

FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

As required by the Provisions of the ASME Code Rules

1. Owner Duke Power Company, 422 S. Church St., Charlotte, NC 28201
(Name and Address of Owner)
2. Plant Oconee Nuclear Station, Highway 130/183, Seneca, SC 29679
(Name and Address of Plant)
3. Plant Unit 2 4. Owner Certificate of Authorization (if required) N/A
5. Commercial Service Date 9/9/74 6. National Board Number for Unit N/A
7. Components Inspected

[illegible]

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 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 10/25/90 to 3/3/92 9. Inspection Interval from 3/1/84 to 3/1/94
10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. See Attached Report
11. Abstract of Conditions Noted. See Attached Report
12. Abstract of Corrective Measures Recommended and Taken. See Attached Report

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of the ASME Code, Section XI.

Date May 5 19 92 Signed Duke Power Company By [Signature]
Owner

Certificate of Authorization No. (if applicable) N/A Expiration Date N/A

CERTIFICATE OF INSERVICE INSPECTION

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 *The HSBI&I Co. of Hartford Conn have inspected the components described in this Owners' Data Report during the period 10-25-90 to 3-3-92 and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owners' Data 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 Owners' Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date MAY 6 19 92

[Signature]
Inspector's Signature

Commissions

NC 828

National Board, State, Province and No.

* The Hartford Steam Boiler Inspection & Insurance Company
200 Ashford Center North
Suite 300
Atlanta, Georgia 30338

INSERVICE INSPECTION REPORT
UNIT 2 OCONEE 1992 REFUELING
OUTAGE 12

Location: Hwy. 130/183, Seneca, South Carolina 29679
NRC Docket No. 50-270
Commercial Service Date: September 9, 1974

Owner: Duke Power Company
422 S. Church St.
Charlotte, N. C. 28201

Revision 0

Prepared By:	<u><i>A. J. Hogge Jr</i></u>	Date	<u><i>4/27/92</i></u>
Reviewed By:	<u><i>R. S. Rouse</i></u>	Date	<u><i>5/5/92</i></u>
Approved By:	<u><i>J. T. Barkner</i></u>	Date	<u><i>5/5/92</i></u>
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TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Revision</u>
1.	Summary of Inservice Inspection	0
2.	Status of Required Inspections	0
3.	Final Inservice Inspection Plan for Outage 12	0
4.	Results of Inspections Performed During Outage 12	0
5.	Class 1 Inspection Results	0
6.	Class 2 Inspection Results	0
7.	Augmented Inspection Results	0
8.	Personnel, Equipment, and Material Certifications	0
9.	Problem Investigation Reports	0
10.	Reference Documents	0
11.	Class 1 and 2 Repairs and Replacements	0

1.0 Summary of Inservice Inspection

This report describes the Inservice Inspection of Duke Power Company's Oconee Nuclear Station Unit 2 during the 1992 Refueling Outage (also referred to as Outage 12), which is the first outage of the Third Inspection Period of the Second Inspection Interval.

Included in this report are the final Inservice Inspection Plan, the inspection results for each item, a summary for each category of examinations, and corrective action taken when unacceptable conditions were found. In addition, there is a section included for repairs and replacements required since October 25, 1990.

1.1 Class 1 Inspection

The Class 1 Inspection included examinations on the Reactor Vessel Circumferential Shell Welds, Circumferential Head Welds, Shell to Flange Weld, Head to Flange Weld, Nozzle to Vessel Welds and Inside Radius Sections, CRDM Nozzle to Vessel Welds, Incore Instrumentation Nozzle to Head Welds, Nozzle to Safe-End Butt Welds and Reactor Vessel Flange Stud Hole Threads. Also, examinations were performed on Reactor Vessel Interior Surfaces, Internals and on CRD Housing Welds.

Examinations were performed on the Pressurizer Shell to Head Circumferential Weld, Upper Shell Course and Heater Bundle Longitudinal Welds, Nozzle to Vessel Weld and Inside Radius Section, Nozzle to Safe-End Butt Weld, Lower Heater Bundle Studs, and on integrally-welded attachments.

Examinations were performed on Letdown Cooler 2B Nozzle to Vessel Weld and Inside Radius Section and on Steam Generator 2B Upper and Lower Head Inspection Cover Bolting.

Dissimilar Metal Butt Welds in the Reactor Coolant System were examined. Reactor Coolant Pumps 2A1, 2A2, Main Flange Studs and Nuts, 2A2 and 2B2 Seal Gland Bolts, Nuts, Washers and Low Pressure and High Pressure Injection System Valve Bolting also received examinations.

Piping Welds in Reactor Coolant, Low Pressure Injection (Core Flood) and High Pressure Injection Systems were examined. In addition, piping integrally-welded attachments in the low Pressure Injection System were examined.

Visual examinations were performed on the Class 1 Pressure Boundary during system leakage tests. Also, visual examinations were performed on Class 1 Component Supports of the High Pressure Injection and Low Pressure Injection Systems, Reactor Pressure Vessel Support Skirt and on Steam Generator 2A Support Skirt.

The Inconel 600 tubing in Steam Generators 2A and 2B was inspected by eddy current during Outage 12. The results are shown in the Section 5 of this report. A detailed description of the Oconee 2 Refueling Outage

12 eddy current inspection is provided in the "Eddy Current Examination Report Oconee Unit 2 January 1992 Refueling Outage 12" on file in the Corporate Office in Charlotte, North Carolina.

Reportable indications were found on the Class 1 Inspections shown in this section. Inspection and evaluation data for each reportable indication found on Class 1 Inspections is included in Section 5 of this report.

A detailed description of each inspection is found in the final Inservice Inspection Plan in Section 3 of this report. Results of each examination are found in Section 4.

1.2 Class 2 Inspection

The Class 2 Inspections included examinations on Steam Generator 2B Shell to Shell Circumferential Weld, Core Flood Tank 2A Top Head to Shell Circumferential Weld and Low Pressure Injection Cooler A Head Flange to Shell Weld. In addition, examinations were performed on Low Pressure Injection Coolers A and B Inlet and Outlet Nozzle to Shell Welds, Steam Generators 2A and 2B Outlet Nozzle Welds, Core Flood Tank 2A Outlet Nozzle to Head Weld and Core Flood Tank 2B Outlet Nozzle to Head Weld and Inside Radius Section. Also, examinations were performed on vessel integrally-welded attachments of Core Flood Tank 2A, piping integrally-welded attachments of the Main Steam, Main Feedwater, Low Pressure Injection and Reactor Building Spray Systems and on Steam Generator 2A Feedwater Header.

Examinations were performed on circumferential butt welds of the Low Pressure Injection, Spent Fuel Cooling, Reactor Building Spray, High Pressure Injection, Component Cooling, Main Feedwater and Main Steam Systems. Also, longitudinal welds of the Low Pressure Injection, Reactor Building Spray and Main Steam Systems were examined. In addition, branch connection welds of the Main Steam System were examined.

Visual examinations were performed on the Class 2 Pressure Boundary during System Hydrostatic Tests. Also, visual examinations were performed on Class 2 Component Supports of the Main Steam, Main Feedwater, Auxiliary Feedwater, Low Pressure Injection, and Reactor Building Spray Systems.

Reportable indications were found on the Class 2 Inspections shown in this section. Inspection and evaluation data for each reportable indication is included in Section 6 of this report.

A detailed description of each inspection is found in the final Inservice Inspection Plan in Section 3 of this report. Results of each examination are found in Section 4.

1.3 Augmented Inspection

Augmented inspections were performed on Reactor Coolant Pump 2A1, 2A2, 2B1 and 2B2 Flywheels, Pressurizer Surge Piping, Thermal Stress Piping, Auxiliary Feedwater Header and on Pressurizer Safe-End Sensing and Sampling Nozzles.

1.4 Identification Numbers

Owner: Duke Power Company, 422 S. Church St., Charlotte, NC 28201

Plant: Oconee Nuclear Station, Highway 130/183, Seneca, SC 29679

Plant Unit: 2

Owner Certificate of Authorization: N/A

Commercial Service Date: 9/9/74

<u>Item</u>	<u>Manufacturer or Installer</u>	<u>Manufacturer or Installer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
Reactor Vessel	Babcock & Wilcox	620-0004-51-52	N/A	N-105
Steam Generator A	Babcock & Wilcox	620-0004-55	N/A	N-107
Steam Generator B	Babcock & Wilcox	620-0004-55	N/A	N-108
Pressurizer	Babcock & Wilcox	620-0004-59	N/A	N-106

1.5 Authorized Nuclear Inservice Inspector(s)

Name: R. F. Elgin

Rayford F. Elgin

Employer: The Hartford Steam Boiler Inspection
& Insurance Company
200 Ashford Center North
Suite 300
Atlanta, GA 30338

PROGRAM: NISI-RAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B16

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 CLASS 1 REPORTABLE ITEMS OUTAGE 12

PAGE 17
DATE 04/27/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B16.011.000	*** STEAM GENERATOR	TUBING ***** *****	_____	***	***** *****	_____	00.62 00.040	_____	STRAIGHT TUBE DESIGN ***** *****
B16.011.001	2SGA-TUBES	B&W 146409E	_____	ET	ISI-418	INCØ	00.62 00.040	_____	* SELECT CAL. STANDARD PER VOL.1, SECT. 10.2
B16.011.002	2SGB-TUBES	B&W 146409E	_____	ET	ISI-418	INCØ	00.62 00.040	_____	* SELECT CAL. STANDARD PER VOL.1, SECT. 10.2

PROGRAM: NISI-QAISI02
FILE: C007185
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C03

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 CLASS 2 REPORTABLE ITEMS OUTAGE 12

PAGE 20
DATE 04/27/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C03.010.000	*****PRESSURE	VESSELS INTEGRALLY** WELDED ATTACHMENTS**	_____	***	*****	*****	____	*****	***** ***** *****
C03.040.000	CLASS 2 PIPING	INTEGRALLY WELDED ATTACHMENTS*****	_____	***	*****	*****	____	*****	***** ***** *****
C03.040.032	2-03-H16A	0-1481A	_____	PT	NDE-35	CS	____	----	MAIN FDWTR - X. RIGID 2-03-0-1481A-H16A REF. PIR 2-092-0013

PROGRAM: NISIR-QAISI02
 FILE: C007135
 PLANT: O'CONNOR UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 O'CONNOR 2 CLASS 2 REPORTABLE ITEMS OUTAGE 12

PAGE 33
 DATE 04/27/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.01.000	*****CLASS 1	SUPPORTS***** *****	_____	***	*****	*****	____	*****	***** *****
F1.02.000	*****CLASS 2	SUPPORTS***** *****	_____	***	*****	*****	____	*****	***** *****
F1.02.025	2-01A-R1	0-1441 _____	_____	VT	QAL-14	_____	36.50	_____	MAIN STEAM-MECH. SHOCK SUPP 2-01A-0-1441-R1 REF PIR #2-092-0027
F1.03.000	***** CLASS 3	SUPPORTS***** *****	_____	***	*****	_____	____	_____	***** *****

2.0 Status of Required Inspections

The completion status of inspections required by the 1980 ASME Section XI Code, including Addenda through Winter 1980, is summarized in this section. The requirements are listed by the ASME Section XI Examination Category as defined in Table IWB-2500-1 for Class 1 Inspections and in IWC-2500-1 for Class 2 Inspections. Augmented inspections are also included.

Class 1 Inspections

<u>Section XI Category</u>	<u>Description</u>	<u>Inspections Required</u>	<u>Inspections Completed</u>	<u>Percentage Completed</u>	<u>Deferral Allowed</u>
B-A	Pressure Retaining Welds in Reactor Vessel	8 Welds	8 Welds	100%	Yes
B-B	Pressure Retaining Welds in Vessels Other than Reactor Vessels	15 Welds	13 Welds	86.66%	No
B-D	Full Penetration Welds of Nozzles in Vessels	58 Inspections	54 Inspections	93.10%	Partial
B-E	Pressure Retaining Partial Penetration Welds in Vessels	31 Welds	31 Welds	100%	No
B-F	Pressure Retaining Dissimilar Metal Welds	38 Welds	36 Welds	94.73%	No
B-G-1	Pressure Retaining Bolting Greater Than 2 Inch in Diameter	553 Items	460 Items	83.18%	Yes
B-G-2	Pressure Retaining Bolting 2 Inches and Less in Diameter	40* Connections	36 Connections	90%	No

* Total Connections includes CRDMs that are disassembled

Class 1 Inspections (Continued)

Section XI Category	Description	Inspections Required	Inspections Completed	Percentage Completed	Deferral Allowed
B-H	Integral Attachments For Vessels	12 Attachments	12 Attachments	100%	No
B-J	Pressure Retaining Welds in Piping	94 Welds	86 Welds	91.48%	No
B-K-1	Integral Attachments for Piping, Pumps and Valves	3 Attachments	3 Attachments	100%	No
B-L-1	Pressure Retaining Welds in Pump Casings	1 Weld	1 Weld	100%	Yes
B-L-2	Pump Casings	1 Casing	1 Casing	100%	Yes
B-M-1	Pressure Retaining Welds in Valve Bodies	None	N/A	N/A	N/A
B-M-2	Valve Body > 4 in. Nominal Pipe Size	2 Valves	1 Valve	50%	Yes
B-N-1	Interior of Reactor Vessel	3 Items	3 Items	100%	No
B-N-2	Integrally Welded Core Support Structures and Interior Attachments to Reactor Vessels	None	N/A	N/A	N/A
B-N-3	Removable Core Support Structures	1 Item	1 Item	100%	Yes
B-O	Pressure Retaining Welds in Control Rod Housings	3 Housings	3 Housings	100%	Yes
B-P	All Pressure Retaining Components				No
	System Leakage Test	117 Components	117 Components	100%	
	System Hydrostatic Test	20 Components	0 Components	0%	
B-Q	Steam Generator Tubing	100% Station Technical Specifications Met			N/A

Class 1 Inspections (Continued)

Section XI <u>Category</u>	<u>Description</u>	<u>Inspections Required</u>	<u>Inspections Completed</u>	<u>Percentage Completed</u>	<u>Deferral Allowed</u>
F1.01	Class 1 Component Supports	85 Supports	71 Supports	83.52%	No

Class 2 Inspections

Section XI Category

Description

Inspections Required

Inspections Completed

Percentage Completed

Deferral Allowed

C-A	Pressure Retaining Welds In Pressure Vessels	10 Welds	9 Welds	90%	No
C-B	Pressure Retaining Nozzle Welds in Vessels	5 Welds	5 Welds	100%	No
C-C	Integral Attachments for Vessels, Piping, Pumps and Valves	55 Attachments	44 Attachments	80%	No
C-D	Pressure Retaining Bolting Greater than 2 Inches in Diameter	1 Item	1 Item	100%	No
C-F	Pressure Retaining Welds in Piping	267 Welds	234 Welds	87.64%	No
C-G	Pressure Retaining Welds in Pumps and Valves	None	N/A	N/A	N/A
C-H	All Pressure Retaining Components				No
	System or Component Functional Test	32 Components	24 Components	75%	
	System Hydrostatic Test	57 Components	7 Components	12.28%	
F1.02	Class 2 Component Supports	382 Supports	321 Supports	84.03%	No

Augmented Inspections

<u>Description</u>	<u>Percentage Complete</u>
Reactor Coolant Pump Flywheels	100% of Technical Specifications met
Make-Up and High Pressure Injection Nozzle Safe-Ends	100% of requirements
Core Flood 2A Dump Valve Flange To Head Weld	100% of requirements
Core Flood Tank 2A Support Attachment Weld	100% of requirements
Pressurizer Surge Piping	100% of requirements
Thermal Stress Piping	100% of requirements
Auxiliary Feedwater Header (PSC-21-82) Water Hammer Examinations	100% of requirements for Outage 12
Pressurizer Safe-End Examinations	100% of requirements

3.0 Final Inservice Inspection Plan for Outage 12

The final ISI Plan presented in this section lists all examinations credited for Outage 12 at Oconee Unit 2. This includes ASME Section XI Class 1, 2, and augmented inspections required by the plant technical specifications, NRC Bulletins and Problem Investigation Reports.

The information shown below is a field description for the reporting format included in this section of the report:

Item Number	=	ASME Section XI Tables IWB-2500-1 (Class 1), IWC-2500-1 (Class 2), IWD-2500-1 (Class 3), IWF-2500-1 (Class 1, Class 2 & Class 3), and Augmented Requirements
ID Number	=	Unique Identification Number
Drawing Number	=	Location and/or Detail Drawing
Locs.	=	Location
Insp. Req.	=	Examination Technique - Magnetic Particle, Dye Penetrant, etc.
Proc. Numbers	=	Examination Procedures
Material Type/Grade	=	General Description of Material
Diam./Thick	=	Diameter/Thickness
Calib. Block	=	Calibration Block
Comments	=	General and/or Detail Description

PROGRAM: NISIRONS-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 1
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B01.000.000	REACTOR VESSEL	WELDS***** *****		***	*****	****	---	****	***** *****
B01.010.000	REACTOR VESSEL	SHELL WELDS***** *****		***	*****	****	---	****	***** *****
B01.011.000	***** REACTOR VESSEL	CIRCUMFERENTIAL***** SHELL WELDS*****		***	*****	****	---	****	***** *****
B01.011.001	2RPV-WR1A	ISI-OCN2-001 -----		UT	ISI-138	CS	09.500	40393	NOZZLE BELT TO SHELL PC87 TO 165
B01.011.002	2RPV-WR1	ISI-OCN2-001 -----		UT	ISI-138	CS	09.500	40393	SHELL TO SHELL PC 165 TO 166
B01.011.003	2RPV-WR18	ISI-OCN2-001 -----		UT	ISI-138	CS	12.000	40390	NOZZLE BELT PC 86 TO87
B01.012.000	REACTOR VESSEL	LONGITUDINAL***** SHELL WELDS*****		***	*****	****	---	****	***** *****
B01.020.000	REACTOR VESSEL	HEAD WELDS***** *****		***	*****	****	---	****	***** *****

PROGRAM: NISIR-CAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 2
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B01.021.000	***** REACTOR VESSEL	HEAD WELDS***** CIRCUMFERENTIAL*****	_____	***	*****	*****	____	*****	***** *****
B01.021.001B	2RPV-WH5	ISI-OCN2-001	_____	UT	NDE-660	CS	06.625	40387	CLOS HEAD PC 23 TO 24 INTERVAL 240-0 DEGREES
B01.021.002	2RPV-WR34	ISI-OCN2-001	_____	UT	ISI-138	CS	05.500	40393	LOWER HEAD TO SHELL PC 166 TO 36
B01.022.000	REACTOR VESSEL	HEAD WELDS***** MERIDIONAL*****	_____	***	*****	*****	____	*****	***** *****
B01.030.000	***** REACTOR VESSEL	SHELL TO FLANGE WELD *****	_____	***	*****	*****	____	*****	***** *****
B01.030.001	2RPV-WR19	ISI-OCN2-001	_____	UT	ISI-138	CS	12.000	40390	NOZZLE BELT TO FLANGE PC 07 TO 86 INSPECTED FROM VESSEL ID
B01.040.000	***** REACTOR VESSEL	HEAD TO FLANGE WELDS *****	_____	***	*****	*****	____	*****	***** *****
B01.040.001B	2RPV-WH7	ISI-OCN2-001	_____	UT	NDE-660	CS	06.625	40387	PC 22 TO 23 INTERVAL 240-0 DEGREES

PROGRAM: NISIR-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 3
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B01.040.002B	2RPV-WH7	ISI-OCN2-001		MT	NDE-25	CS	06.625		PC 22 TO 23 INTERVAL 240-0 DEGREES

PROGRAM: NISIRONS-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B02

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 4
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B02.011.000	*****	PRESSURIZER SHELL TO HEAD WELDS CIRCUMFERENTIAL*****	=====	***	*****	*****	-----	*****	***** ***** *****
B02.011.006	2PZR-WP28	ISI-OCN2-002 -----	=====	UT	NDE-620 NDE-640	CS	04.750	40339	LOWER HEAD TO HEATER BUNDLE PC 4/40 TO 6 PTS.3-5 AND 6-8 INSP.RF08,10,12, IWB-2420(B) IWB-2420(B) NO GROWTH,ACCEPT
B02.012.000	*****	PRESSURIZER WELDS***** LONGITUDINAL*****	=====	***	*****	*****	-----	*****	***** ***** *****
B02.012.001	2PZR-WP1-1	ISI-OCN2-002 -----	=====	UT	NDE-620 NDE-640	CS	06.188	40338	PC 01 TO 01 -----
B02.012.004	2PZR-WP7-1	ISI-OCN2-002 -----	=====	UT	NDE-620 NDE-640	CS	06.188	40338	Y-AXIS HEATER BUNDLE PC 04 TO 40/41 -----
B02.012.005	2PZR-WP7-2	ISI-OCN2-002 -----	=====	UT	NDE-620 NDE-640	CS	06.188	40338	X-AXIS HEATER BUNDLE PC 04 TO 40/41 -----
B02.040.000	*****	STEAM GENERATORS TUBESHEET TO HEAD WELDS*****	=====	***	*****	*****	-----	*****	***** ***** *****
B02.051.000	*****	HEAT EXCHANGER CIRCUMFERENTIAL **** SHELL / HEAD WELDS *	=====	***	***** *****	-----	-----	-----	**** INSPECTOR TO RECORD **** ** COOLER S'N ON INSP. DATA ** -----

