22-02 to 3-13-03, 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.

Albert Ladd  
Inspector's Signature

Commissions

TN3130

"A" "B" "I" "N" "NS"  
National Board, State, Province, and Endorsements

Date

May 22 20 03

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS/REPLACEMENT ACTIVITY**  
**SUPPLEMENTAL SHEET**

1. Owner Tennessee Valley Authority (TVA)

Date May 13, 2003

**1101 Market Street** **Name** \_\_\_\_\_

Chattanooga, TN 37402-2801

Sheet 2 of 2

2. Plant Browns Ferry Nuclear Plant (BFN)

Unit 2

**P. O. Box 2000, Decatur, AL 35609-2000**

**Work Orders (WO) 02-009284-002, 02-009284-003 and 02-009284-009**

**Design Change Notice (DCN) 50729 Stage 1**

**3. Work Performed by** TVA-BFN

Repair/Replacement Organization P.O. No., Job No., etc.  
Type Code Symbol Stamp N/A

P. O. Box 2000, Decatur, AL 35609-2000

Authorization No. N/A

4. Identification of System System 085, Control Rod Drive System (ASME Code Class 2 equivalent)  
(valves) ASME Sec. III 1989 Edition (less N-stamp)

5. (a) Applicable Construction Code (piping) USAS B31.1.0 19 67\* Edition, N/A Addenda, N/A Code Case  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 19 95, 1996 Addenda

## 6. Identification of Components

[illegible]



**FORM NIS-2, SUPPLEMENTAL SHEET (Back)**

Remarks See Remarks on the back of page 1.