PROGRAM: NISIRU-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B02

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 5
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B02.060.000	HEAT EXCHANGER	TUBESHEET TO SHELL** WELDS*****		***	*****	*****	..	*****	**** INSPECTOR TO RECORD **** ** COOLER S/N ON INSP. DATA **

PROGRAM: NISIRU-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B03

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 6
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B03.090.000	REACTOR VESSEL	NOZZLE TO VESSEL**** WELDS*****							***** *****
B03.090.001	2RPV-WR13	ISI-0CN2-001		UT	ISI-138	CS	60.00 12.000	40390	X-OUTLET NOZZLE PC 19 TO 86 & 87 UT FROM VESSEL ID
B03.090.001A	2RPV-WR13	ISI-0CN2-001		UT	ISI-138	CS	60.00 12.000	50304	X-OUT. NOZ. PC.19 TO 86 & 87 UT FROM NOZ. ID ONS-014
B03.090.002	2RPV-WR13A	ISI-0CN2-001		UT	ISI-138	CS	60.00 12.000	40390	Z-OUTLET NOZ PC 19 TO 86 & 87 UT FROM VESSEL ID
B03.090.002A	2RPV-WR13A	ISI-0CN2-001		UT	ISI-138	CS	60.00 12.000	50304	Z-OUTLET NOZ PC 19 TO 86 & 87 UT FROM NOZ. ID ONS-014
B03.090.003	2RPV-WR12	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	W-X INLET NOZZLE PC 18 TO 86 & 87 UT FROM VESSEL ID
B03.090.003A	2RPV-WR12	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	W-X INLET NOZZLE PC 18 TO 86 & 87 UT FROM NOZZLE ID
B03.090.004	2RPV-WR12A	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	X-Y INLET NOZZLE PC 18 TO 86 & 87 UT FROM VESSEL ID

PROGRAM: NISIR-01-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B03

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 7
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B03.090.004A	2RPV-WR12A	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	X-Y INLET NOZZLE PC 18 TO 86 & 87 UT FROM NOZZLE ID
B03.090.005	2RPV-WR12B	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	Y-Z INLET NOZZLE PC 18 TO 86 & 87 UT FROM VESSEL ID
B03.090.005A	2RPV-WR12B	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	Y-Z INLET NOZZLE PC 18 TO 86 & 87 UT FROM NOZZLE ID
B03.090.006	2RPV-WR12C	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	Z-W INLET NOZZLE PC 18 TO 86 & 87 UT FROM VESSEL ID
B03.090.006A	2RPV-WR12C	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	Z-W INLET NOZZLE PC 18 TO 86 & 87 UT FROM NOZZLE ID
B03.090.007	2RPV-WR54	ISI-0CN2-001		UT	ISI-138	CS	25.00 12.000	40390	CORE FLOOD NOZ W-AXIS PC 17 TO 86 UT FROM VESSEL ID
B03.090.008	2RPV-WR54A	ISI-0CN2-001		UT	ISI-138	CS	25.00 12.000	40390	CORE FLOOD NOZ Y-AXIS PC 17 TO 86 UT FROM VESSEL ID
B03.100.000	REACTOR VESSEL	NOZZLE INSIDE***** RADIUS SECTION*****		***	*****	*****	--- ---	*****	***** *****

PROGRAM: NISIR QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B03

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 8
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B03.100.001	2RPV-WR13	ISI-0CN2-001		UT	ISI-138	CS	60.00 12.000	50304	X-OUTLET NOZZLE PC 19 TO 86 & 87 UT FROM NOZ. ID ONS-014
B03.100.002	2RPV-WR13A	ISI-0CN2-001		UT	ISI-138	CS	60.00 12.000	50304	Z-OUTLET NOZZLE PC 19 TO 86 & 87 UT FROM NOZ. ID ONS-014
B03.100.003	2RPV-WR12	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	W-X INLET NOZ PC 18 TO 86 & 87 UT FROM NOZZLE ID
B03.100.004	2RPV-WR12A	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	X-Y INLET NOZ PC 18 TO 86 & 87 UT FROM NOZZLE ID
B03.100.005	2RPV-WR12B	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	Y-Z INLET NOZ PC 18 TO 86 & 87 UT FROM NOZZLE ID
B03.100.006	2RPV-WR12C	ISI-0CN2-001		UT	ISI-138	CS	48.00 12.000	40390	Z-W INLET NOZ PC 18 TO 86 & 87 UT FROM NOZZLE ID
B03.110.000	***PRESSURIZER	NOZZLE TO VESSEL*** WELDS*****		***	*****	*****	---	*****	*****
B03.110.010	2PZR-WP26-2	ISI-0CN2-002		UT	NDE-620 NDE-640	CS	06.188	40338	PZR SEN & SAMPLING NOZ BET Y&Z PC 30 TO 04

PROGRAM: NISIRONB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B03

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 9
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B03.120.000	***PRESSURIZER	NOZZLE INSIDE RADIUS SECTION*****		***	*****	*****	---	****	***** *****
B03.120.010	2PZR-WP26-2	ISI-OCN2-002		UT	NDE-680	CS	06.188	40338	SAMPLING NOZZLE BETWEEN Y & Z PC 30 TO 4 INSIDE RADIUS
B03.130.000	*****STEAM	GENERATOR NOZZLE TO VESSEL WELDS*****		***	*****	*****	---	****	***** *****
B03.140.000	*****STEAM	GENERATOR NOZZLE INSIDE RADIUS*****		***	*****	*****	---	****	***** *****
B03.150.000	HEAT EXCHANGER	NOZZLE TO VESSEL WELDS*****		***	*****	*****	---	****	**** INSPECTOR TO RECORD **** ** COOLER S/N ON INSP. DATA **
B03.150.003	2-LDCB-IN-V1	OM-201-2933		UT	NDE-600	SS	03.00 00.875	40411	LDC-B TUBESIDE INL.NØZ. PC.5 TO 3 (OUT.7:1-51A-139-V-2) B.L. OUT.7 TRANS. FROM UNIT 1
B03.160.000	***** HEAT EXCHANGER	NOZZLE INSIDE RADIUS SECTION *****		***	*****	*****	---	---	**** INSPECTOR TO RECORD **** ** COOLER S/N ON INSP. DATA **
B03.160.003	2-LDCB-IN-V1	OM-201-2933		UT	NDE-600	SS	03.00 00.875	40411	LDC-B INL.NØZ., IN RADIUS PC.5 TO 3(OUT.7:1-51A-139-V-2) B.L. OUT.7 TRANS. FROM UNIT 1

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B04

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 10
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B04.012.000	***** PARTIAL	PENETRATION WELDS*** CRD NOZZELS *****	___	***	*****	*****	___	*****	INSPECT AND DOCUMENT 100 % OF NOZZLE WELDS ON NPD PROCEDURE
B04.012.001	2RPV-CRDM	B&W 152005E -----	___	VT2	QAL-15	-----	___	-----	CLOSE.HEAD J GROOVE WELD,TOTAL 69 NOZ.PEN.,ALT.EXAM ISI-350
B04.013.000	***** PARTIAL	PENETRATION WELDS ** INCORE INSTRUMENTION	___	***	*****	*****	___	*****	INSPECT AND DOCUMENT 100 % OF NOZZLE WELDS ON NPD PROCEDURE
B04.013.001	2RPV-INCORE	B&W 154712E -----	___	VT2	QAL-15	-----	___	-----	RV INCORE MONITORING NOZ.,52 TOTAL NOZ. ALT.EXAM ISI-350

PROGRAM: NISIRONS-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 11
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B05.010.000	REACTOR VESSEL	NOZZLE TO SAFE END** BUTT WELDS*****		***	*****	*****	— . — — . —	*****	NOMINAL PIPE SIZE 4 IN. ***** AND GREATER *****
B05.010.001A	2RPV-WR53	ISI-OCN2-001		UT	ISI-138	CS/SS	15.63 01.688	40388	A SIDE CORE FLD W-AXIS SAFE END UT FROM NOZZLE SIDE
B05.010.001B	2RPV-WR53	ISI-OCN2-001		UT	ISI-138	CS/SS	15.63 01.688	40388	A SIDE CORE FLD W-AXIS SAFE END UT FROM SAFE END SIDE
B05.010.002A	2RPV-WR53A	ISI-OCN2-001		UT	ISI-138	CS/SS	15.63 01.688	40388	B SIDE CORE FLD Y-AXIS SAFE END UT FROM NOZZLE SIDE
B05.010.002B	2RPV-WR53A	ISI-OCN2-001		UT	ISI-138	CS/SS	15.63 01.688	40388	B SIDE CORE FLD Y-AXIS SAFE END UT FROM SAFE END SIDE
B05.020.000	***PRESSURIZER	NOZZLE TO SAFE END** BUTT WELDS*****		***	*****	*****	— . — — . —	*****	NOMINAL PIPE SIZE 4 IN. ***** AND GREATER *****
B05.020.002	2PZR-WP45	ISI-OCN2-002		UT	NDE-610	CS/IN	05.10 00.750	40367	PRESSURIZER SPRAY NOZZLE TO SAFE END
B05.020.002A	2PZR-WP45	ISI-OCN2-002		PT	NDE 35	CS/IN	05.10 00.750		PRESSURIZER SPRAY NOZZLE TO SAFE END

PROGRAM: NISIRU-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B05

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 12
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B05.021.000	***** PRESSURIZER	NOZZLE-TØ-SAFE END** BUTT WELDS *****	_____	***	***** *****	_____	_____ _____ _____	_____	NOMINAL PIPE SIZE < 4 IN.***** *****
B05.050.000	***** CLASS 1 PIPING	DISSIMILAR METAL**** BUTT WELDS*****	_____	***	*****	*****	_____ _____ _____	*****	NOMINAL PIPE SIZE 4 IN. & OVER *****
B05.050.014	2PSP-1	ISI-ØCN2-016 SYS 50 ISO 11	_____	UT	NDE-610	SS/IN	04.00 00.531	50373	PRESS. SPRAY T.E. TØ S.E. PC. 45 TØ 90
B05.050.014A	2PSP-1	ISI-ØCN2-016 SYS 50 ISO 11	_____	PT	NDE-35	SS/IN	04.00 00.531	_____	PRESS. SPRAY T.E. TØ S.E. PC.45 TØ 90
B05.051.000	***** CLASS 1 PIPING	DISSIMILAR METAL**** BUTT WELDS*****	_____	***	***** *****	_____	_____ _____ _____	_____	NOMINAL PIPE SIZE < 4 INCHES *****
B05.051.002	2PIA1-12	ISI-ØCN2-ØØ7	_____	PT	NDE-35	CS/IN	07.50 03.000	_____	A1 SUCTION RTE NOZZLE SAFE END PC 58 TØ 56
B05.051.003	2PIA2-11	ISI-ØCN2-ØØ8	_____	PT	NDE-35	CS/IN	03.50 00.816	_____	A2 SUCTION DRAIN NOZZLE SAFE END PC 64 TØ 65
B05.051.004	2PIA2-12	ISI-ØCN2-ØØ8	_____	PT	NDE-35	CS/IN	07.50 03.000	_____	A2 SUCTION RTE NOZZLE SAFE END PC 58 TØ 56

PROGRAM: NISIRUNG-RAISIO2
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B05

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 13
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B05.051.005	2PDA2-11	ISI-0CN2-012		PT	NDE-35	SS/CS	03.50 00.750		A2 DISCHARGE HPI NOZZLE TO SAFE END PC 46 TO 47
B05.051.012	2PHA-13	ISI-0CN2-005		PT	NDE-35	CS/IN	07.50 03.500		A HOT LEG RTE NOZ. SM X-AXIS PC 12 TO 7
B05.051.013	2PHA-14	ISI-0CN2-005		PT	NDE-35	CS/IN	07.50 03.500		A HOT LEG RTE NOZ. SM Y-Z AXIS PC 12 TO 7
B05.051.014	2PHA-15	ISI-0CN2-005		PT	NDE-35	CS/IN	07.50 03.500		A HOT LEG RTE NOZ. SM Z-W AXIS PC 12 TO 7

PROGRAM: NISIRU-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B06

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 14
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B06.010.000	REACTOR VESSEL	CLOSURE HEAD NUTS*** *****	=====	***	*****	*****	-. -.	*****	***** *****
B06.030.000	REACTOR VESSEL	CLOSURE STUDS***** *****	=====	***	*****	*****	-. -.	*****	WHEN REMOVED***** *****
B06.040.000	REACTOR VESSEL	THREADS IN FLANGE*** *****	=====	***	*****	*****	-. -.	*****	***** *****
B06.040.001A	2RPV-LIGAMENTS	B&W 151997E	=====	UT	NDE-640	CS	12.500	40390	THREADS IN RPV FLG. STUD HOLES 14 THRU 16 AND 34 THRU 60
B06.050.000	REACTOR VESSEL	CLOSURE WASHERS AND* BUSHINGS*****	=====	***	*****	*****	-. -.	*****	***** *****
B06.060.000	***PRESSURIZER	BOLTING***** *****	=====	***	*****	*****	-. -.	-----	***** *****
B06.070.000	***PRESSURIZER	FLANGE SURFACES***** *****	=====	***	*****	*****	-. -.	*****	***** *****
B06.080.000	***PRESSURIZER	NUTS, BUSHINGS, AND WASHERS*****	=====	***	*****	*****	-. -.	*****	***** *****

PROGRAM: NISIRUNG-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B06

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 15
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B06.180.000	*CLASS 1 PUMPS	BOLTS AND STUDS***** *****	=====	***	*****	*****	---.---	*****	GREATER THAN 2 INCH***** *****
B06.180.001	2RCP-2A1-FB	OM-1201-1217 OM-1201D-0055	=====	UT	NDE-44	CS	03.75 32.000	40362	A1 RCP MAIN FLG. STUDS TOTAL 20 STUDS
B06.180.002	2RCP-2A2-FB	OM-1201-1217 OM-1201D-0055	=====	UT	NDE-44	CS	03.75 32.000	40362	A2 RCP MAIN FLG. STUDS TOTAL 20 STUDS
B06.180.006	2RCP-2A2-S	OM-1201-1217 OM-1201D-0055	=====	UT	NDE-44	CS	02.25 11.750	40359	A2 SEAL GLAND BOLTS 8 TOTAL
B06.180.008	2RCP-2B2-S	OM-1201-1217 OM-1201D-0055	=====	UT	NDE-44	CS	02.25 11.750	40359	B2 SEAL GLAND BOLTS 8 TOTAL
B06.190.000	*CLASS 1 PUMPS	FLANGE SURFACE***** *****	=====	***	*****	*****	---.---	*****	WHEN CONNECTION DISASSEMBLED** *****
B06.200.000	*CLASS 1 PUMPS	NUTS, BUSHINGS, AND WASHERS*****	=====	***	*****	*****	---.---	*****	***** *****
B06.200.001	2RCP-A1-NUTS	OM-1201-1217 OM-1201D-0055	=====	VT1	QAL-13	CS	---.---	-----	20 NUTS, BUSHINGS & WASHERS

PROGRAM: NISIRUM-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B06

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 16
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B06.200.002	2RCP-A2-NUTS	OM-1201-1217 OM-1201D-0055	_____ _____ _____	VT1	QAL-13	CS	_____ _____ _____	-----	20 NUTS, BUSHINGS & WASHERS
B06.200.006	2RCP-A2-WASH	OM-1201-1217 OM-1201D-0055	_____ _____ _____	VT1	QAL-13	_____ _____ _____	_____ _____ _____	_____ _____ _____	A2 RCP SEAL GLAND NUTS & WASHERS, 8 EACH
B06.200.008	2RCP-B2-WASH	OM-1201-1217 OM-1201D-0055	_____ _____ _____	VT1	QAL-13	_____ _____ _____	_____ _____ _____	_____ _____ _____	B2 RCP SEAL GLAND NUTS & WASHERS, 8 EACH

PROGRAM: NISIRU-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B07

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 17
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B07.020.000	***PRESSURIZER	BOLTS,STUDS,AND NUTS *****		***	*****	*****	-. .	*****	***** *****
B07.020.003	2PZR-LHB-STUDS	B&W 149775E		VT1	QAL-13	CS	02.00 17.000	----	16 STUDS LOWER HEATER BUNDLE
B07.030.000	*****STEAM	GENERATOR***** BOLTS,STUDS,AND NUTS		***	*****	*****	-. .	*****	***** *****
B07.030.007	2SGB-UH-BOLTS	B&W 146470E		VT1	QAL-13	CS	01.00 .	----	STEAM GENERATOR 2B UPPER HEAD INSPECTION COVER BOLTING
B07.030.008	2SGB-LH-BOLTS	B&W 146470E		VT1	QAL-13	CS	01.00 .	----	STEAM GENERATOR 2B LOWER HEAD INSPECTION COVER BOLTING
B07.070.000	CLASS 1 VALVES	BOLTS,STUDS,AND NUTS *****		***	*****	*****	-. .	*****	***** *****
B07.070.001	2-53A-CF11	OM-245-001		VT1	QAL-13	CS	-. .	----	CORE FLOOD A
B07.070.002	2-53A-CF12	OM-245-001		VT1	QAL-13	CS	-. .	----	CORE FLOOD A

PROGRAM: NISIRUNG-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B07

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 18
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ. NUMBERS	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B07.070.005	2-53A-LP47	OM-245-001		VT1	QAL-13	CS		----	LOW PRESSURE INJECTION A
B07.070.008	2-53A-LP2	OM-245-001		VT1	QAL-13	CS		----	DECAY HEAT REMOVAL
B07.070.014	2-51A-HP152	OM-246-015		VT1	QAL-13	-----	02.50	----	HIGH PRESSURE INJECTION, VLV. HP-152 BOLTING
B07.070.017	2-53A-LP104	OM-246-1255		VT1	QAL-13	-----	03.00	----	DECAY HEAT EMERGENCY DUMP, VLV. LP-104 BOLTING
B07.070.018	2-53A-LP103	OM-246-1255		VT1	QAL-13	-----	03.00	----	DECAY HEAT EMERGENCY DUMP, VLV. LP-103 BOLTING
B07.080.000	**CRD HOUSINGS	BOLTS,STUDS,AND NUTS *****		***	*****	*****		*****	INSPECT ONLY IF HOUSING IS**** DISASSEMBLED*****

PROGRAM: NISIRUG-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B08

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 19
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB. BLOCK	COMMENTS
B08.020.000	***PRESSURIZER	INTEGRALLY WELDED*** ATTACHMENTS*****		***	*****	*****	03.500	*****	***** *****
B08.020.001	2PZR-WP82-X	ISI-0CN2-002		MT	NDE-25	CS	03.500		PZR SUPPORT LUG X-AXIS IWB-2420(B)
B08.020.003	2PZR-WP82-Y	ISI-0CN2-002		MT	NDE-25	CS	03.500		PZR SUPPORT LUG Y AXIS ADDED OUT.8 PER IWB-2430
B08.020.005	2PZR-WP82-Z	ISI-0CN2-002		MT	NDE-25	CS	03.500		PZR SUPPORT LUG Z AXIS IWB-2420(B)
B08.020.006	2PZR-WP82-ZW	ISI-0CN2-002		MT	NDE-25	CS	03.500		PZR SUPPORT LUG Z-W AXIS IWB-2420(B)
B08.020.007	2PZR-WP82-W	ISI-0CN2-002		MT	NDE-25	CS	03.500		PZR SUPPORT LUG W AXIS IWB-2420(B)
B08.020.008	2PZR-WP82-WX	ISI-0CN2-002		MT	NDE-25	CS	03.500		PZR SUPPORT LUG W-X AXIS IWB-2420(B)

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B09

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 20
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B09.011.000	***** CLASS 1 PIPING	CIRCUMFERENTIAL***** WELDS*****		***	*****	*****	---	*****	NOMINAL PIPE SIZE 4 IN. & OVER *****
B09.011.014	2PDA1-8	ISI-OCN2-011		UT	ISI-138	CS	33.50 03.000	40350	A1 DISCHARGE CIRCLE SEAM PC 38 TO REACTOR VESSEL NOZ.
B09.011.028	2PDA2-8	ISI-OCN2-012		UT	ISI-138	CS	33.50 03.000	40350	A2 DISCHARGE CIRCLE SEAM PC 38 TO REACTOR VESSEL NOZ.
B09.011.042	2PDB1-8	ISI-OCN2-013		UT	ISI-138	CS	33.50 03.000	40350	B1 DISCHARGE CIRCLE SEAM PC 38 TO REACTOR VESSEL NOZ.
B09.011.056	2PDB2-8	ISI-OCN2-014		UT	ISI-138	CS	33.50 03.000	40350	B2 DISCHARGE CIRCLE SEAM PC 38 TO REACTOR VESSEL NOZ.
B09.011.057	2PHA-1	ISI-OCN2-005		UT	ISI-138	CS	42.75 03.000	50304	A HOT LEG RV NOZZLE TO PIPE PC 19 TO 32 ONS-014
B09.011.069	2PHB-1	ISI-OCN2-006		UT	ISI-138	CS	42.75 03.000	50304	B HOT LEG RV NOZZLE TO PIPE PC 19 TO 32 ONS-014
B09.011.151	2-53A-8.2-63	SYS 53A ISO 8 P2		UT	ISI-138	SS	14.00 01.250	40388	CORE FLOOD A TERMINAL END

PROGRAM: NISIRUND-QAISI02
FILE: C007133
PLANT: O'CONNOR UNIT 2
KEY: ITEM NUMBER B09

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
O'CONNOR 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 21
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B09.011.160	2-53A-8.3-64	SYS 53A ISO 8 P3		UT	ISI-138	SS	14.00 01.250	40388	CORE FLOOD B TERMINAL END
B09.011.161	2-53A-8.3-53	SYS 53A ISO 8 P3		UT	NDE-600	SS	14.00 01.250	40389	CORE FLOOD B
B09.011.161A	2-53A-8.3-53	SYS 53A ISO 8 P3		PT	NDE-35	SS	14.00 01.250	----	CORE FLOOD B
B09.012.000	***** CLASS 1 PIPING	LONGITUDINAL***** WELDS*****		***	*****	*****	---. ---	*****	NOMINAL PIPE SIZE 4 IN. & OVER *****
B09.021.000	***** CLASS 1 PIPING	CIRCUMFERENTIAL***** WELDS*****		***	*****	*****	---. ---	*****	NOMINAL PIPE SIZE < 4 IN. **** *****
B09.021.021	2-50-44-03	SYS 50 ISO-44		PT	NDE-35	SS	03.00 00.438	----	PZR RELIEF LINE
B09.021.033	2-50-7.1-36B	SYS 50 ISO 7 P1		PT	NDE-35	SS	01.50 00.281	----	A-1 LOOP DRAIN
B09.021.054	2-51A-146-09	SYS 51A ISO 146		PT	NDE-35	SS	03.00 00.438	---	B1 LETDOWN LINE

PROGRAM: NISIRUM-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B09

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 22
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B09.021.103	2-51A-30-30	SYS 51A ISO 30		PT	NDE-35	SS	02.50 00.375	----	A1 HPI
B09.021.104	2-51A-30-26	SYS 51A ISO 30		PT	NDE-35	SS	02.50 00.375	----	A1 HPI
B09.021.105	2-51A-30-22	SYS 51A ISO 30		PT	NDE-35	SS	02.50 00.375	----	A1 HPI
B09.021.106	2-51A-30-15	SYS 51A ISO 30		PT	NDE-35	SS	02.50 00.375	----	A1 HPI
B09.021.107	2-51A-30-11	SYS 51A ISO 30		PT	NDE-35	SS	02.50 00.375	----	A1 HPI
B09.021.108	2-51A-39.3-87A	SYS 51A ISO 39 P3		PT	NDE-35	SS	02.50 00.750	----	A2 HPI
B09.021.109	2-51A-30-52	SYS 51A ISO 30		PT	NDE-35	SS	02.50 00.375	----	A2 HPI
B09.021.110	2-51A-30-44	SYS 51A ISO 30		PT	NDE-35	SS	02.50 00.375	----	A2 HPI

PROGRAM: NISIRU-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B09

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 23
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B09.021.111	2-51A-30-40	SYS 51A ISO 30		PT	NDE-35	SS	02.50 00.375	----	A2 HPI
B09.021.112	2-51A-30-36A	SYS 51A ISO 30		PT	NDE-35	SS	02.50 00.375	----	A2 HPI
B09.021.116	2-51A-27-105A	SYS 51A ISO 27 P3		PT	NDE-35	SS	02.50 00.375	----	B1 HPI
B09.021.117	2-51A-27.3-90	SYS 51A ISO 27 P3		PT	NDE-35	SS	02.50 00.375	----	B1 HPI
B09.021.118	2-51A-27.3-97A	SYS 51A ISO 27 P3		PT	NDE-35	SS	02.50 00.375	----	B1 HPI
B09.021.119	2-51A-27.3-93	SYS 51A ISO 27 P3		PT	NDE-35	SS	02.50 00.375	----	B1 HPI
B09.021.120	2-51A-27.3-88	SYS 51A ISO 27 P3		PT	NDE-35	SS	02.50 00.375	----	B1 HPI
B09.021.121	2-51A-27.3-57B	SYS 51A ISO 27 P3		PT	NDE-35	SS	02.50 00.375	----	B1 HPI

PROGRAM: NISIRU QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B09

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 24
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ. NUMBERS	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B09.021.122	2-51A-39.3-92A	SYS 51A ISO 39 P3		PT	NDE-35	SS	02.50 00.375	----	TERMINAL END SELECTION CRITERIA 4.2.2
B09.021.125	2-51A-27.2-69	SYS 51A ISO 27 P2		PT	NDE-35	SS	02.50 00.375	----	B2 HPI
B09.021.126	2-51A-27.2-63	SYS 51A ISO 27 P2		PT	NDE-35	SS	02.50 00.375	----	B2 HPI
B09.021.127	2-51A-27.2-59	SYS 51A ISO 27 P2		PT	NDE-35	SS	02.50 00.375	----	B2 HPI
B09.022.000	***** CLASS 1 PIPING	LONGITUDINAL ***** WELDS *****		***	*****		---	----	NOMINAL PIPE SIZE < 4 IN. **** *****
B09.031.000	***** BRANCH PIPE	CONNECTION WELDS *** *****		***	*****	*****	---	*****	NOMINAL PIPE SIZE 4 IN. & OVER *****
B09.032.000	*****BRANCH PIPE	CONNECTION WELDS *** *****		***	*****	*****	---	*****	NOMINAL PIPE SIZE < 4 IN. **** *****
B09.040.000	***** SOCKET WELDS	***** *****		***	*****	*****	---	*****	***** *****

PROGRAM: NISIRU-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B10

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 25
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B10.010.003	2-53A-H1B	0-1479A		PT	NDE-35	SS	01.500		CFT 2B-SPRING 53A-0-1479A-H1B D.E. STRESS CALC. OSC-1318-06

PROGRAM: NISIRUB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B12

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 26
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B12.010.000	CLASS 1 PUMPS	CASING WELDS***** *****	_____	***	*****	*****	____.	****	***** *****
B12.020.000	CLASS 1 PUMP	CASINGS***** *****	_____	***	*****	*****	____.	****	***** *****
B12.040.000	***** CLASS 1 VALVE	BODIES EXCEEDING**** 4 INCH NPS*****	_____	***	*****	*****	____.	****	INSPECT IF VALVE IS DISASSEMBLED

PROGRAM: NISIRCH-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B13

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 27
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ. NUMBERS	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B13.010.000	REACTOR VESSEL *****	VESEL INTERIOR***** *****	=====	***	*****	*****	---.	*****	***** *****
B13.010.001	2RPV-INT SUR	ISI-0CN2-001	=====	VT3	ISI-354	SS	---.	-----	INTERNAL SURFACES OF VESSEL USE PROCEDURE ISI-350 ALSO
B13.030.000	REACTOR VESSEL *****	CORE SUPPORT***** STRUCTURE*****	=====	***	*****	*****	---.	*****	***** *****
B13.030.001	2RPV-INTERNAL	=====	=====	VT3	QAL-14	=====	---.	-----	CORE SUPPORT STRUCTURES WELDS, BOLTING, AND SURFACES

PROGRAM: NISIRL-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B14

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE: 28
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B14.010.000	REACTOR VESSEL	CRD HOUSING WELDS*** *****	_____	***	*****	*****	_____ _____ _____	*****	INSPECT THREE HOUSINGS WHEN REMOVED
B14.010.001	2RPV-CRD-58WH9	B&W 128720E14 OM-201-2186	_____	PT	NDE-35	SS/IN	04.06 00.650	_____	PERIPHERAL CRDM HOUSING BODY TO ADAPTER MK-67 TO MK-55
B14.010.005	2RPV-CRD-58W60	B&W 128720E14 DPS 706599-1056	_____	PT	NDE-35	CS/SS	05.00 00.500	_____	CRDM BASE TO MOTOR TUBE
B14.010.008	2RPV-CRD-58	B&W 128720E14 DPS 706599-1056	_____	PT	NDE-35	CS/SS	04.30 00.400	_____	CRDM MOTOR TUBE TO EXTENSION
B14.010.011	2RPV-CRD-58W61	B&W 128720E14 DPS 706599-1056	_____	PT	NDE-35	SS	04.19 00.380	_____	PERIPHERAL CRDM EXTENSION TO CAP

PROGRAM: NISIRQAISIO2
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B15

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 29
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B15.010.000	REACTOR VESSEL	PRESSURE RETAINING** BOUNDARY*****	_____	***	*****	*****	____.	****	***** *****
B15.010.001	2RPV-LK TEST	0FD-100A-2.1 -----	_____	VIS	ISI-350	-----	____.	----	RPV SYS LEAK TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.020.000	***PRESSURIZER	PRESSURE RETAINING** BOUNDARY*****	_____	***	*****	*****	____.	****	***** *****
B15.020.001	2PZR-LK TEST	0FD-100A-2.2 -----	_____	VIS	ISI-350	-----	____.	----	PZR SYS LEAK TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.021.000	***PRESSURIZER	PRESSURE RETAINING** BOUNDARY*****	_____	***	*****	*****	____.	****	***** *****
B15.030.000	*****STEAM	GENERATORS PRESSURE* RETAINING BOUNDARY**	_____	***	*****	*****	____.	****	***** *****
B15.030.001	2SGA-LK TEST	0FD-100A-2.1 -----	_____	VIS	ISI-350	-----	____.	----	SGA SYS LEAK TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.030.002	2SGB-LK TEST	0FD-100A-2.1 -----	_____	VIS	ISI-350	-----	____.	----	SGB SYS LEAK TEST ALT EXAM QCL-15 VT2 MAY BE USED

PROGRAM: NISIRUNG-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER B15

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 30
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B15.031.000	*****STEAM	GENERATORS PRESSURE* RETAINING BOUNDARY**	_____	***	*****	*****	_____ _____	*****	***** ***** *****
B15.040.001	2LDC2A-LK TEST	ØFD-101A-2.1 -----	_____	VIS	ISI-350	-----	_____ _____	-----	LETDOWN COOLER 2A SYS LK TEST ALT EXAM QCL15 VT2 MAY BE USED
B15.040.002	2LDC2B-LK TEST	ØFD-101A-2.1 -----	_____	VIS	ISI-350	-----	_____ _____	-----	LETDOWN COOLER 2B SYS LK TEST ALT EXAM QCL15 VT2 MAY BE USED
B15.050.000	CLASS 1 PIPING	PRESSURE RETAINING** BOUNDARY*****	_____	***	*****	*****	_____ _____	*****	***** ***** *****
B15.050.001	2-ØFD-100A-2.1	ØFD-100A-2.1 -----	_____	VIS	ISI-350 QAL-15	-----	_____ _____	-----	CLASS 1 SYS LEAK TEST-INCLUDES DWG NOS. 0-1422BB-1,2 & 3
B15.050.001A	2-ØFD-100A-2.2	ØFD-100A-2.2 -----	_____	VIS	ISI-350 QAL-15	-----	_____ _____	-----	CLASS 1 SYS LEAK TEST-INCLUDES DWG. NO. 0-1422BB-4
B15.050.002	2-ØFD-101A-2.1	ØFD-101A-2.1 -----	_____	VIS	ISI-350 QAL-15	-----	_____ _____	-----	CLASS 1 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.003	2-ØFD-101A-2.4	ØFD-101A-2.4 -----	_____	VT2	ISI-350 QAL-15	-----	_____ _____	-----	CLASS A SYS LEAK TEST-INCLUDES DWG NO. 0-1422X-51

PROGRAM: NISIRUNG-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B15

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 31
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ. NUMBERS	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B15.050.004	2-OFD-102A-2.1	OFD-102A-2.1		VIS	ISI-350 QAL-15	----	-. --	----	CLASS 1 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.005	2-OFD-102A-2.2	OFD-102A-2.2		VIS	ISI-350 QAL-15	----	-. --	----	CLASS 1 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.006	2-OFD-102A-2.3	OFD-102A-2.3		VIS	ISI-350 QAL-15	----	-. --	----	CLASS 1 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.007	2-OFD-110A-2.1	OFD-110A-2.1		VIS	ISI-350 QAL-15	----	-. --	----	CLASS 1 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.009	2-OFD-100A-2.3	OFD-100A-2.3		VIS	ISI-350 QAL-15	----	-. --	----	CLASS 1 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.010	2-OFD-110A-2.4	OFD-110A-2.4		VIS	ISI-350 QAL-15	----	-. --	----	CLASS 1 SYSTEM LEAKAGE TEST
B15.060.000	*CLASS 1 PUMPS	PRESSURE RETAINING** BOUNDARY*****		***	*****	*****	-. --	*****	***** *****
B15.060.001	2-RCP-2A1	OFD-100A-2.1		VIS	ISI-350 QAL-15	----	-. --	----	RCP 2A1 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B15

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 32
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B15.060.002	2-RCP-2A2	OFD-100A-2.1		VIS	ISI-350 QAL-15	----	-. --	----	RCP 2A2 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.060.003	2-RCP-2B1	OFD-100A-2.1		VIS	ISI-350 QAL-15	----	-. --	----	RCP 2B1 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.060.004	2-RCP-2B2	OFD-100A-2.1		VIS	ISI-350 QAL-15	----	-. --	----	RCP 2B2 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.061.000	*CLASS 1 PUMPS	PRESSURE RETAINING** BOUNDARY*****		***	*****	*****	-. --	*****	***** *****
B15.070.000	CLASS 1 VALVES	PRESSURE RETAINING** BOUNDARY*****		***	*****	*****	-. --	*****	COVERED IN B15.050.000 *****

PROGRAM: NISIRCH-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B16

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 33
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B16.011.000	**** STEAM GENERATOR TUBING	***** *****		***	***** *****				STRAIGHT TUBE DESIGN ***** *****
B16.011.001	2SGA-TUBES	B&W 146409E		ET	ISI-418	INCØ	00.62 00.040		* SELECT CAL. STANDARD PER VOL.1, SECT. 10.2
B16.011.002	2SGB-TUBES	B&W 146409E		ET	ISI-418	INCØ	00.62 00.040		* SELECT CAL. STANDARD PER VOL.1, SECT. 10.2

PROGRAM: NISIRONS-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 34
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C01.010.000	**** PRESSURE VESSEL	SHELL WELDS ***** CIRCUMFERENTIAL ****	=====	***	*****	*****	---	*****	***** *****
C01.010.008	2SGB-WG8-4	OM-1201-450 ISI-OCN2-004	=====	UT	NDE-620 NDE-640	CS	04.188	40339	GEN B SHELL TO SHELL PC 5 TO 6
C01.020.000	*****HEAD	CIRCUMFERENTIAL***** WELDS*****	=====	***	*****	*****	---	*****	***** PRESSURE VESSEL ***** *****
C01.020.001	2-CFTA-UH-SHL	B&W 148732E	=====	UT	NDE-620 NDE-640	CS	02.375	40410	CORE FLD TK 2CF-T1A TOP HEAD TO SHELL PC 10 TO 12
C01.020.003	2-LPCA-HD-SHL	B&W 36-43-004-00 OM201-0286-001	=====	UT	NDE-630	SS	00.600	40385	LP COOLER A HEAD FLG TO STAINLESS SHELL
C01.030.000	*****CLASS 2	TUBESHEET TO SHELL WELDS*****	=====	***	*****	*****	---	*****	***** PRESSURE VESSEL ***** *****

PROGRAM: NISIRCA-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER C02

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 35
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ. NUMBERS	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C02.010.000	*****NOZZLES	IN VESSELS***** *****		***	*****	*****	---	*****	1/2" NOMINAL THICKNESS AND*** LESS*****
C02.010.001	2LPCA-INLET	B&W 36-43-004-00		PT	NDE-35	SS	00.500		LP COOLER A INLET NOZZLE TO SHELL (REF. PIR 4-091-0093) REF. PIR 4-091-0093
C02.010.002	2LPCA-OUTLET	B&W 36-43-004-00		PT	NDE-35	SS	00.500		LP COOLER A OUTLET NOZZLE TO SHELL (REF. PIR 4-091-0093) REF. PIR 4-091-0093
C02.010.003	2LPCB-INLET	B&W 36-43-004-00		PT	NDE-35	SS	00.500		LP COOLER B INLET NOZZLE TO SHELL (REF. PIR 4-091-0093) REF. PIR 4-091-0093
C02.010.004	2LPCB-OUTLET	B&W 36-43-004-00		PT	NDE-35	SS	00.500		LP COOLER B OUTLET NOZZLE TO SHELL (REF. PIR 4-091-0093) REF. PIR 4-091-0093
C02.021.000	*****NOZZLE	TO SHELL OR HEAD*** WELDS*****		***	*****	*****	---	*****	***** *****
C02.021.001A	2SGA-WG23-1	OM-1201-450 ISI-OCN2-003		MT	NDE-25	CS	29.00 06.625		GEN A STM OUTLET NOZZLE W-X AXIS PC 14 TO 3
C02.021.002A	2SGA-WG23-2	OM-1201-450 ISI-OCN2-003		MT	NDE-25	CS	29.00 06.625		GEN A STM OUTLET NOZZLE X-Y AXIS PC 14 TO 3

PROGRAM: NISIRUNG-RAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER C02

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2. INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 36
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM. THICK	CALIB BLOCK	COMMENTS
C02.021.003A	2SGB-WG23-1	OM-1201-450 ISI-OCN2-004		MT	NDE-25	CS	29.00 06.625		GEN B STM OUTLET NOZZLE W-X AXIS PC 14 TO 3
C02.021.004A	2SGB-WG23-2	OM-1201-450 ISI-OCN2-004		MT	NDE-25	CS	29.00 06.625		GEN B STM OUTLET NOZZLE X-Y AXIS PC 14 TO 3
C02.021.005A	2-CFTA-OUTLET	B&W 148732E		MT	NDE-25	CS	20.50 02.562		CORE FLD TK 2CF-T1A OUTLET NOZZLE PC 6 TO 11
C02.021.006	2-CFTB-OUTLET	B&W 148732E		UT	NDE-620 NDE-640	CS	20.50 02.562	40410	CORE FLD TK 2CF-T1B OUTLET NOZZLE PC 6 TO 11
C02.021.006A	2-CFTB-OUTLET	B&W 148732E		MT	NDE-25	CS	20.50 02.562		CORE FLD TK 2CF-T1B OUTLET NOZZLE PC 6 TO 11
C02.022.000	*****NOZZLE	INSIDE RADIUS***** SECTION*****		***	*****	*****	— —	*****	***** *****
C02.022.006	2-CFTB-OUTLET	B&W 148732E		UT	NDE-680	CS	20.50 02.562	40410	CORE FLOOD TANK 2CF-T1B OUTLET NOZZLE PC 6 TO 11

PROGRAM: NISIRUNG-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER C03

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 37
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
C03.010.000	*****PRESSURE	VESSELS INTEGRALLY** WELDED ATTACHMENTS**		***	*****	*****		*****	***** *****
C03.010.017	2-CFTA-WT18-X	B&W 148732E		MT	NDE-25	CS	02.000	----	CORE FLD TK SUPPORT ATTACH. X QUADRANT PC 18 TO 12 INSP.RFO#8 PER IWC-2420(B)
C03.010.018	2-CFTA-WT18-W	B&W 148732E		MT	NDE-25	CS	02.000	----	CORE FLD TK SUPPORT ATTACH. W QUADRANT PC 18 TO 12
C03.040.000	CLASS 2 PIPING	INTEGRALLY WELDED ATTACHMENTS*****		***	*****	*****		*****	***** *****
C03.040.004	2-01A-H14	0-1441		MT	NDE-25	CS		----	MAIN STEAM - RIGID 2-01A-0-1441-H14
C03.040.007	2-01A-R6	0-1401B		MT	NDE-25	CS		----	MAIN STEAM - MECH SHOCK SUPP. 2-01A-0-1401B-R6
C03.040.031	2-03-H15A	0-1481A		MT	NDE-25	CS	01.500	----	INSP PER IMF2430(A) 03-0-1481A-H15A OSC-1316-06 ADDED PER IWC-2430(A)
C03.040.032	2-03-H16A	0-1481A		PT	NDE-35	CS		----	MAIN FDWTR - X RIGID 2-03-0-1481A-H16A REF. PIR 2-092-0013

PROGRAM: NISIRCA-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER C03

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 38
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C03.040.050	2-53B-H3	0-1444		PT	NDE-35	SS		----	DECAY HEAT - SPRING 2-53B-5-0-1444-H3
C03.040.051	2-53B-H2	0-1444		PT	NDE-35	SS		----	DECAY HEAT - SPRING 2-53B-5-0-1444-H2
C03.040.052	2-53B-DE051	0-435B		PT	NDE-35	SS		----	DECAY HEAT - RIGID 2-53B-0-435B-DE051
C03.040.055	2-53B-R16	0-1436A		PT	NDE-35	SS		----	DECAY HEAT -RIGID 2-53B-5-0-1436A-R16
C03.040.082	2SGA-WG87-ZW	0M-201-1054		MT	NDE-25	CS	01.000	----	SGA FDWTR.HDR.S/R ATTACH. Z-W QUAD.NEAR Z-AXIS
C03.040.097	2-54B-H4B	0-1477		PT	NDE35	SS	08.00	----	REACTOR SPRAY Y SPRING

PROGRAM: NISIRON-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 39
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.011.000	*****CLASS 2 PIPING	CIRCUMFERENTIAL WELD *****		***	*****	*****	---	*****	NOMINAL WALL THICKNESS ***** 1/2 IN. OR LESS *****
C05.011.004	2-53B-17.1-20	SYS 53B ISØ 17 PT 1 -----		PT	NDE-35	SS	12.00 00.180	----	
C05.011.005	2-53B-17.1-128	SYS 53B ISØ 17 PT 1 -----		PT	NDE-35	SS	08.00 00.148	----	
C05.011.006	2-53B-17.1-124	SYS 53B ISØ 17 PT 1 -----		PT	NDE-35	SS	10.00 00.165	----	
C05.011.016	2-53B-17.4-82	SYS 53B ISØ 17 PT 4 -----		PT	NDE-35	SS	14.00 00.250	----	
C05.011.017	2-53B-17.4-120	SYS 53B ISØ 17 PT 4 -----		PT	NDE-35	SS	14.00 00.250	----	
C05.011.018	2-53B-17.4-93	SYS 53B ISØ 17 PT 4 -----		PT	NDE-35	SS	14.00 00.250	----	
C05.011.019	2-53B-17.4-96	SYS 53B ISØ 17 PT 4 -----		PT	NDE-35	SS	14.00 00.250	----	

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 40
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.011.025	2-53B-18.1-42	SYS 53B ISO 18 PT 1 ----- =====	=====	PT	NDE-35	SS	14.00 00.250	-----	=====
C05.011.027	2-53B-18.1-71	SYS 53B ISO 18 PT 1 ----- =====	=====	PT	NDE-35	SS	14.00 00.250	-----	=====
C05.011.070	2-53B-27.1-43	SYS 53B ISO 27 PT 1 ----- =====	=====	PT	NDE-35	SS	10.00 00.250	-----	=====
C05.011.071	2-53B-27.1-46	SYS 53B ISO 27 PT 1 ----- =====	=====	PT	NDE-35	SS	10.00 00.250	-----	=====
C05.011.072	2-53B-27.1-50	SYS 53B ISO 27 PT 1 ----- =====	=====	PT	NDE-35	SS	10.00 00.250	-----	=====
C05.011.074	2-53B-27.1-52	SYS 53B ISO 27 PT 1 ----- =====	=====	PT	NDE-35	SS	10.00 02.500	-----	=====
C05.011.075	2-53B-27.3-57D	SYS 53B ISO 27 PT 3 ----- =====	=====	PT	NDE-35	SS	08.00 02.500	-----	=====
C05.011.077	2-53B-28.1-27	SYS 53B ISO 28 PT 1 ----- =====	=====	PT	NDE-35	SS	08.00 02.500	-----	=====

PROGRAM: NISIRONS-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 41
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.011.082	2-53B-28.2-48	SYS 53B ISO 28 PT 2		PT	NDE-35	SS	08.00 00.148	----	
C05.011.083	2-53B-28.2-57	SYS 53B ISO 28 PT 2		PT	NDE-35	SS	08.00 00.148	----	
C05.011.097	2-53B-30-23	SYS 53B ISO 30		PT	NDE-35	SS	12.00 00.180	----	
C05.011.098	2-53B-30-27	SYS 53B ISO 30		PT	NDE-35	SS	12.00 00.180	----	
C05.011.099	2-53B-30-32	SYS 53B ISO 30		PT	NDE-35	SS	12.00 00.180	----	SELECTION CRITERIA 5.2
C05.011.100	2-53B-31.1-37E	SYS 53B ISO 31 PT 1		PT	NDE-35	SS	10.00 00.165	----	TERMINAL END
C05.011.258	2-56-13-57	SYS 56 ISO 13		PT	NDE-35	SS	08.00 00.148	----	
C05.011.259	2-56-13-54	SYS 56 ISO 13		PT	NDE-35	SS	08.00 00.148	----	

PROGRAM: NISIRON-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 42
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.011.260	2-56-13-50	SYS 56 ISO 13		PT	NDE-35	SS	08.00 00.148		
C05.011.261	2-56-13-41	SYS 56 ISO 13		PT	NDE-35	SS	08.00 00.148		
C05.011.262	2-56-13-38	SYS 56 ISO 13		PT	NDE-35	SS	08.00 00.148		
C05.011.305	2-54A-5-16	SYS 54A ISO 5		PT	NDE-35	SS	10.00 00.250		
C05.011.306	2-54A-5-17	SYS 54A ISO 5		PT	NDE-35	SS	10.00 00.250		
C05.011.307	2-54A-5-22	SYS 54A ISO 5		PT	NDE-35	SS	10.00 00.250		
C05.011.308	2-54A-5-1A	SYS 54A ISO 5		PT	NDE-35	SS	08.00 00.250		TERMINAL END
C05.011.331	2-54A-8.2-30	SYS 54B ISO 8.2		PT	NDE-35	SS	08.00 00.250		

PROGRAM: NISIRU-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 43
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
C05.011.332	2-54A-8.2-33	SYS 54B ISO 8.2	_____	PT	NDE-35	SS	08.00 00.250	_____	_____
C05.011.333	2-54A-8.2-36	SYS 54B ISO 8.2	_____	PT	NDE-35	SS	08.00 00.250	_____	_____
C05.011.334	2-54A-8.2-43	SYS 54B ISO 8.2	_____	PT	NDE-35	SS	08.00 00.250	_____	_____
C05.011.338	2-54A-8.3-60	SYS 54B ISO 8.3	_____	PT	NDE-35	SS	08.00 00.250	_____	_____
C05.011.339	2-54A-8.3-62	SYS 54B ISO 8.3	_____	PT	NDE-35	SS	08.00 00.250	_____	_____
C05.011.407	2-51A-17.1-34	SYS 51A ISO 17 P1	_____	PT	NDE-35	SS	06.00 00.280	_____	_____
C05.011.412	2-51A-17.1-72	SYS 51A ISO 17 P1	_____	PT	NDE-35	SS	06.00 00.280	_____	_____
C05.011.413	2-51A-17.1-78	SYS 51A ISO 17 P1	_____	PT	NDE-35	SS	06.00 00.280	_____	_____

PROGRAM: NISIRUM-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER C05

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 44
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
C05.011.451	2-55-16-72	SYS 55 ISO 16		MT	NDE-25	CS	06.00 00.280		
C05.011.453	2-55-17-107	SYS 55 ISO 17		MT	NDE-25	CS	08.00 00.322		
C05.012.000	***** CLASS 2 LONGITUDINAL WELDS** *****			***	*****	*****	--- ---	*****	**** NOMINAL WALL THICKNESS ** *** 1/2 IN. OR LESS *****
C05.012.003	2-53B-26.2-41BL	SYS 53B ISO 26 PT 2		PT	NDE-35	SS	10.00 00.250		TERMINAL END LONG SEAM FOR C05.011.066
C05.012.004	2-53B-31.2-17EL	SYS 53B ISO 31 PT 2		PT	NDE-35	SS	10.00 00.165		TERMINAL END LONG SEAM FOR C05.011.104
C05.012.005	2-54A-8.2-36L	SYS 54B ISO 8.3		PT	NDE-35	SS	08.00 00.250		LONG SEAM FOR C05.011.333
C05.012.006	2-54A-8.3-60L	SYS 54B ISO 8.3		PT	NDE-35	SS	08.00 00.250		LONG SEAM FOR C05.011.338
C05.012.007	2-53B-30-32L	SYS 53B ISO 30		PT	NDE-35	SS	12.00 00.180		LONG SEAM FOR C05.011.099

PROGRAM: NISIRUNG-QAISI02
 FILE: C007133
 PLANT: O'CONNOR UNIT 2
 KEY: ITEM NUMBER C05

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 O'CONNOR 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 45
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.012.008	2-56-13-38L	SYS 56 ISO 13	_____	PT	NDE-35	SS	08.00 00.148	_____	LONG SEAM ON ELL C05.011.262
C05.012.009	2-53B-17.4-93L	SYS 53B ISO 17 PT 4	_____	PT	NDE-35	SS	14.00 00.250	_____	LONG SEAMS FOR C05.011.018 INSIDE & OUTSIDE SEAMS ON ELL
C05.012.010	2-53B-17.4-96L	SYS 53B ISO 17 PT 4	_____	PT	NDE-35	SS	14.00 00.250	_____	LONG SEAMS FOR C05.011.019 INSIDE & OUTSIDE SEAMS ON ELL
C05.012.017	2-53B-28.1-27L	SYS 53B ISO 28 PT 1	_____	PT	NDE-35	SS	08.00 02.500	_____	LONG SEAM FOR C05.011.077
C05.021.000	***** CLASS 2	CIRCUMFERENTIAL***** WELDS*****	_____	***	*****	*****	_____ _____	*****	NOMINAL WALL THICKNESS ***** > 1/2 INCH *****
C05.021.002	2-53A-8.1-17	SYS 53A ISO 8 PT 1	_____	UT	NDE-600	SS	10.00 01.125	40354	
C05.021.002A	2-53A-8.1-17	SYS 53A ISO 8 PT 1	_____	PT	NDE-35	SS	10.00 01.125	-----	
C05.021.065	2-03-18.1-07	SYS 03 ISO 18 PT 1	_____	RT	NDE-12	CS	24.00 01.219	-----	

PROGRAM: NISIRUM-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 46
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.021.065A	2-03-18.1-07	SYS 03 ISO 18 PT 1		MT	NDE-25	CS	24.00 01.219	----	
C05.021.066	2-03-FWD79-A	SYS 03 GRINN SUB ASSY FWD79		RT	NDE-12	CS	24.00 01.219	----	
C05.021.066A	2-03-FWD79-A	SYS 03 GRINN SUB ASSY FWD79		MT	NDE-25	CS	24.00 01.219	----	
C05.021.068	2-03-18.1-14	SYS 03 ISO 18 PT 1		RT	NDE-12	CS	24.00 01.219	----	
C05.021.068A	2-03-18.1-14	SYS 03 ISO 18 PT 1		MT	NDE-25	CS	24.00 01.219	----	
C05.021.069	2-03-18.1-15	SYS 03 ISO 18 PT 1		RT	NDE-12	CS	24.00 01.219	----	
C05.021.069A	2-03-18.1-15	SYS 03 ISO 18 PT 1		MT	NDE-25	CS	24.00 01.219	----	
C05.021.102	2-01A-5.2-43	SYS 01A ISO 5 PT 2		RT	NDE-12	CS	26.00 00.875	----	

PROGRAM: NISIROND-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 47
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.021.102A	2-01A-5.2-43	SYS 01A ISO 5 PT 2		MT	NDE-25	CS	26.00 00.875	----	
C05.021.105	2-01A-5.2-42	SYS 01A ISO 5 PT 2		RT	NDE-12	CS	26.00 00.875	----	
C05.021.105A	2-01A-5.2-42	SYS 01A ISO 5 PT 2		MT	NDE-25	CS	26.00 00.875	----	
C05.021.106	2-01A-5.2-45	SYS 01A ISO 5 PT 2		RT	NDE-12	CS	26.00 00.875	----	
C05.021.106A	2-01A-5.2-45	SYS 01A ISO 5 PT 2		MT	NDE-25	CS	26.00 00.875	----	
C05.021.120	2-01A-5.4-26	SYS 01A ISO 5 PT 4		RT	NDE-12	CS	26.00 00.875	----	
C05.021.120A	2-01A-5.4-26	SYS 01A ISO 5 PT 4		MT	NDE-25	CS	26.00 00.875	----	
C05.021.121	2-01A-5.4-33	SYS 01A ISO 5 PT 4		RT	NDE-12	CS	26.00 00.875	----	

PROGRAM: NISIRUM-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 48
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.021.121A	2-01A-5.4-33	SYS 01A ISO 5 PT 4		MT	NDE-25	CS	26.00 00.875	----	
C05.021.124	2-01A-5.3-24	SYS 01A ISO 5 PT 3		RT	NDE-12	CS	36.00 01.164	----	
C05.021.124A	2-01A-5.3-24	SYS 01A ISO 5 PT 3		MT	NDE-25	CS	36.00 01.164	----	
C05.021.130	2-01A-5.3-18A	SYS 01A ISO 5 PT 3		RT	NDE-12	CS	12.00 00.562	----	
C05.021.130A	2-01A-5.3-18A	SYS 01A ISO 5 PT 3		MT	NDE-25	CS	12.00 00.562	----	
C05.021.131	2-01A-16-C56A	SYS 01A ISO 16		RT	NDE-12	CS	12.00 00.562	----	SELECTION CRITERIA 5.2
C05.021.131A	2-01A-16-C56A	SYS 01A ISO 16		MT	NDE-25	CS	12.00 00.562	----	SELECTION CRITERIA 5.2
C05.022.000	*** CLASS 2 PIPING	LONGITUDINAL WELDS * ***** ***** *****	***** ***** *****	*** ***** *****	***** ***** *****	***** ***** *****	--- --- ---	---	*** GREATER THAN 1/2 INCH ** *** NOMINAL WALL THICKNESS **

PROGRAM: NISIRUNG-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 49
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.022.005	2-01A-5.2-42L	SYS 01A ISO 5 PT2		RT	NDE-12	CS	26.00 00.875		LONG SEAM FOR C05.021.105
C05.022.005A	2-01A-5.2-42L	SYS 01A ISO 5 PT 2		MT	NDE-25	CS	26.00 00.875		LONG SEAM FOR C05.021.105A
C05.022.006	2-01A-5.2-45L	SYS 01A ISO 5 PT 2		RT	NDE-12	CS	26.00 00.875		LONG SEAM FOR C05.021.106
C05.022.006A	2-01A-5.2-45L	SYS 01A ISO 5 PT 2		MT	NDE-25	CS	26.00 00.875		LONG SEAM FOR C05.021.106A
C05.022.007	2-01A-5.4-26L	SYS 01A ISO 5 PT 4		RT	NDE-12	CS	26.00 00.875		LONG SEAM FOR C05.021.120
C05.022.007A	2-01A-5.4-26L	SYS 01A ISO 5 PT 4		MT	NDE-25	CS	26.00 00.875		LONG SEAM FOR C05.021.120A
C05.022.008	2-01A-5.4-33L	SYS 01A ISO 5 PT 4		RT	NDE-12	CS	26.00 00.875		LONG SEAM FOR C05.021.121
C05.022.008A	2-01A-5.4-33L	SYS 01A ISO 5 PT 4		MT	NDE-25	CS	26.00 00.875		LONG SEAM FOR C05.021.121A

PROGRAM: NISIRU-01-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER C05

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 50
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.022.009	2-01A-5.2-43L	SYS 01A ISO 5 PT 2		RT	NDE-12	CS	26.00 00.875		LONG SEAM FOR C05.021.102
C05.022.009A	2-01A-5.2-43L	SYS 01A ISO 5 PT 2		MT	NDE-25	CS	26.00 00.875		LONG SEAM FOR C05.021.102
C05.022.010	2-01A-5.3-24L	SYS 01A ISO 5 PT 3		RT	NDE-12	CS	36.00 01.164		LONG SEAM FOR C05.021.124
C05.022.010A	2-01A-5.3-24L	SYS 01A ISO 5 PT 3		MT	NDE-25	CS	36.00 01.164		LONG SEAM FOR C05.021.124A
C05.031.000	CLASS 2 PIPING	BRANCH CONNECTION WELDS*****		***	*****	*****	---	*****	***** *****
C05.031.202	2-01A-2MSB-10F	SYS 01A ISO 15 GRINN SUB 2MSB-10		MT	NDE-25	CS	06.00 00.432	----	REINFORCEMENT COLLAR, INSP. ALL WELDS, SELECTION CRITERIA 5.2
C05.031.204	2-01A-2MS14A-B	SYS 01A ISO 4.1 GRINN SUB ASSY MS14A		MT	NDE-25	CS	12.00	----	BASELINE OUT. 8 BASELINE OUT. 8

PROGRAM: NISIRUM-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C07

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 51
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C07.010.000	*****PRESSURE	VESSELS***** *****		***	*****	*****	---.	*****	PRESSURE RETAINING COMPONENTS* *****
C07.020.000	*****PIPING	***** *****		***	*****	*****	---.	*****	PRESSURE RETAINING COMPONENTS* *****
C07.021.003	2-OFD-101A-2.1	OFD-101A-2.1		VT2	QCL-15 ISI-350		---.		CL B SYSTEM HYDRO TEST PARTIAL
C07.021.007	2-OFD-101A-2.5	OFD-101A-2.5		VT2	QCL-15 ISI-350		---.		CL. B SYSTEM HYDRO TEST INCLS. SHTS. 2,3 & 4 PARTIAL
C07.021.008	2-OFD-102A-2.1	OFD-102A-2.1		VT2	QAL-15 ISI-350		---.		CL. B SYSTEM HYDRO TEST INCLS. SHTS.2 & 3 PARTIAL
C07.021.013	2-OFD-104A-1.2	OFD-104A-1.2		VT2	QAL-15 ISI-350		---.		CL. B SYSTEM HYDRO TEST
C07.021.031	2-OFD-124B-2.2	OFD-124B-2.2		VT2	QCL-15 ISI-350		---.		CL B SYSTEM HYDRO TEST PARTIAL
C07.021.040	2-OFD-124B-2.3	OFD-124B-2.3		VT2	QCL-15 ISI-350		---.		CL. B SYSTEM HYDRO TEST

PROGRAM: NISIRU QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C07

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 52
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C07.030.000	*****PUMPS	***** *****	=====	***	*****	*****	---. ---	*****	PRESSURE RETAINING COMPONENTS* SYSTEM PRESSURE TEST*****
C07.040.000	*****VALVES	***** *****	=====	***	*****	*****	---. ---	*****	PRESSURE RETAINING COMPONENTS COVERED IN C07.020.000

PROGRAM: NISIRU-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER D01

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 53
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
D01.011.000	*****SYSTEM	INSERVICE TEST***** *****		***	*****	*****	---	*****	***** *****
D01.011.002	2-OFD-101A-2.1	OFD-101A-2.1		VT2	QAL-15 ISI-350	----	---	----	CL. C SYSTEM LEAK TEST
D01.011.003	2-OFD-101A-2.2	OFD-101A-2.2		VT2	QCL-15 ISI-350	----	---	----	CL. C SYSTEM LEAK TEST
D01.011.009	2-OFD-110A-2.1	OFD-110A-2.1		VT2	QAL-15 ISI-350	----	---	----	CL. C SYSTEM LEAK TEST
D01.011.015	2-OFD-144A-2.2	OFD-144A-2.2		VT2	QAL-15 ISI-350	----	---	----	CL. C SYSTEM LEAK TEST
D01.012.002	2-OFD-101A-2.1	OFD-101A-2.1		VT2	QCL-15 ISI-350	----	---	----	CL. C SYSTEM HYDRØ TEST INCLS. SHTS. 2 & 3 PARTIAL
D01.012.003	2-OFD-101A-2.2	OFD-101A-2.2		VT2	QCL-15 ISI-350	----	---	----	CL. C SYSTEM HYDRØ TEST INCLS. SHTS. 2-5 PARTIAL
D01.012.004	2-OFD-101A-2.3	OFD-101A-2.3		VT2	QCL-15 ISI-350	----	---	----	CL. C SYSTEM HYDRØ TEST

PROGRAM: NISIRONS-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER D01

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 54
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
D01.012.005	2-OFD-101A-2.4	OFD-101A-2.4	=====	VT2	QCL-15 ISI-350	-----	---.---	-----	CL. C SYSTEM HYDRO TEST INCLS. SHT. 2 PARTIAL
D01.012.006	2-OFD-101A-2.5	OFD-101A-2.5	=====	VT2	QCL-15 ISI-350	-----	---.---	-----	CL. C SYSTEM HYDRO TEST
D01.012.008	2-OFD-109A-1.1	OFD-109A-1.1	=====	VT2	QCL-15 ISI-350	-----	---.---	-----	CL. C SYSTEM HYDRO TEST PARTIAL
D01.012.009	2-OFD-110A-2.1	OFD-110A-2.1	=====	VT2	QCL-15 ISI-350	-----	---.---	-----	CL. C SYSTEM HYDRO TEST INCLS. SHTS. 2,3 & 4 PARTIAL
D01.012.014	2-OFD-100A-2.3	OFD-100A-2.3	=====	VT2	QCL-15 ISI-350	-----	---.---	-----	CL. C SYSTEM HYDRO TEST INCLS. SHT. 2 PARTIAL
D01.012.015	2-OFD-144A-2.2	OFD-144A-2.2	=====	VT2	QCL-15 ISI-350	-----	---.---	-----	CL. C SYSTEM HYDRO TEST INCLS. SHTS. 2,3 & 4
D01.012.016	2-OFD-110-2.4	OFD-110A-2.4	=====	VT2	QCL-15 ISI-350	-----	---.---	-----	CL. C SYSTEM HYDRO TEST INCLS. SHT. 2
D01.012.018	2-OFD-102A-2.2	OFD-102A-2.2	=====	VT2	QCL-15 ISI-350	-----	---.---	-----	CL. C SYSTEM HYDRO TEST

PROGRAM: NISIR QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER 002

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 55
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
D02.011.000	*****SYSTEM	FUNCTIONAL***** TEST*****	=====	***	*****	*****	==.	=====	***** ***** *****
D02.011.020	2-OFD-124B-2.1	OFD-124B-2.1	=====	VT2	QAL-15 ISI-350	=====	==.	=====	CL. C SYSTEM LEAK TEST
D02.012.009	2-OFD-122A-2.4	OFD-122A-2.4	=====	VT2	QCL-15 ISI-350	=====	==.	=====	CL. C SYSTEM HYDRØ TEST PARTIAL
D02.012.019	2-OFD-124A-1.1	OFD-124A-1.1	=====	VT2	QCL-15 ISI-350	=====	==.	=====	CL. C SYSTEM HYDRØ TEST
D02.012.020	2-OFD-124B-2.1	OFD-124B-2.1	=====	VT2	QCL-15 ISI-350	=====	==.	=====	CL. C SYSTEM HYDRØ TEST PARTIAL
D02.012.021	2-OFD-124A-2.3	OFD-124A-2.3	=====	VT2	QCL-15 ISI-350	=====	==.	=====	CL. C SYSTEM HYDRØ TEST PARTIAL
D02.012.022	2-OFD-124B-2.2	OFD-124B-2.2	=====	VT2	QCL-15 ISI-350	=====	==.	=====	CL. C SYSTEM HYDRØ TEST INCLS. SHTS. 2 & 3
D02.012.023	2-OFD-124B-2.4	OFD-124B-2.4	=====	VT2	QCL-15 ISI-350	=====	==.	=====	CL. C SYSTEM HYDRØ TEST INCLS. SHT. 2

PROGRAM: NISIRUM-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER D02

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 56
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
D02.012.028	2-OFD-124C-2.2	OFD-124C-2.2		VT2	QAL-15				CL. C SYSTEM HYDRO TEST
D02.020.000	*** CLASS 3 INTEGRAL ATTACHMENTS***** *****			***	*****	*****		*****	*****COMPONENTS SUPPORTS AND RESTRAINTS*****
D02.020.009	2-03A-H17	0-1439A		VT3	QAL14				EMER. FDWTR-SPRING 2-03A-1-0-1439A-H17
D02.020.024	2-03A-R63	0-1439A		VT3	QAL-14				EMER. FDWTR - S/R'S 2-03A-1-0-1439A-R63
D02.020.032	2-08-H1	0-1400A		VT3	QAL14				EFWP TURB EXHAUST-SPRING 2-08-1-0-1400A-H1
D02.020.034	2-03A-H12	0-1439B		VT3	QAL-14				EMER. FDWTR - S/R'S 2-03A-1-0-1439B-H12
D02.020.039	2-03A-H7	0-1439C		VT3	QAL-14				EMER. FDWTR - S/R'S 2-03A-1-0-1439C-H7
D02.020.040	2-03A-SR35	0-1439B		VT3	QAL-14				EMER. FDWTR - S/R'S 2-03A-1-0-1439B-SR35

PROGRAM: NISIRONB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER D02

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 57
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
D02.020.043	2-03A-H46	0-1401B		VT3	QAL-14	----	---	----	EMER. FDWTR - S/R'S 2-03A-1-0-1401B-H46
D02.020.045	2-03A-SR13	0-1437A		VT3	QAL-14	----	---	----	EMER. FDWTR - S/R'S 2-03A-1-0-1437A-SR13
D02.020.053	2-03A-H11	0-1437A		VT3	QAL-14	----	---	----	EMER. FDWTR - S/R'S 2-03A-1-0-1437A-H11
D02.020.054	2-03A-H11A	0-1437A		VT3	QAL-14	----	---	----	EMER. FDWTR - S/R'S 2-03A-1-0-1437A-H11A
D02.020.055	2-03A-SR10	0-1437A		VT3	QAL-14	----	---	----	EMER. FDWTR - S/R'S 2-03A-1-0-1437A-SR10
D02.020.058	2-03A-SR6	0-1439B		VT3	QAL-14	----	---	----	EMER. FDWTR - S/R'S 2-03A-1-0-1439C-SR6
D02.020.073	2-03A-SR1	0-437B		VT3	QAL-14	----	---	----	EMER. FDWTR - S/R'S 2-03A-1-0-437B-SR1
D02.020.075	2-03A-SR16	0-437B		VT3	QAL-14	----	---	----	EMER. FDWTR - S/R'S 2-03A-1-0-437B-SR16

PROGRAM: NISIRUM-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER D02

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 58
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ. NUMBERS	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
D02.020.076	2-03A-H27	0-1400A		VT3	QAL-14	----	----	----	EMER. FDWTR - S/R'S 2-03A-1-0-1400A-H27
D02.020.096	2-03A-H59	0-551		VT3	QAL-14		24.00		MAIN FDWTR - SPRING 2-03-0-551-H59
D02.020.097	2-03A-1316	0-1401A		VT3	QAL-14		06.00		EMER FDWTR - RIGID 2-03A-1401A-GC-1316
D02.020.098	2-03A-SR30	0-1400A		VT3	QAL14		06.00		EMER FDWTR-RIGID 2-03A-1-0-1400A-SR30
D02.020.099	2-03-R12	0-1401A		VT	QAL-14		24.00		MAIN FDWTR - HYD. SUPP 2-03-0-1401A-R12
D02.020.127	2-03A-SR25(A)	0-1400B		VT3	QAL-14	---	----	----	EMER. FDWTR. - RIGID 2-03A-1-0-1400B-SR25
D02.020.128	2-03A-SR25	0-1401A		VT3	QAL-14	---	----	----	EMER. FDWTR. - RIGID 2-03A-1-0-1401A-SR25
D02.030.000	*****INTEGRAL	ATTACHMENTS***** *****		***	*****	*****	----	*****	MECHANICAL AND HYDRUALIC SNUBBERS*****

PROGRAM: NISIRUNG-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER D02

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 59
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
D02.040.000	*****INTEGRAL	ATTACHMENTS***** *****	=====	***	*****	*****	-----	*****	SPRING TYPE SUPPORTS***** *****
D02.060.000	*****INTEGRAL	ATTACHMENTS***** *****	=====	***	*****	*****	-----	*****	SHOCK ABSORBERS***** *****

PROGRAM: NISIR QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER D03

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 60
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
D03.011.000	*****SYSTEM	INSERVICE TEST*****	=====	***	*****	*****	-----	*****	***** ***** *****

PROGRAM: NISIRONE-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER E01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 61
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
E01.001.000	REACTOR COOL. PUMP	FLYWHEEL INSPECTIONS *****		***	*****				***** *****
E01.001.001	2RCP-2A1			UT	ISI-117 NDE-900	CS	72.00 09.500		RC PUMP 2A1 FLYWHEEL
E01.001.002	2RCP-2A2			UT	ISI-117 NDE-900	CS	72.00 09.500		RC PUMP 2A2 FLYWHEEL
E01.001.003	2RCP-2B1			UT	ISI-117 NDE-900	CS	72.00 09.500		RC PUMP 2B1 FLYWHEEL
E01.001.004	2RCP-2B2			UT	ISI-117 NDE-900	CS	72.00 09.500		RC PUMP 2B2 FLYWHEEL

PROGRAM: NISIRCH-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER E03

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 62
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
E03.001.000	***** ALTERNATE	EXAMINATIONS *****	***	*****					***** ***** *****

PROGRAM: NISIRUM-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER E04

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 63
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
E04.001.000	***** HPI SAFE END	EXAMINATIONS***** *****	_____	***	*****	*****	_____	*****	***** ***** *****

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER E06

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 64
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
E06.001.000	*****	PRESSURIZER	SURGE PIPING *****	*****	***	*****	*****	-----	***** DRAIN NOZZLE ***** *****
E06.001.001	2-PSL-11	ISI-OCN2-015	-----	PT	NDE-35	SS	01.00 00.250	-----	SELECTION CRITERIA 4.2.2

PROGRAM: NISIRL QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER E07

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 65
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
E07.001.000	***** THERMAL STRESS	PIPING ***** EXAMINATIONS *****	***** ***** *****	***	***** ***** *****	***** ***** *****	___. ___.	___	**** NRC BULLETION 88-08**** *****
E07.001.001	2-51A-39-90C	SYS. 51A ISO. 39.3	___ ___ ___	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF WELD & 1" B.M. (AXIAL & CIRC.)
E07.001.002	2-51A-39-90B	SYS. 51A ISO. 39.3	___ ___ ___	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF WELD & 1" B.M. (AXIAL & CIRC.)
E07.001.003	2-51A-39-91	SYS. 51A ISO. 39.3	___ ___ ___	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF WELD & 1" B.M. (AXIAL & CIRC.)
E07.001.004	2-51A-39-92A	SYS. 51A ISO. 39.3	___ ___ ___	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF WELD & 1" B.M. (AXIAL & CIRC.)
E07.001.005	2-51A-39-92B	SYS. 51A ISO. 39.3	___ ___ ___	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF WELD & 1" B.M. (AXIAL & CIRC.)
E07.001.006	2-51A-39-93	SYS. 51A ISO. 39.3	___ ___ ___	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF WELD & 1" B.M. (AXIAL & CIRC.)
E07.001.009	2-51A-27-73	SYS 51A ISO 27.2	___ ___ ___	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF WELD & 1" B.M. (AXIAL & CIRC.)

PROGRAM: NISIRUM-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER E07

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 66
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
E07.001.010	2-51A-27-81	SYS 51A ISO 27.2	_____	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF WELD & 1" B.M. (AXIAL & CIRC.)
E07.001.011	2-51A-27-82	SYS 51A ISO 27.2	_____	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF ELD & 1" B.M. (AXIAL & CIRC.)
E07.001.012	2-51A-27-108	SYS 51A ISO 27.3	_____	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF WELD & 1" B.M. (AXIAL & CIRC.)
E07.001.013	2-51A-27-110	SYS 51A ISO 27.3	_____	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF WELD & 1" B.M. (AXIAL & CIRC.)
E07.001.014	2-51A-27-111	SYS 51A ISO 27.3	_____	UT	NDE-600	SS	02.50 00.375	40378	INSP. 100% OF WELD & 1" B.M. (AXIAL & CIRC.)

PROGRAM: NISIRUNG-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER E09

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 67
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
E09.001.000	*AUXILIARY FEEDWATER	*****	*****	***	*****	*****	---	---	*(PSC 21-82) WATER ***** *HAMMER EXAMINATIONS*****
E09.001.001	2-03A-24-21	SYS03A ISO 24	---	MT	NDE-25	CS	03.00 00.300	---	2A AUX. FDWTR. HEADER 3" FLANGE-TØ-ELL
E09.001.002	2-03A-24-2VEN	SYS03A ISO 24	---	MT	NDE-25	CS	04.00 00.938	---	2A AUX. FDWTR. HEADER 3" FLANGE NOZZLE TØ 6" HEADER
E09.001.003	2-03A-24-18	SYS03A ISO 24	---	MT	NDE-25	CS	03.00 00.300	---	2A AUX. FDWTR. HEADER 3" FLANGE-TØ-ELL
E09.001.004	2-03A-24-3VEN	SYS03A ISO 24	---	MT	NDE-25	CS	04.00 00.938	---	2A AUX FDWTR. HEADER 3" FLANGE NOZZLE TØ 6" HEADER
E09.001.005	2-03A-24-15	SYS03A ISO 24	---	MT	NDE-25	CS	03.00 00.300	---	2A AUX. FDWTR. HEADER 3" FLANGE-TØ-ELL
E09.001.006	2-03A-24-4VEN	SYS03A ISO 24	---	MT	NDE-25	CS	04.00 00.938	---	2A AUX. FDWTR. HEADER 3" FLANGE NOZZLE TØ 6" HEADER
E09.001.007	2-03A-24-12	SYS03A ISO 24	---	MT	NDE-25	CS	03.00 00.300	---	2A AUX FDWTR. HEADER 3" FLANGE-TØ-ELL

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER E09

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 68
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
E09.001.008	2-03A-24-5VEN	SYS03A ISO 24	_____	MT	NDE-25	CS	04.00 00.938	_____	2A AUX. FDMTR. HEADER 3" FLANGE NOZZLE TO 6" HEADER
E09.001.009	2-03A-24-9	SYS03A ISO 24	_____	MT	NDE-25	CS	03.00 00.300	_____	2A AUX. FDMTR. HEADER 3" FLANGE-TO-ELL
E09.001.010	2-03A-24-6VEN	SYS03A ISO 24	_____	MT	NDE-25	CS	04.00 00.938	_____	2A AUX. FDMTR. HEADER 3" FLANGE NOZZLE TO 6" HEADER
E09.001.011	2-03A-24-6	SYS03A ISO 24	_____	MT	NDE-25	CS	03.00 00.300	_____	2A AUX. FDMTR. HEADER 3" FLANGE-TO-ELL
E09.001.012	2-03A-24-7VEN	SYS03A ISO 24	_____	MT	NDE-25	CS	04.00 00.938	_____	2A AUX. FDMTR. HEADER 3" FLANGE NOZZLE TO 6" HEADER
E09.001.013	2-03A-24-3	SYS03A ISO 24	_____	MT	NDE-25	CS	03.00 00.300	_____	2A AUX. FDMTR. HEADER 3" FLANGE-TO-ELL
E09.001.014	2-03A-24-8VEN	SYS03A ISO 24	_____	MT	NDE-25	CS	04.00 00.938	_____	2A AUX. FDMTR. HEADER 3" FLANGE NOZZLE TO 6" HEADER
E09.001.015	2-03A-24-1VEN	SYS03A ISO 24	_____	RT	NDE-12	CS	06.00 00.432	_____	2A AUX. FDMTR. HEADER HEADER PIPE-TO-ELL

PROGRAM: NISIRON-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER E10

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 69
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
E10.001.000	**PRESSURIZER**	**SAFE END** **EXAMINATIONS**	***** ***** *****	***	***** ***** *****	***** ***** *****	— — —	—	**SENSING/SAMPLING** **NOZZLES**
E10.001.001	2PZR-WP63-1	ISI-OCN2-002	— — —	PT	NDE-35	CS/IN	01.00 01.185	—	SENSING NOZZLE-TØ-SAFE END PC. 30 TØ 42 W-X QUAD.
E10.001.002	2PZR-WP63-2	ISI-OCN2-002	— — —	PT	NDE-35	CS/IN	01.00 01.185	—	SENSING NOZZLE-TØ-SAFE END PC. 30 TØ 42 Y-Z QUAD.
E10.001.003	2PZR-WP63-3	ISI-OCN2-002	— — —	PT	NDE-35	CS/IN	01.00 01.185	—	SENSING NOZZLE-TØ-SAFE END PC. 30 TØ 42 Z-W QUAD.
E10.001.004	2PZR-WP63-4	ISI-OCN2-002	— — —	PT	NDE-35	CS/IN	01.00 01.187	—	SENSING NOZZLE-TØ-SAFE END PC. 30 TØ 42 W-X QUAD.
E10.001.005	2PZR-WP63-5	ISI-OCN2-002	— — —	PT	NDE-35	CS/IN	01.00 01.185	—	SENSING NOZZLE-TØ-SAFE END PC. 30 TØ 42 Y-Z QUAD.
E10.001.006	2PZR-WP63-6	ISI-OCN2-002	— — —	PT	NDE-35	CS/IN	01.00 01.185	—	SENSING NOZZLE-TØ-SAFE END PC. 30 TØ 42 Z-W QUAD.
E10.001.007	2PZR-WP63-7	ISI-OCN2-002	— — —	PT	NDE-35	CS/IN	01.00 01.185	—	SAMPLING NOZZLE-TØ-SAFE END PC. 30 TØ 42 Z-W QUAD.

PROGRAM: NISIR -QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 70
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.01.000	*****CLASS 1	SUPPORTS***** *****		***	*****	*****	---	*****	***** *****
F1.01.087	2-51A-H17B	0-1479A		VT	QAL-14	----	02.50	----	HPI - Y RIGID 2-51A-0-1479A-H17B
F1.01.098	2-51A-H2C	0-1478A		VT	QAL-14	----	02.50	----	HPI - SPRING 2-51A-0-1478A-H2C
F1.01.099	2-51A-H1C	0-1478A		VT	QAL-14	----	02.50	----	HPI - RIGID 2-51A-0-1478A-H1C
F1.01.100	2-59-H28	0-1478A		VT	QAL-14	----	02.50	----	HPI - RIGID 2-59-0-1478A-H28
F1.01.101	2-51A-H11A	0-1479A		VT	QAL-14	----	02.50	----	HPI-SPRING 2-51A-0-1479A-H11A
F1.01.122	2-53A-H29C	0-1481A		VT	QAL-14	----	01.50	----	PRESS. SPRAY - LATERAL RIGID 2-53A-0-1481A-H29C
F1.01.125	2-53A-H7B	0-1479A		VT	QAL-14	----	10.00	----	LPI - X RIGID 2-53A-0-1479A-H7B

PROGRAM: NISIR QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 71
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
F1.01.129	2-53A-H4B	0-1478A		VT	QAL-14	-----	10.00	-----	LPI - RIGID 2-53A-0-1478A-H4B
F1.01.135	2-53A-H4A	0-1478A		VT	QAL-14	-----	10.00	-----	LPI - X RIGID 2-53A-0-1478A-H4A
F1.01.137	2-53A-H5A	0-1478A		VT	QAL-14	-----	10.00	-----	LPI - X RIGID 2-53A-0-1478A-H5A
F1.01.139	2-53A-H6A	0-1478A		VT	QAL-14	-----	10.00	-----	LPI - SPRING 2-53A-0-1478A-H6A
F1.01.140	2-53A-H7A	0-1479A		VT	QAL-14	-----	10.00	-----	LPI - Y RIGID 2-53A-0-1479A-H7A
F1.01.142	2-53-H4	0-1478A		VT	QAL-14	-----	12.00	-----	DECAY HEAT - X RIGID 2-53-0-1478A-H4
F1.01.144	2-53-H1	0-1479A		VT	QAL-14	-----	12.00	-----	DECAY HEAT - SPRING 2-53-0-1479A-H1
F1.01.145	2-53-H3	0-1478A		VT	QAL-14	-----	12.00	-----	DECAY HEAT - SNUBBER 2-53-0-1478A-H3

PROGRAM: NISIRUC-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 72
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM. THICK	CALIB BLOCK	COMMENTS
F1.01.146	2-53-H2	0-1478A		VT	QAL-14	-----	12.00	-----	DECAY HEAT - X RIGID 2-53-0-1478A-H2
F1.01.147	2-RPV-WR36	ISI-OCN2-001		VT3	QAL-14	CS	02.000	-----	RPV SUPPORT SKIRT
F1.01.148	2SGA-SKIRT	ISI-OCN2-003 OM-1201-450		VT	QAL-14	-----	-----	-----	2SGA SUPPORT SKIRT
F1.02.000	*****CLASS 2	SUPPORTS***** *****		***	*****	*****	-----	*****	***** *****
F1.02.001	2-01A-H1	0-1441		VT	QAL-14	-----	36.50	-----	INSP PER ASME IW2430(A) 2-01A-0-1441-H1 ADDED PER IW2-2430(A)
F1.02.002	2-01A-H2	0-1441		VT	QAL-14	-----	36.50	-----	INSP PER ASME IW2430(A) 2-01A-0-1441-H2 ADDED PER IW2-2430(A)
F1.02.014	2-01A-H14	0-1441		VT	QAL-14	-----	36.50	-----	MAIN STEAM - RIGID 2-01A-0-1441-H14
F1.02.015	2-01A-H15	0-1441		VT	QAL-14	-----	36.50	-----	MAIN STEAM - RIGID 2-01A-0-1441-H15

PROGRAM: NISIRON-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 73
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.02.017	2-01A-H17	0-1441		VT	QAL-14	-----	36.50	-----	MAIN STEAM - RIGID 2-01A-0-1441-H17
F1.02.020	2-01A-H20	0-1401B		VT	QAL-14	-----	36.50	-----	MAIN STEAM - RIGID 2-01A-1401B-H20
F1.02.025	2-01A-R1	0-1441		VT	QAL-14	-----	36.50	-----	MAIN STEAM-MECH. SHOCK SUPP 2-01A-0-1441-R1 REF PIR #2-092-0027
F1.02.026	2-01A-R2-1	0-1441		VT	QAL-14	-----	36.50	-----	MAIN STEAM - MECH. SUPP. 2-01A-0-1441-R2-1
F1.02.028	2-01A-R4	0-1401B		VT	QAL-14	-----	36.50	-----	MAIN STEAM - MECH. SUPP. 2-01A-0-1401B-R4
F1.02.029	2-01A-R5	0-1401B		VT	QAL-14	-----	36.50	-----	MAIN STEAM-MECH. SHOCK SUPP. 2-01A-0-1401B-R5
F1.02.030	2-01A-R6	0-1401B		VT	QAL-14	-----	36.50	-----	MAIN STEAM - MECH. SHOCK SUPP. 2-01A-0-1401B-R6
F1.02.031	2-01A-R7	0-1441		VT	QAL-14	-----	36.50	-----	INSP PER ASME IWF2430(A) 2-01A-0-1441-R7 ADDED PER IWF-2430(A)

PROGRAM: NISIRON-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 74
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ. NUMBERS	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.02.033	2-01A-R9-1	0-1441		VT	QAL-14	-----	36.50	-----	INSP PER ASME IWF2430(A) 2-01A-0-1441-R9-1 ADDED PER IWF-2430(A)
F1.02.035	2-01A-R11	0-1401B		VT	QAL-14	-----	36.50	-----	INSP PER ASME IWF2430(A) 2-01A-0-1401B-R11 ADDED PER IWF-2430(A)
F1.02.041	2-01A-DE060	0-1441		VT	QAL-14	-----	35.00	-----	INSP PER ASME IWF2430(A) 2-01A-0-1441-DE060 ADDED PER IWF-2430(A)
F1.02.042	2-01A-DE061	0-1441		VT	QAL-14	-----	36.00	-----	MAIN STEAM - MECH. SHOCK SUPP. 2-01A-0-1441-DE061
F1.02.081	2-01A-R2-2	0-1441		VT	QAL-14	-----	36.50	-----	INSP PER ASME IWF2430(A) 2-01A-0-1441-R2-2 ADDED PER IWF-2430(A)
F1.02.107	2-03-H8B	0-1480A		VT	QAL-14	-----	20.00	-----	MAIN FDWTR - SPRING 2-03-0-1480A-H8B
F1.02.108	2-03-H9B	0-1480A		VT	QAL-14	-----	20.00	-----	MAIN FDWTR - Y RIGID 2-03-0-1480A-H9B
F1.02.110	2-03-H11A	0-1481A		VT	QAL-14	-----	24.00	-----	MAIN FDWTR - Z RIGID 2-03-0-1481A-H11A

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 75
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
F1.02.115	2-03-H16A	0-1481A		VT	QAL-14	----	24.00	----	MAIN FDWTR - X RIGID 2-03-0-1481A-H16A
F1.02.117	2-03-H1A	0-1479A		VT	QAL-14	----	14.00	----	MAIN FDWTR - X RIGID 2-03-0-1479A-H1A
F1.02.119	2-03-H3A	0-1479A		VT	QAL-14	----	14.00	----	MAIN FDWTR - X RIGID 2-03-0-1479A-H3A
F1.02.121	2-03-H5A	0-1479A		VT	QAL-14	----	24.00	----	MAIN FDWTR - Z RIGID 2-03-0-1479A-H5A
F1.02.125	2-03-H9A	0-1480A		VT	QAL-14	----	24.00	----	MAIN FDWTR - X RIGID 2-03-0-1480A-H9A
F1.02.126	2-03-H10A	0-1480A		VT	QAL-14	----	24.00	----	MAIN FDWTR - Y RIGID 2-03-0-1480A-H10A
F1.02.151	2-03A-H22	0-1439A		VT	QAL-14	----	06.00	----	EMER FDWTR - RIGID 2-03A-1-0-1439A-H22
F1.02.152	2-03A-R61	0-1439A		VT	QAL-14	----	06.00	----	EMER FDWTR - RIGID 2-03A-1-0-1439A-R61

PROGRAM: NISIRU-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 76
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM. THICK	CALIB BLOCK	COMMENTS
F1.02.153	2-03A-H6B	0-1480A		VT	QAL-14	----	06.00	----	EMER FDWTR - SPRING 2-03A-0-1480A-H6B
F1.02.154	2-03A-H6270	0-1490C		VT	QAL-14	----	06.00	----	EMER FDWTR - SPRING 2-03A-1490C-H6270
F1.02.155	2-03A-H6271	0-1490C		VT	QAL-14	----	06.00	----	EMER FDWTR - SPRING 2-03A-1490C-H6271
F1.02.202	2-53B-H8	0-436E		VT	QAL-14	----	06.00	----	HPI - RIGID 2-53B-2-0-436E-H8
F1.02.252	2-53B-DE057	0-435B		VT	QAL-14	----	10.00	----	DECAY HEAT - MECH. S.S. SUPP. 2-53B-5-0-435B-DE057
F1.02.254	2-53B-H58A	0-1439B		VT	QAL-14	----	10.00	----	DECAY HEAT - ANCHOR 2-53B-5-0-1439B-H58A
F1.02.255	2-53B-H56	0-435B		VT	QAL-14	----	10.00	----	DECAY HEAT - SPRING 2-53B-435B-EMO-H56
F1.02.259	2-53B-DE052	0-435B		VT	QAL-14	----	10.00	----	DECAY HEAT - RIGID 2-53B-0-435B-DE052

PROGRAM: NISIRON-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 77
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.02.260	2-53B-DE053	0-435B	=====	VT	QAL-14	-----	10.00	-----	DECAY HEAT - RIGID 2-53B-0-435B-DE053
F1.02.261	2-53B-H3	0-1444	=====	VT	QAL-14	-----	10.00	-----	DECAY HEAT - SPRING 2-53B-5-0-1444-H3
F1.02.263	2-53B-H15	0-435B	=====	VT	QAL-14	-----	12.00	-----	DECAY HEAT - SPRING 2-53B-2-435B-H15
F1.02.264	2-53B-H2	0-1444	=====	VT	QAL-14	-----	10.00	-----	DECAY HEAT - SPRING 2-53B-5-0-1444-H2
F1.02.269	2-53B-DE051	0-435B	=====	VT	QAL-14	-----	14.00	-----	DECAY HEAT - RIGID 2-53B-0-435B-DE051
F1.02.292	2-53B-H58	0-1439B	=====	VT	QAL-14	-----	10.00	-----	DECAY HEAT - RIGID 2-53B-5-0-1439B-H58
F1.02.296	2-53B-DE008	0-435B	=====	VT	QAL-14	-----	10.00	-----	DECAY HEAT - RIGID 2-53B-435B-DE008
F1.02.300	2-53B-H6(B)	0-435B	=====	VT	QAL-14	-----	10.00	-----	DECAY HEAT - SPRING 2-53B-5-0-435B-H6

PROGRAM: NISIRUND-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 78
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
F1.02.316	2-53B-DE063	0-1436A		VT	QAL-14	-----	10.00	-----	DECAY HEAT - MECH SHOCK SUPP. 2-53B-1-0-1436A-DE063
F1.02.320	2-53B-R13	0-1444		VT	QAL-14	-----	08.00	-----	DECAY HEAT - RIGID 2-53B-5-0-1444-R13
F1.02.322	2-53B-R10	0-1444		VT	QAL-14	-----	10.00	-----	DECAY HEAT - RIGID 2-53B-5-0-1444-R10
F1.02.326	2-53B-H35	0-1439C		VT	QAL-14	-----	10.00	-----	DECAY HEAT - RIGID 2-53B-5-0-1439C-H35
F1.02.328	2-53B-H34	0-1439C		VT	QAL-14	-----	10.00	-----	DECAY HEAT - RIGID 2-53B-5-0-1439C-H34
F1.02.330	2-53B-DE067	0-1439C		VT	QAL-14	-----	10.00	-----	DECAY HEAT - RIGID 2-53B-1-0-1439C-DE067
F1.02.331	2-53B-H33	0-1439C		VT	QAL-14	-----	10.00	-----	DECAY HEAT - SHAY STRUT 2-53B-5-0-1439C-H33
F1.02.332	2-53B-H32	0-1439C		VT	QAL-14	-----	10.00	-----	DECAY HEAT - RIGID 2-53B-5-0-1439C-H32

PROGRAM: NISIRUNG-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 79
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.02.334	2-53B-H25	0-1439C		VT	QAL-14	-----	10.00	-----	DECAY HEAT - RIGID 2-53B-0-1439C-H25
F1.02.344	2-53B-R16	0-1436A		VT	QAL-14	-----	10.00	-----	DECAY HEAT - RIGID 2-53B-5-0-1436A-R16
F1.02.346	2-53A-H8A	0-1479A		VT	QAL-14	-----	10.00	-----	DECAY HEAT - SPRING 2-53A-0-1479A-H8A
F1.02.365	2-54B-H10B	0-1477		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - X RIGID 2-54B-0-1477-H10B
F1.02.367	2-54B-H8B	0-1477		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - X RIGID 2-54B-0-1477-H8B
F1.02.401	2-54B-H5A	0-1477		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - X RIGID 2-54B-0-1477-H5A
F1.02.404	2-54B-H2A	0-1477		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - X RIGID 2-54B-0-1477-H2A
F1.02.436	2-54A-H4	0-1436A		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - RIGID 2-54A-3-0-1436A-H4 BASELINE OUT. 8

PROGRAM: NISIRU QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 80
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM. THICK	CALIB BLOCK	COMMENTS
F1.02.457	2-54A-H11	0-1439C		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - RIGID 2-54A-3-0-1439C-H11
F1.02.465	2-54A-R42	0-1439B		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - RIGID 2-54A-3-0-1439B-R42
F1.02.466	2-54A-H18	0-1439B		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - RIGID 2-54A-3-0-1439B-H18
F1.02.469	2-54A-R2	0-1444		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - RIGID 2-54A-3-0-1444-R2
F1.02.480	2-54A-H25	0-1439A		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - RIGID 2-54A-3-0-1439A-H25
F1.02.481	2-54A-R16	0-1439A		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY-HYD. SUPP. 2-54A-3-0-1439A-R16
F1.02.482	2-54A-H26	0-1439D		VT	QAL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - ANCHOR 2-54A-3-0-1439D-H26
F1.02.531	2-56-H12	0-1478A		VT	QAL-14	-----	08.00	-----	SPENT FUEL - Y RIGID 2-56-0-1478A-H12

PROGRAM: NISIRUN-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 81
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.02.537	2-01A-CV-4	0-1401B		VT	QAL-14				MAIN STEAM - RIGID 2-01A-0M-200-30-CV-4
F1.02.538	2-53A-H19	0-435B		VT	QAL-14		14.00		LPI - SPRING 2-53A-4-0-435B-H19
F1.02.540	2-53B-H5402	0-1436B		VT	QAL-14		06.00		LPI - SWAY STRUT 2-53B-1436B-H5402
F1.02.541	2-53B-H28	0-1439B		VT	QAL-14		10.00		REACTOR SPRAY - RIGID 2-53B-0-1439B-H28
F1.02.542	2-53B-H22	0-1436A		VT	QAL-14		08.00		LPI - RIGID 2-53B-5-0-1436A-H22
F1.02.543	2-54A-R7	0-1436A		VT	QAL-14		08.00		REACTOR SPRAY - RIGID 2-54A-3-0-1436A-R7
F1.02.544	2-54A-R8	0-435B		VT	QAL-14		08.00		REACTOR SPRAY - RIGID 2-54A-3-0-435B-R8
F1.02.545	2-54A-R6	0-1436A		VT	QAL-14		08.00		REACTOR SPRAY - SWAY STRUT 2-54A-3-0-1436A-R6

PROGRAM: NISIRU-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 82
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.02.546	2-54A-H4A	0-1436A		VT	QAL-14		08.00		REACTOR SPRAY - RIGID 2-54A-3-1436A-H4A
F1.02.548	2-54A-R44	0-435B		VT	QAL-14		08.00		REACTOR SPRAY - RIGID 2-54A-3-0-435B-R44
F1.02.550	2-54B-H4B	0-1477		VT	QAL-14		08.00		REACTOR SPRAY - Y-SPRING 54B-0-1477-H4B
F1.03.000	***** CLASS 3 SUPPORTS*****	*****		***	*****				*****
F1.03.014	2-01A-DE028	0-1403D		VT	QAL-14		08.00		STM SUPPLY EFWP TURB. - RIGID 2-01A-1403D-DE028
F1.03.015	2-01A-DE032	0-1403D		VT	QAL-14		08.00		STM SUPPLY EFWP TURB. - RIGID 2-01A-1403D-DE032
F1.03.062	2-03-R12	0-1401A		VT	QAL-14		24.00		MAIN FDWTR - HYD. SUPP. 2-03-0-1401A-R12
F1.03.063	2-03-H65	0-551		VT	QAL-14		24.00		MAIN FDWTR - RIGID 2-03-0-551-H65

PROGRAM: NISIRU-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 83
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.03.064	2-03-H59	0-551		VT	QAL-14	----	24.00	----	MAIN FDWTR - SPRING 2-03-0-551-H59
F1.03.065	2-03-H54	0-1439B		VT	QAL-14	----	24.00	----	MAIN FDWTR -RIGID 2-03-0-1439B-H54
F1.03.109	2-03A-H30	0-1439		VT	QAL-14	----	06.00	----	EMER FDWTR - RIGID 2-03A-1-0-1439-H30
F1.03.112	2-03A-H28	0-1439B		VT	QAL-14	----	06.00	----	EMER FDWTR - RIGID 2-03A-1-0-1439B-H28
F1.03.113	2-03A-R63	0-1439A		VT	QAL-14	----	06.00	----	EMER FDWTR - RIGID 2-03A-1-0-1439A-R63
F1.03.114	2-03A-H27	0-1439A		VT	QAL-14	----	06.00	----	EMER FDWTR-SWAY STRUT 2-03A-1-0-1439A-H27
F1.03.126	2-03A-SR54	0-1400A		VT	QAL-14	----	06.00	----	EMER FDWTR - RIGID 2-03A-1-0-1400A-SR54
F1.03.130	2-03A-SR23	0-1401A		VT	QAL-14	----	06.00	----	EMER FDWTR - RIGID 2-03A-1-0-1401A-SR23

PROGRAM: NISIRU-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 84
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.03.134	2-03A-1316	0-1401A		VT	QAL-14	-----	06.00	-----	EMER FDWTR - RIGID 2-03A-1401A-GC-1316
F1.03.136	2-03A-SR29A	0-1401A		VT	QAL-14	-----	06.00	-----	EMER FDWTR - RIGID 2-03A-1-0-1401A-SR29A
F1.03.168	2-03A-SR12	0-1401B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1401B-SR12
F1.03.172	2-03A-DE032	0-1401A		VT	QAL-14	-----	06.00	-----	2-03A-1401A-DE032
F1.03.184	2-03A-1010	0-1401A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1401A-GC-1010
F1.03.185	2-03A-H13	0-1439B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1439B-H13
F1.03.187	2-03A-H12	0-1439B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1439B-H12
F1.03.193	2-03A-H7	0-1439C		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1439C-H7

PROGRAM: NISIRCB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 85
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.03.199	2-03A-SR35	0-1439B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1439B-SR35
F1.03.208	2-03A-0600	0-1401B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - SWAY STRUT 2-03A-1401B-RL-0600
F1.03.209	2-03A-H46	0-1401B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1401B-H46
F1.03.210	2-03A-0604	0-1401B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1401B-RL-0604
F1.03.213	2-03A-SR101P0	0-1401B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - HYD. S.S. SUPP. 2-03A-1-0-1401B-SR101P0
F1.03.215	2-03A-SR13	0-1437A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1437A-SR13
F1.03.223	2-03A-H11	0-1437A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1437A-H11
F1.03.224	2-03A-H11A	0-1437A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1437A-H11A

PROGRAM: NISIRU-B-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 86
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.03.225	2-03A-SR10	0-1437A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1437A-SR10
F1.03.227	2-03A-H9	0-1437A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1437A-H9
F1.03.229	2-03A-H17	0-1439A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - SPRING 2-03A-1-0-1439A-H17
F1.03.231	2-03A-SR6	0-1439B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1439C-SR6
F1.03.254	2-03A-SR1	0-437B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-437B-SR1
F1.03.256	2-03A-0701	0-437B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-437B-JEJ-0701
F1.03.257	2-03A-SR16	0-437B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-437B-SR16
F1.03.259	2-03A-H27	0-1400A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1400A-H27

PROGRAM: NISIRU-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 87
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.03.281	2-03A-H74	0-1400A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1400A-H74
F1.03.282	2-03A-H75	0-1400A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1400A-H75
F1.03.317	2-03A-H2B	0-1480A		VT	QAL-14	-----	06.00	-----	EMER FDWTR - SPRING 2-03A-0-1480A-H2B
F1.03.329	2-03A-H4A	0-1480A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-0-1480A-H4A
F1.03.331	2-03A-H6089	0-1480A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1480B-H6089
F1.03.332	2-03A-H6112	0-1480A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03-1480A-H6112
F1.03.333	2-03-H6111	0-1480A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - SPRING 2-03-1480A-H6111
F1.03.334	2-03-H6110	0-1480A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03-1480A-H6110

PROGRAM: NISIRU-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 88
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
F1.03.335	2-03A-H6113	0-1480A		VT	QAL-14	-----	06.00	-----	EMER. FDMTR - RIGID 2-03-1480A-H6113
F1.03.369	2-07A-2102	0-1400A		VT	QAL-14	-----	24.00	-----	CONDENSATE SYSTEM - SPRING 2-07A-1400A-JLM-2102
F1.03.370	2-07A-DE039	0-1400A		VT	QAL-14	-----	24.00	-----	CONDENSATE SYSTEM-MECH. S. S. 2-07A-1400A-DE039
F1.03.371	2-07A-DE045	0-1400A		VT	QAL-14	-----	24.00	-----	CONDENSATE SYSTEM - RIGID 2-07A-1400A-DE045
F1.03.372	2-07A-2101	0-1400A		VT	QAL-14	-----	24.00	-----	CONDENSATE SYSTEM - RIGID 2-07A-1400A-JLM-2101
F1.03.373	2-07A-DE002	0-1400A		VT	QAL-14	-----	24.00	-----	CONDENSATE SYSTEM - RIGID 2-07A-1400A-DE002
F1.03.412	2-07A-DE046	0-1400A		VT	QAL-14	-----	08.00	-----	CONDENSATE SYSTEM - RIGID 2-07A-1400A-DE046
F1.03.414	2-07A-DE019	0-1400A		VT	QAL-14	-----	08.00	-----	CONDENSATE SYSTEM - RIGID 2-07A-1400A-DE019

PROGRAM: NISIRUB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 89
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.03.417	2-07A-SR4	0-1400A		VT	QAL-14	-----	08.00	-----	CONDENSATE SYSTEM - RIGID 2-07A-1400A-SR4
F1.03.432	2-07A-1102	0-1402A		VT	QAL-14	-----	08.00	-----	CONDENSATE SYSTEM - SPRING 2-07A-1402A-PS-1102
F1.03.434	2-07A-H33	0-1400A		VT	QAL-14	-----	08.00	-----	CONDENSATE SYSTEM - SPRING 2-07A-1400A-H33
F1.03.435	2-07A-0900	0-1400A		VT	QAL-14	-----	08.00	-----	CONDENSATE SYSTEM - SWAY STRUT 2-07A-1400A-RL-0900
F1.03.437	2-07A-SR1	0-1400A		VT	QAL-14	-----	08.00	-----	CONDENSATE SYSTEM - RIGID 2-07A-0-1400A-SR1
F1.03.439	2-07A-SR26	0-1400A		VT	QAL-14	-----	08.00	-----	CONDENSATE SYSTEM - RIGID 2-07A-0-1400A-SR26
F1.03.440	2-07A-DE023	0-1400A		VT	QAL-14	-----	08.00	-----	CONDENSATE SYSTEM - RIGID 2-07A-1400A-DE023
F1.03.441	2-07A-H5	0-1402A		VT	QAL-14	-----	30.00	-----	CONDENSATE SYSTEM-SPRING 2-07A-6-0-1402A-H5

PROGRAM: NISIRU QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 2
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 90
 DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
F1.03.450	2-08-H1	0-1400A		VT	QAL-14	-----	10.00	-----	EFWP TURBINE EXHAUST - SPRING 2-08-1-0-1400A-H1
F1.03.451	2-08-H5	0-1400A		VT	QAL-14	-----	10.00	-----	EFWP TURBINE EXHAUST - RIGID 2-08-1400A-H5
F1.03.453	2-08-DE001	0-1400A		VT	QAL-14	-----	10.00	-----	EFWP TURBINE EXHAUST - RIGID 2-08-1400A-DE001
F1.03.497	2-14-H6094	0-1478F		VT	QAL-14	-----	06.00	-----	AUX SERVICE WATER - RIGID 2-14-1478F-H6094
F1.03.498	2-14-H6095	0-1478F		VT	QAL-14	-----	06.00	-----	AUX SERVICE WATER - RIGID 2-14-1478F-H6095
F1.03.499	2-14-H6096	0-1478F		VT	QAL-14	-----	06.00	-----	AUX SERVICE WATER - RIGID 2-14-1478F-H6096
F1.03.510	2-03A-1001	0-1401B		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - SWAY STRUT 2-03A-1401B-JG-1001
F1.03.523	2-03A-SR30	0-1400A		VT	QAL-14	-----	06.00	-----	EMER. FDWTR - RIGID 2-03A-1-0-1400A-SR30

PROGRAM: NISIR QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 91
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
F1.03.525	2-03A-SR22	0-1400A		VT	QAL-14		06.00		EMER. FDWTR - RIGID 2-03A-1-0-1400A-SR22
F1.03.526	2-03A-SR16	0-1401B		VT	QAL-14		06.00		EMER. FDWTR - RIGID 2-03A-1-0-1401B-SR16
F1.03.527	2-03A-SR15	0-1401B		VT	QAL-14		06.00		EMER. FDWTR - RIGID 2-03A-1-0-1401B-SR15
F1.03.528	2-03A-SR13	0-1401B		VT	QAL-14		06.00		EMER. FDWTR - RIGID 2-03A-1-0-1401B-SR13
F1.03.530	2-03A-SR23	0-1400A		VT	QAL-14		06.00		EMER. FDWTR - RIGID 2-03A-1-0-1400A-SR23
F1.03.546	2-03A-DE004	0-1401B		VT	QAL-14		06.00		EMER. FDWTR - RIGID 2-03A-1401B-DE004
F1.03.547	2-03A-DE006	0-1401B		VT	QAL-14		06.00		EMER. FDWTR - RIGID 2-03A-1-0-1401B-DE006
F1.03.548	2-03A-DE007	0-1401B		VT	QAL-14		06.00		EMER. FDWTR - RIGID 2-03A-1401B-DE007

PROGRAM: NISIR -QAISI02
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION LISTING OUTAGE 12

PAGE 92
DATE 04/30/92

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.03.550	2-03A-DE057	0-1401B	VT	QAL-14		06.00			EMER. FDWTR - RIGID 1-03A-1-0-401B-DE057
F1.03.556	2-03A-SR25	0-1401B	VT	QAL-14		06.00			EMER. FDWTR - RIGID 2-03A-1-0-1401A-SR25
F1.03.564	2-03A-SR25(A)	0-1400B	VT	QAL-14		06.00			EMER. FDWTR -RIGID 2-03A-1-0-1400B-SR25

4.0 Results of Inspections Performed During Outage 12

The results of each inspection shown in the final ISI Plan (Section 3 of this report) are included in this section. The completion date and status for each inspection are shown. All inspections revealing reportable indications are described in further detail in Section 5, 6, or 7 as applicable.

The information shown below is a field description for the reporting format included in this section of the report:

Item Number	=	ASME Section XI Tables IWB-2500-1 (Class 1), IWC-2500-1 (Class 2), IWD-2500-1 (Class 3), IWF-2500-1 (Class 1, Class 2 and Class 3), and Augmented Requirements
ID Number	=	Unique Identification Number
Inspection Date	=	Date of Examination
Inspection Status		
CLR	=	Clear
REC	=	Recordable
REP	=	Reportable
Inspection Limited		
L	=	Limited
-	=	No
Geo. Ref.	=	Geometric Reflector
N	=	No
Y	=	Yes
Comments	=	General and/or Detail Description

PROGRAM: NISIRCH-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 1
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B01.011.001	2RPV-WR1A	01/24/92	REC	-	Y	_____
B01.011.002	2RPV-WR1	01/24/92	REC	-	Y	_____
B01.011.003	2RPV-WR18	02/01/92	REC	-	Y	_____
B01.021.001B	2RPV-WH5	01/21/92	CLR	L	N	_____
B01.021.002	2RPV-WR34	02/03/92	REC	L	Y	_____
B01.030.001	2RPV-WR19	02/01/92	REC	L	Y	_____
B01.040.001B	2RPV-WH7	01/21/92	CLR	L	N	_____
B01.040.002B	2RPV-WH7	01/20/92	CLR	-	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B02

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 2
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
B02.011.006	2PZR-WP28	01/30/92	REC	-	N	IWB-2420(B) NO GROWTH, ACCEPT
B02.012.001	2PZR-WP1-1	01/28/92	CLR	L	N	_____
B02.012.004	2PZR-WP7-1	01/28/92	CLR	L	N	_____
B02.012.005	2PZR-WP7-2	01/29/92	CLR	L	N	_____

PROGRAM: NISIN QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B03

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 3
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GE0. REF. =====	COMMENTS =====
B03.090.001	2RPV-WR13	01/28/92	REC	L	Y	
B03.090.001A	2RPV-WR13	01/27/92	REC	L	Y	
B03.090.002	2RPV-WR13A	02/04/92	REC	L	N	
B03.090.002A	2RPV-WR13A	02/03/92	REC	L	Y	
B03.090.003	2RPV-WR12	01/29/92	REC	L	Y	
B03.090.003A	2RPV-WR12	01/30/92	REC	L	Y	
B03.090.004	2RPV-WR12A	01/28/92	REC	L	Y	
B03.090.004A	2RPV-WR12A	01/31/92	REC	L	Y	
B03.090.005	2RPV-WR12B	01/26/92	CLR	L	N	
B03.090.005A	2RPV-WR12B	01/31/92	REC	L	Y	
B03.090.006	2RPV-WR12C	01/26/92	CLR	L	N	
B03.090.006A	2RPV-WR12C	01/26/92	REC	L	Y	
B03.090.007	2RPV-WR54	01/26/92	REC	L	Y	
B03.090.008	2RPV-WR54A	01/31/92	REC	L	Y	
B03.100.001	2RPV-WR13	01/27/92	REC	L	Y	

PROGRAM: NISIR QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B03

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 4
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B03.100.002	2RPV-WR13A	02/03/92	REC	L	Y	_____
B03.100.003	2RPV-WR12	02/03/92	REC	L	Y	_____
B03.100.004	2RPV-WR12A	01/28/92	REC	L	Y	_____
B03.100.005	2RPV-WR12B	01/25/92	REC	L	Y	_____
B03.100.006	2RPV-WR12C	01/26/92	REC	L	Y	_____
B03.110.010	2PZR-WP26-2	01/22/92	CLR	L	N	_____
B03.120.010	2PZR-WP26-2	01/22/92	CLR	L	N	_____
B03.150.003	2-LDCB-IN-V1	01/22/92	CLR	L	Y	_____
B03.160.003	2-LDCB-IN-V1	01/22/92	CLR	L	N	_____

PROGRAM: NISIN QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B04

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 5
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B04.012.001	2RPV-CRDM	03/03/92	CLR	-	N	_____
B04.013.001	2RPV-INORE	03/03/92	CLR	-	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 6
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B05.010.001A	2RPV-WR53	02/01/92	REC	-	Y	
B05.010.001B	2RPV-WR53	02/01/92	CLR	-	N	
B05.010.002A	2RPV-WR53A	02/02/92	CLR	-	Y	
B05.010.002B	2RPV-WR53A	02/02/92	CLR	-	N	
B05.020.002	2PZR-WP45	01/20/92	CLR	L	N	
B05.020.002A	2PZR-WP45	01/21/92	CLR	-	N	
B05.050.014	2PSP-1	01/20/92	REC	-	N	
B05.050.014A	2PSP-1	01/21/92	CLR	-	N	
B05.051.002	2PIA1-12	01/14/92	CLR	-	N	
B05.051.003	2PIA2-11	01/21/92	CLR	-	N	
B05.051.004	2PIA2-12	01/14/92	CLR	-	N	
B05.051.005	2PDA2-11	01/15/92	CLR	-	N	
B05.051.012	2PHA-13	01/17/92	CLR	-	N	
B05.051.013	2PHA-14	01/17/92	CLR	-	N	
B05.051.014	2PHA-15	01/17/92	CLR	-	N	

PROGRAM: NISIR QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B06

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 7
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
B06.040.001A	2RPV-LIGAMENTS	01/17/92	CLR	L	N	_____
B06.180.001	2RCP-2A1-FB	02/03/92	CLR	-	N	_____
B06.180.002	2RCP-2A2-FB	02/03/92	CLR	-	N	_____
B06.180.006	2RCP-2A2-S	01/22/92	CLR	L	N	_____
B06.180.008	2RCP-2B2-S	01/22/92	CLR	L	N	_____
B06.200.001	2RCP-A1-NUTS	01/18/92	CLR	-	N	_____
B06.200.002	2RCP-A2-NUTS	01/18/92	CLR	-	N	_____
B06.200.006	2RCP-A2-WASH	01/20/92	CLR	-	N	_____
B06.200.008	2RCP-B2-WASH	01/15/92	CLR	-	N	_____

PROGRAM: NISIR QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B07

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 8
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
B07.020.003	2PZR-LHB-STUDS	01/21/92	CLR	-	N	_____
B07.030.007	2SGB-UH-BOLTS	02/04/92	CLR	-	N	_____
B07.030.008	2SGB-LH-BOLTS	02/11/92	CLR	-	N	_____
B07.070.001	2-53A-CF11	01/18/92	CLR	-	N	_____
B07.070.002	2-53A-CF12	01/18/92	CLR	-	N	_____
B07.070.005	2-53A-LP47	01/18/92	REC	-	N	_____
B07.070.008	2-53A-LP2	01/21/92	CLR	-	N	_____
B07.070.014	2-51A-HP152	01/18/92	CLR	-	N	_____
B07.070.017	2-53A-LP104	01/18/92	CLR	-	N	_____
B07.070.018	2-53A-LP103	01/18/92	CLR	-	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B08

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 9
DATE 04/27/92

ITEM NUMBER	ID NUMBER	INSPECTION DATE	INSPECTION STATUS	INSPECTION LIMITED	GEQ. REF.	COMMENTS
=====	=====	=====	=====	=====	=====	=====
B08.020.001	2PZR-WP82-X	01/17/92	CLR	-	N	IWB-2420(B)
B08.020.003	2PZR-WP82-Y	01/20/92	CLR	L	N	_____
B08.020.005	2PZR-WP82-Z	01/17/92	CLR	-	N	IWB-2420(B)
B08.020.006	2PZR-WP82-ZW	02/05/92	CLR	-	N	IWB-2420(B)
B08.020.007	2PZR-WP82-W	01/27/92	CLR	-	N	IWB-2420(B)
B08.020.008	2PZR-WP82-WX	02/05/92	CLR	L	N	IWB-2420(B)

PROGRAM: NISI QAISI04
FILE: C007135
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B09

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 10
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
B09.011.014	2PDA1-8	02/01/92	REC	-	Y	
B09.011.028	2PDA2-8	02/03/92	REC	-	N	
B09.011.042	2PDB1-8	02/01/92	REC	-	Y	
B09.011.056	2PDB2-8	01/31/92	REC	-	Y	
B09.011.057	2PHA-1	01/25/92	REC	-	Y	
B09.011.069	2PHB-1	01/27/92	REC	-	Y	
B09.011.151	2-53A-8.2-63	02/01/92	REC	-	Y	
B09.011.160	2-53A-8.3-64	02/02/92	REC	-	Y	
B09.011.161	2-53A-8.3-53	01/21/92	CLR	-	Y	
B09.011.161A	2-53A-8.3-53	01/21/92	CLR	-	N	
B09.021.021	2-50-44-03	01/15/92	CLR	-	N	
B09.021.033	2-50-7.1-36B	01/22/92	CLR	-	N	
B09.021.054	2-51A-146-09	01/16/92	CLR	-	N	
B09.021.103	2-51A-30-30	01/14/92	CLR	-	N	
B09.021.104	2-51A-30-26	01/14/92	CLR	-	N	

PROGRAM: NISIN-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B09

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 11
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
B09.021.105	2-51A-30-22	01/14/92	CLR	-	N	
B09.021.106	2-51A-30-15	01/14/92	CLR	-	N	
B09.021.107	2-51A-30-11	01/14/92	CLR	-	N	
B09.021.108	2-51A-39.3-87A	01/15/92	CLR	-	N	
B09.021.109	2-51A-30-52	01/14/92	CLR	-	N	
B09.021.110	2-51A-30-44	01/14/92	CLR	-	N	
B09.021.111	2-51A-30-40	01/14/92	CLR	-	N	
B09.021.112	2-51A-30-36A	01/15/92	CLR	-	N	
B09.021.116	2-51A-27-105A	01/15/92	CLR	-	N	
B09.021.117	2-51A-27.3-90	01/16/92	CLR	-	N	
B09.021.118	2-51A-27.3-97A	01/16/92	CLR	-	N	
B09.021.119	2-51A-27.3-93	01/16/92	CLR	-	N	
B09.021.120	2-51A-27.3-88	01/16/92	CLR	-	N	
B09.021.121	2-51A-27.3-57B	01/16/92	CLR	-	N	
B09.021.122	2-51A-39.3-92A	01/15/92	CLR	-	N	

PROGRAM: NISIN-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B09

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 12
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
B09.021.125	2-51A-27.2-69	01/27/92	CLR	-	N	_____
B09.021.126	2-51A-27.2-63	01/15/92	CLR	-	N	_____
B09.021.127	2-51A-27.2-59	01/15/92	CLR	-	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B10

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE: 13
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
B10.010.003	2-53A-H1B	02/05/92	CLR	-	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B13

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 14
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
B13.010.001	2RPV-INT SUR	02/05/92	CLR	-	N	_____
B13.030.001	2RPV-INTERNALS	02/03/92	CLR	-	N	_____

PROGRAM: NISIR QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B14

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 15
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B14.010.001	2RPV-CRD-58WH9	01/29/92	CLR	-	N	_____
B14.010.005	2RPV-CRD-58W60	01/29/92	CLR	-	N	_____
B14.010.008	2RPV-CRD-58	01/29/92	CLR	-	N	_____
B14.010.011	2RPV-CRD-58W61	01/29/92	CLR	-	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B15

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 16
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B15.010.001	2RPV-LK TEST	03/03/92	CLR	-	N	
B15.020.001	2PZR-LK TEST	03/03/92	CLR	-	N	
B15.030.001	2SGA-LK TEST	03/03/92	CLR	-	N	
B15.030.002	2SGB-LK TEST	03/03/92	CLR	-	N	
B15.040.001	2LDC2A-LK TEST	03/03/92	CLR	-	N	
B15.040.002	2LDC2B-LK TEST	03/03/92	CLR	-	N	
B15.050.001	2-OFD-100A-2.1	03/03/92	CLR	-	N	
B15.050.001A	2-OFD-100A-2.2	03/03/92	CLR	-	N	
B15.050.002	2-OFD-101A-2.1	03/03/92	REC	-	N	
B15.050.003	2-OFD-101A-2.4	03/03/92	CLR	-	N	
B15.050.004	2-OFD-102A-2.1	03/03/92	CLR	-	N	
B15.050.005	2-OFD-102A-2.2	03/03/92	CLR	-	N	
B15.050.006	2-OFD-102A-2.3	03/03/92	CLR	-	N	
B15.050.007	2-OFD-110A-2.1	03/03/92	CLR	-	N	
B15.050.009	2-OFD-100A-2.3	03/03/92	REC	-	N	

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B15

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 17
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B15.050.010	2-0FD-110A-2.4	03/03/92	CLR	-	N	_____
B15.060.001	2-RCP-2A1	03/03/92	CLR	-	N	_____
B15.060.002	2-RCP-2A2	03/03/92	CLR	-	N	_____
B15.060.003	2-RCP-2B1	03/03/92	CLR	-	N	_____
B15.060.004	2-RCP-2B2	03/03/92	CLR	-	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER B16

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 18
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
B16.011.001	2SGA-TUBES	02/01/92	REP	-	N	_____
B16.011.002	2SGB-TUBES	02/07/92	REP	-	N	_____

PROGRAM: NISIR QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 19
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
C01.010.008	2SCB-WG8-4	01/29/92	CLR	L	Y	_____
C01.020.001	2-CFTA-UH-SHL	01/16/92	CLR	L	N	_____
C01.020.003	2-LPCA-HD-SHL	01/09/92	CLR	L	N	_____

PROGRAM: NISIR QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C02

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 20
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
C02.010.001	2LPCA-INLET	02/06/92	CLR	-	N	REF. PIR 4-091-0093
C02.010.002	2LPCA-OUTLET	02/06/92	CLR	-	N	REF. PIR 4-091-0093
C02.010.003	2LPCB-INLET	12/16/92	CLR	-	N	REF. PIR 4-091-0093
C02.010.004	2LPCB-OUTLET	12/16/92	CLR	-	N	REF. PIR 4-091-0093
C02.021.001A	2SGA-WG23-1	01/14/92	CLR	-	N	_____
C02.021.002A	2SGA-WG23-2	01/14/92	CLR	-	N	_____
C02.021.003A	2SGB-WG23-1	01/21/92	CLR	-	N	_____
C02.021.004A	2SGB-WG23-2	01/21/92	CLR	-	N	_____
C02.021.005A	2-CFTA-OUTLET	01/20/92	CLR	-	N	_____
C02.021.006	2-CFTB-OUTLET	01/15/92	CLR	L	N	_____
C02.021.006A	2-CFTB-OUTLET	01/15/92	CLR	-	N	_____
C02.022.006	2-CFTB-OUTLET	01/15/92	CLR	L	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C03

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 21
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
C03.010.017	2-CFTA-WT18-X	01/17/92	CLR	-	N	
C03.010.018	2-CFTA-WT18-W	01/17/92	CLR	-	N	
C03.040.004	2-01A-H14	02/06/92	CLR	-	N	
C03.040.007	2-01A-R6	02/17/92	CLR	-	N	
C03.040.031	2-03-H15A	01/31/92	CLR	-	N	ADDED PER IWC-2430(A)
C03.040.032	2-03-H16A	01/21/92	REP	-	N	REF. PIR 2-092-0013
C03.040.050	2-53B-H3	02/05/92	CLR	-	N	
C03.040.051	2-53B-H2	02/05/92	CLR	-	N	
C03.040.052	2-53B-DE051	01/30/92	CLR	-	N	
C03.040.055	2-53B-R16	01/27/92	CLR	-	N	
C03.040.082	2SGA-WG87-ZW	01/22/92	CLR	-	N	
C03.040.097	2-54B-H4B	02/10/92	CLR	-	N	

PROGRAM: NISIN-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 22
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
C05.011.004	2-53B-17.1-20	01/30/92	CLR	-	N	_____
C05.011.005	2-53B-17.1-128	01/30/92	CLR	-	N	_____
C05.011.006	2-53B-17.1-124	01/30/92	CLR	-	N	_____
C05.011.016	2-53B-17.4-82	01/30/92	CLR	-	N	_____
C05.011.017	2-53B-17.4-120	01/22/92	CLR	-	N	_____
C05.011.018	2-53B-17.4-93	01/23/92	CLR	-	N	_____
C05.011.019	2-53B-17.4-96	01/23/92	CLR	-	N	_____
C05.011.025	2-53B-18.1-42	01/30/92	CLR	-	N	_____
C05.011.027	2-53B-18.1-71	01/22/92	CLR	-	N	_____
C05.011.070	2-53B-27.1-43	02/03/92	CLR	-	N	_____
C05.011.071	2-53B-27.1-46	01/23/92	CLR	-	N	_____
C05.011.072	2-53B-27.1-50	01/23/92	CLR	-	N	_____
C05.011.074	2-53B-27.1-52	01/23/92	CLR	-	N	_____
C05.011.075	2-53B-27.3-57D	01/23/92	CLR	-	N	_____
C05.011.077	2-53B-28.1-27	02/05/92	CLR	-	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 23
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
C05.011.082	2-53B-28.2-48	01/27/92	CLR	-	N	_____
C05.011.083	2-53B-28.2-57	02/05/92	CLR	L	N	_____
C05.011.097	2-53B-30-23	01/16/92	CLR	-	N	_____
C05.011.098	2-53B-30-27	01/16/92	CLR	-	N	_____
C05.011.099	2-53B-30-32	01/16/92	CLR	-	N	_____
C05.011.100	2-53B-31.1-37E	01/23/92	CLR	-	N	_____
C05.011.258	2-56-13-57	01/22/92	CLR	-	N	_____
C05.011.259	2-56-13-54	01/22/92	CLR	-	N	_____
C05.011.260	2-56-13-50	01/22/92	CLR	-	N	_____
C05.011.261	2-56-13-41	01/16/92	CLR	-	N	_____
C05.011.262	2-56-13-38	01/16/92	CLR	-	N	_____
C05.011.305	2-54A-5-16	01/22/92	CLR	-	N	_____
C05.011.306	2-54A-5-17	01/22/92	CLR	-	N	_____
C05.011.307	2-54A-5-22	01/22/92	CLR	-	N	_____
C05.011.308	2-54A-5-1A	01/30/92	CLR	-	N	_____

PROGRAM: NISIN-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 24
DATE 04/27/92

ITEM NUMBER	ID NUMBER	INSPECTION DATE	INSPECTION STATUS	INSPECTION LIMITED	GEQ. REF.	COMMENTS
=====	=====	=====	=====	=====	=====	=====
C05.011.331	2-54A-8.2-30	01/14/92	CLR	-	N	_____
C05.011.332	2-54A-8.2-33	01/14/92	CLR	-	N	_____
C05.011.333	2-54A-8.2-36	01/14/92	CLR	-	N	_____
C05.011.334	2-54A-8.2-43	01/17/92	CLR	-	N	_____
C05.011.338	2-54A-8.3-60	01/14/92	CLR	-	N	_____
C05.011.339	2-54A-8.3-62	01/14/92	CLR	-	N	_____
C05.011.407	2-51A-17.1-34	01/27/92	CLR	-	N	_____
C05.011.412	2-51A-17.1-72	01/27/92	CLR	-	N	_____
C05.011.413	2-51A-17.1-78	01/27/92	CLR	-	N	_____
C05.011.451	2-55-16-72	01/28/92	CLR	-	N	_____
C05.011.453	2-55-17-107	12/11/91	CLR	-	N	_____
C05.012.003	2-53B-26.2-41BL	12/16/91	CLR	-	N	_____
C05.012.004	2-53B-31.2-17EL	12/16/91	CLR	-	N	_____
C05.012.005	2-54A-8.2-36L	01/15/92	CLR	-	N	_____
C05.012.006	2-54A-8.3-60L	01/15/92	CLR	-	N	_____

PROGRAM: NISIN-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 25
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
C05.012.007	2-53B-30-32L	01/15/92	CLR	-	N	
C05.012.008	2-56-13-38L	01/16/92	CLR	-	N	
C05.012.009	2-53B-17.4-93L	01/23/92	CLR	-	N	
C05.012.010	2-53B-17.4-96L	01/23/92	CLR	-	N	
C05.012.017	2-53B-28.1-27L	02/05/92	CLR	-	N	
C05.021.002	2-53A-8.1-17	01/31/92	REC	-	N	
C05.021.002A	2-53A-8.1-17	01/22/92	CLR	-	N	
C05.021.065	2-03-18.1-07	01/26/92	CLR	-	N	
C05.021.065A	2-03-18.1-07	01/24/92	CLR	-	N	
C05.021.066	2-03-FWD79-A	01/28/92	CLR	-	N	
C05.021.066A	2-03-FWD79-A	01/21/92	CLR	-	N	
C05.021.068	2-03-18.1-14	01/26/92	CLR	-	N	
C05.021.068A	2-03-18.1-14	01/24/92	CLR	-	N	
C05.021.069	2-03-18.1-15	01/26/92	CLR	-	N	
C05.021.069A	2-03-18.1-15	01/21/92	CLR	-	N	

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 26
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
C05.021.102	2-01A-5.2-43	01/25/92	CLR	-	N	
C05.021.102A	2-01A-5.2-43	01/22/92	CLR	-	N	
C05.021.105	2-01A-5.2-42	01/25/92	CLR	-	N	
C05.021.105A	2-01A-5.2-42	01/21/92	CLR	-	N	
C05.021.106	2-01A-5.2-45	01/25/92	CLR	L	N	
C05.021.106A	2-01A-5.2-45	01/20/92	CLR	-	N	
C05.021.120	2-01A-5.4-26	01/25/92	CLR	-	N	
C05.021.120A	2-01A-5.4-26	01/20/92	CLR	-	N	
C05.021.121	2-01A-5.4-33	02/14/92	CLR	-	N	
C05.021.121A	2-01A-5.4-33	01/20/92	CLR	-	N	
C05.021.124	2-01A-5.3-24	02/06/92	CLR	-	N	
C05.021.124A	2-01A-5.3-24	02/03/92	CLR	-	N	
C05.021.130	2-01A-5.3-18A	02/04/92	CLR	-	N	
C05.021.130A	2-01A-5.3-18A	01/15/92	CLR	-	N	
C05.021.131	2-01A-16-C56A	02/04/92	CLR	-	N	

PROGRAM: NISIN -QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 27
DATE 04/27/92

ITEM NUMBER	ID NUMBER	INSPECTION DATE	INSPECTION STATUS	INSPECTION LIMITED	GEQ. REF.	COMMENTS
=====	=====	=====	=====	=====	=====	=====
C05.021.131A	2-01A-16-C56A	01/15/92	CLR	-	N	
C05.022.005	2-01A-5.2-42L	01/25/92	CLR	-	N	
C05.022.005A	2-01A-5.2-42L	01/21/92	CLR	-	N	
C05.022.006	2-01A-5.2-45L	01/25/92	CLR	-	N	
C05.022.006A	2-01A-5.2-45L	01/20/92	CLR	-	N	
C05.022.007	2-01A-5.4-26L	01/25/92	CLR	-	N	
C05.022.007A	2-01A-5.4-26L	01/20/92	CLR	-	N	
C05.022.008	2-01A-5.4-33L	02/14/92	CLR	-	N	
C05.022.008A	2-01A-5.4-33L	01/20/92	CLR	-	N	
C05.022.009	2-01A-5.2-43L	01/25/92	CLR	-	N	
C05.022.009A	2-01A-5.2-43L	01/22/92	CLR	-	N	
C05.022.010	2-01A-5.3-24L	02/06/92	CLR	-	N	
C05.022.010A	2-01A-5.3-24L	02/03/92	CLR	-	N	
C05.031.202	2-01A-2MSB-10F	02/05/92	CLR	-	N	
C05.031.204	2-01A-2MS14A-B	01/15/92	CLR	-	N	BASELINE OUT. 8

PROGRAM: NISI-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER C07

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 28
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
C07.021.003	2-0FD-101A-2.1	02/21/92	CLR	-	N	PARTIAL
C07.021.007	2-0FD-101A-2.5	02/21/92	CLR	-	N	PARTIAL
C07.021.008	2-0FD-102A-2.1	02/13/91	REC	-	N	PARTIAL
C07.021.013	2-0FD-104A-1.2	02/13/91	CLR	-	N	_____
C07.021.031	2-0FD-124B-2.2	02/13/92	REC	-	N	PARTIAL
C07.021.040	2-0FD-124B-2.3	02/13/92	CLR	-	N	_____

PROGRAM: NISIN-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER D01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 29
DATE 04/27/92

ITEM NUMBER	ID NUMBER	INSPECTION DATE	INSPECTION STATUS	INSPECTION LIMITED	GEØ. REF.	COMMENTS
=====	=====	=====	=====	=====	=====	=====
D01.011.002	2-ØFD-101A-2.1	01/24/91	CLR	-	N	_____
D01.011.003	2-ØFD-101A-2.2	12/11/90	CLR	-	N	_____
D01.011.009	2-ØFD-110A-2.1	01/24/91	CLR	-	N	_____
D01.011.015	2-ØFD-144A-2.2	11/17/90	CLR	-	N	_____
D01.012.002	2-ØFD-101A-2.1	02/22/92	CLR	-	N	PARTIAL
D01.012.003	2-ØFD-101A-2.2	02/22/92	REC	-	N	PARTIAL
D01.012.004	2-ØFD-101A-2.3	01/24/92	CLR	-	N	_____
D01.012.005	2-ØFD-101A-2.4	02/21/92	CLR	-	N	PARTIAL
D01.012.006	2-ØFD-101A-2.5	02/21/92	CLR	-	N	_____
D01.012.008	2-ØFD-109A-1.1	01/24/92	CLR	-	N	PARTIAL
D01.012.009	2-ØFD-110A-2.1	02/21/92	CLR	-	N	PARTIAL
D01.012.014	2-ØFD-100A-2.3	02/18/92	REC	-	N	PARTIAL
D01.012.015	2-ØFD-144A-2.2	02/14/92	CLR	-	N	_____
D01.012.016	2-ØFD-110-2.4	02/21/92	CLR	-	N	_____
D01.012.018	2-ØFD-102A-2.2	01/24/92	CLR	-	N	_____

PROGRAM: NISIROND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER D02

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 30
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
D02.011.020	2-0FD-124B-2.1	12/18/90	CLR	-	N	_____
D02.012.009	2-0FD-122A-2.4	02/21/92	REC	-	N	PARTIAL
D02.012.019	2-0FD-124A-1.1	02/13/92	REC	-	N	_____
D02.012.020	2-0FD-124B-2.1	02/13/92	REC	-	N	PARTIAL
D02.012.021	2-0FD-124A-2.3	02/17/92	CLR	-	N	PARTIAL
D02.012.022	2-0FD-124B-2.2	02/13/92	CLR	-	N	_____
D02.012.023	2-0FD-124B-2.4	02/13/92	CLR	-	N	_____
D02.012.028	2-0FD-124C-2.2	02/10/92	CLR	-	N	_____
D02.020.009	2-03A-H17	01/13/92	CLR	-	N	_____
D02.020.024	2-03A-R63	01/21/92	CLR	-	N	_____
D02.020.032	2-08-H1	12/10/92	CLR	-	N	_____
D02.020.034	2-03A-H12	02/06/92	CLR	-	N	_____
D02.020.039	2-03A-H7	02/10/92	CLR	-	N	_____
D02.020.040	2-03A-SR35	01/13/92	CLR	-	N	_____
D02.020.043	2-03A-H46	01/09/92	CLR	-	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER D02

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 31
DATE 04/27/92

ITEM NUMBER	ID NUMBER	INSPECTION DATE	INSPECTION STATUS	INSPECTION LIMITED	GEØ. REF.	COMMENTS
=====	=====	=====	=====	=====	=====	=====
D02.020.045	2-03A-SR13	01/09/92	REC	-	N	_____
D02.020.053	2-03A-H11	01/14/92	CLR	-	N	_____
D02.020.054	2-03A-H11A	01/14/92	CLR	-	N	_____
D02.020.055	2-03A-SR10	01/14/92	CLR	-	N	_____
D02.020.058	2-03A-SR6	02/06/92	REC	-	N	_____
D02.020.073	2-03A-SR1	02/05/92	CLR	-	N	_____
D02.020.075	2-03A-SR16	12/17/92	CLR	-	N	_____
D02.020.076	2-03A-H27	12/17/91	CLR	-	N	_____
D02.020.096	2-03A-H59	01/24/92	CLR	-	N	_____
D02.020.097	2-03A-1316	01/30/92	CLR	-	N	_____
D02.020.098	2-03A-SR30	01/09/92	CLR	-	N	_____
D02.020.099	2-03-R12	01/12/92	CLR	-	N	_____
D02.020.127	2-03A-SR25(A)	12/17/91	CLR	-	N	_____
D02.020.128	2-03A-SR25	02/13/92	CLR	-	N	_____

PROGRAM: NISIA-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER E01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 32
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
E01.001.001	2RCP-2A1	02/12/92	CLR	L	N	_____
E01.001.002	2RCP-2A2	02/10/92	CLR	L	N	_____
E01.001.003	2RCP-2B1	02/13/92	CLR	L	N	_____
E01.001.004	2RCP-2B2	02/10/92	CLR	L	N	_____

PROGRAM: NISI QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER E06

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 33
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
E06.001.001	2-PSL-11	01/21/92	CLR	-	N	

PROGRAM: NISIP-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER E07

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 34
DATE 04/27/92

ITEM NUMBER	ID NUMBER	INSPECTION DATE	INSPECTION STATUS	INSPECTION LIMITED	GEQ. REF.	COMMENTS
=====	=====	=====	=====	=====	=====	=====
E07.001.001	2-51A-39-90C	02/03/92	CLR	L	N	_____
E07.001.002	2-51A-39-90B	02/03/92	CLR	-	N	_____
E07.001.003	2-51A-39-91	02/03/92	CLR	L	N	_____
E07.001.004	2-51A-39-92A	02/03/92	CLR	L	N	_____
E07.001.005	2-51A-39-92B	02/03/92	CLR	-	N	_____
E07.001.006	2-51A-39-93	02/03/92	CLR	-	N	_____
E07.001.009	2-51A-27-73	02/03/92	CLR	-	N	_____
E07.001.010	2-51A-27-81	02/03/92	CLR	-	N	_____
E07.001.011	2-51A-27-82	02/03/92	CLR	-	N	_____
E07.001.012	2-51A-27-108	02/03/92	CLR	-	N	_____
E07.001.013	2-51A-27-110	02/03/92	CLR	-	N	_____
E07.001.014	2-51A-27-111	02/03/92	CLR	-	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER E09

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 35
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
E09.001.001	2-03A-24-21	01/14/92	CLR	-	N	
E09.001.002	2-03A-24-2VEN	01/14/92	CLR	-	N	
E09.001.003	2-03A-24-18	01/14/92	CLR	-	N	
E09.001.004	2-03A-24-3VEN	01/14/92	CLR	-	N	
E09.001.005	2-03A-24-15	01/14/92	CLR	-	N	
E09.001.006	2-03A-24-4VEN	01/14/92	CLR	-	N	
E09.001.007	2-03A-24-12	01/14/92	CLR	-	N	
E09.001.008	2-03A-24-5VEN	01/14/92	CLR	-	N	
E09.001.009	2-03A-24-9	01/14/92	CLR	-	N	
E09.001.010	2-03A-24-6VEN	01/14/92	CLR	-	N	
E09.001.011	2-03A-24-6	01/14/92	CLR	-	N	
E09.001.012	2-03A-24-7VEN	01/14/92	CLR	-	N	
E09.001.013	2-03A-24-3	01/14/92	CLR	-	N	
E09.001.014	2-03A-24-8VEN	01/14/92	CLR	-	N	
E09.001.015	2-03A-24-1VEN	01/25/92	CLR	-	N	

PROGRAM: NISI -QAISI04
FILE: C007133
PLANT: O'CONNOR UNIT 2
KEY: ITEM NUMBER E10

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
O'CONNOR 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 36
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
E10.001.001	2PZR-WP63-1	01/21/92	CLR	-	N	_____
E10.001.002	2PZR-WP63-2	01/21/92	CLR	-	N	_____
E10.001.003	2PZR-WP63-3	01/21/92	CLR	-	N	_____
E10.001.004	2PZR-WP63-4	01/21/92	CLR	-	N	_____
E10.001.005	2PZR-WP63-5	01/21/92	CLR	-	N	_____
E10.001.006	2PZR-WP63-6	02/05/92	CLR	-	N	_____
E10.001.007	2PZR-WP63-7	01/28/92	CLR	-	N	_____

PROGRAM: NISI--QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 37
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
F1.01.087	2-51A-H17B	01/16/92	REC	-	N	_____
F1.01.098	2-51A-H2C	01/14/92	REC	-	N	_____
F1.01.099	2-51A-H1C	02/05/92	CLR	-	N	_____
F1.01.100	2-59-H28	01/21/92	REC	-	N	_____
F1.01.101	2-51A-H11A	01/16/92	REC	-	N	_____
F1.01.122	2-53A-H29C	01/19/92	CLR	-	N	_____
F1.01.125	2-53A-H7B	01/16/92	CLR	-	N	_____
F1.01.129	2-53A-H4B	01/16/92	REC	-	N	_____
F1.01.135	2-53A-H4A	01/14/92	REC	-	N	_____
F1.01.137	2-53A-H5A	01/16/92	REC	-	N	_____
F1.01.139	2-53A-H6A	01/14/92	CLR	-	N	_____
F1.01.140	2-53A-H7A	01/18/92	REC	-	N	_____
F1.01.142	2-53-H4	01/21/92	CLR	-	N	_____
F1.01.144	2-53-H1	01/18/92	REC	-	N	_____
F1.01.145	2-53-H3	01/21/92	REC	-	N	_____

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 38
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
F1.01.146	2-53-H2	01/21/92	CLR	-	N	
F1.01.147	2-RPV-WR36	01/13/92	CLR	-	N	
F1.01.148	2SGA-SKIRT	02/12/92	REC	-	N	
F1.02.001	2-01A-H1	01/31/92	CLR	-	N	ADDED PER IMF-2430(A)
F1.02.002	2-01A-H2	02/13/92	CLR	-	N	ADDED PER IMF-2430(A)
F1.02.014	2-01A-H14	02/07/92	REC	-	N	
F1.02.015	2-01A-H15	02/06/92	CLR	-	N	
F1.02.017	2-01A-H17	02/07/92	CLR	-	N	
F1.02.020	2-01A-H20	01/24/92	CLR	-	N	
F1.02.025	2-01A-R1	02/07/92	REP	-	N	REF PIR #2-092-0027
F1.02.026	2-01A-R2-1	02/07/92	REC	-	N	
F1.02.028	2-01A-R4	01/21/92	REC	-	N	
F1.02.029	2-01A-R5	02/10/92	REC	-	N	
F1.02.030	2-01A-R6	02/17/92	REC	-	N	
F1.02.031	2-01A-R7	02/14/92	REC	-	N	ADDED PER IMF-2430(A)

PROGRAM: NISI-QAISI04
FILE: CO07133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 39
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
F1.02.033	2-01A-R9-1	02/06/92	REC	-	N	ADDED PER INF-2430(A)
F1.02.035	2-01A-R11	01/28/92	CLR	-	N	ADDED PER INF-2430(A)
F1.02.041	2-01A-DE060	02/07/92	CLR	-	N	ADDED PER INF-2430(A)
F1.02.042	2-01A-DE061	02/07/92	CLR	-	N	_____
F1.02.081	2-01A-R2-2	02/07/92	REC	-	N	ADDED PER INF-2430(A)
F1.02.107	2-03-H8B	01/19/92	REC	-	N	_____
F1.02.108	2-03-H9B	02/12/92	REC	-	N	_____
F1.02.110	2-03-H11A	02/07/92	REC	-	N	_____
F1.02.115	2-03-H16A	01/18/92	REC	-	N	_____
F1.02.117	2-03-H1A	01/23/92	REC	-	N	_____
F1.02.119	2-03-H3A	01/23/92	REC	-	N	_____
F1.02.121	2-03-H5A	01/23/92	REC	-	N	_____
F1.02.125	2-03-H9A	01/23/92	REC	-	N	_____
F1.02.126	2-03-H10A	02/11/92	REC	-	N	_____
F1.02.151	2-03A-H22	01/08/92	REC	-	N	_____

PROGRAM: NISIN-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 40
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
F1.02.152	2-03A-R61	12/17/91	CLR	-	N	
F1.02.153	2-03A-H6B	01/18/92	REC	-	N	
F1.02.154	2-03A-H6270	01/16/92	REC	-	N	
F1.02.155	2-03A-H6271	01/16/92	REC	-	N	
F1.02.202	2-53B-H8	02/05/92	CLR	-	N	
F1.02.252	2-53B-DE057	01/13/92	CLR	-	N	
F1.02.254	2-53B-H58A	02/18/92	REC	-	N	
F1.02.255	2-53B-H56	01/07/92	REC	-	N	
F1.02.259	2-53B-DE052	01/12/92	REC	-	N	
F1.02.260	2-53B-DE053	02/05/92	REC	-	N	
F1.02.261	2-53B-H3	01/20/92	REC	-	N	
F1.02.263	2-53B-H15	02/05/92	CLR	-	N	
F1.02.264	2-53B-H2	01/20/92	CLR	-	N	
F1.02.269	2-53B-DE051	01/25/92	CLR	-	N	
F1.02.292	2-53B-H58	01/13/92	CLR	-	N	

PROGRAM: NISI QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 41
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
F1.02.296	2-53B-DE008	01/07/92	CLR	-	N	
F1.02.300	2-53B-H6(B)	02/20/92	CLR	-	N	
F1.02.316	2-53B-DE063	01/07/92	CLR	-	N	
F1.02.320	2-53B-R13	02/12/92	CLR	-	N	
F1.02.322	2-53B-R10	01/23/92	CLR	-	N	
F1.02.326	2-53B-H35	01/08/92	REC	-	N	
F1.02.328	2-53B-H34	01/21/92	CLR	-	N	
F1.02.330	2-53B-DE067	01/21/92	CLR	-	N	
F1.02.331	2-53B-H33	01/21/92	CLR	-	N	
F1.02.332	2-53B-H32	01/21/92	CLR	-	N	
F1.02.334	2-53B-H25	02/10/92	CLR	-	N	
F1.02.344	2-53B-R16	02/20/92	CLR	-	N	
F1.02.346	2-53A-H8A	02/20/92	CLR	-	N	
F1.02.365	2-54B-H10B	01/18/92	REC	-	N	
F1.02.367	2-54B-H8B	01/18/92	REC	-	N	

PROGRAM: NISIN-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 42
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
F1.02.401	2-54B-H5A	02/20/92	CLR	-	N	
F1.02.404	2-54B-H2A	01/29/92	CLR	-	N	
F1.02.436	2-54A-H4	01/07/92	CLR	-	N	
F1.02.457	2-54A-H11	02/10/92	CLR	-	N	
F1.02.465	2-54A-R42	12/17/91	CLR	-	N	
F1.02.466	2-54A-H18	12/17/91	CLR	-	N	
F1.02.469	2-54A-R2	01/23/92	CLR	-	N	
F1.02.480	2-54A-H25	12/17/91	CLR	-	N	
F1.02.481	2-54A-R16	01/13/92	CLR	-	N	
F1.02.482	2-54A-H26	02/11/92	CLR	-	N	
F1.02.531	2-56-H12	01/16/92	CLR	-	N	
F1.02.537	2-01A-CV-4	02/20/92	CLR	-	N	
F1.02.538	2-53A-H19	01/24/92	REC	-	N	
F1.02.540	2-53B-H5402	01/07/92	CLR	-	N	
F1.02.541	2-53B-H28	01/31/92	CLR	-	N	

PROGRAM: NISIN-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 43
DATE 04/27/92

ITEM NUMBER	ID NUMBER	INSPECTION DATE	INSPECTION STATUS	INSPECTION LIMITED	GEQ. REF.	COMMENTS
=====	=====	=====	=====	=====	=====	=====
F1.02.542	2-53B-H22	01/07/92	REC	-	N	_____
F1.02.543	2-54A-R7	02/11/92	REC	-	N	_____
F1.02.544	2-54A-R8	02/05/92	CLR	-	N	_____
F1.02.545	2-54A-R6	01/31/92	REC	-	N	_____
F1.02.546	2-54A-H4A	01/07/92	CLR	-	N	_____
F1.02.548	2-54A-R44	01/24/92	CLR	-	N	_____
F1.02.550	2-54B-H4B	01/16/92	REC	-	N	_____
F1.03.014	2-01A-DE028	01/21/92	CLR	-	N	_____
F1.03.015	2-01A-DE032	01/12/92	CLR	-	N	_____
F1.03.062	2-03-R12	01/12/92	CLR	-	N	_____
F1.03.063	2-03-H65	12/11/91	CLR	-	N	_____
F1.03.064	2-03-H59	01/24/92	REC	-	N	_____
F1.03.065	2-03-H54	01/13/92	CLR	-	N	_____
F1.03.109	2-03A-H30	01/21/92	CLR	-	N	_____
F1.03.112	2-03A-H28	01/21/92	CLR	-	N	_____

PROGRAM: NISIR-3-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 44
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
F1.03.113	2-03A-R63	01/21/92	REC	-	N	
F1.03.114	2-03A-H27	01/21/92	CLR	-	N	
F1.03.126	2-03A-SR54	01/09/92	REC	-	N	
F1.03.130	2-03A-SR23	01/21/92	CLR	-	N	
F1.03.134	2-03A-1316	01/30/92	CLR	-	N	
F1.03.136	2-03A-SR29A	01/09/92	REC	-	N	
F1.03.168	2-03A-SR12	01/09/92	REC	-	N	
F1.03.172	2-03A-DE032	01/24/92	REC	-	N	
F1.03.184	2-03A-1010	01/08/92	REC	-	N	
F1.03.185	2-03A-H13	01/13/92	REC	-	N	
F1.03.187	2-03A-H12	02/06/92	CLR	-	N	
F1.03.193	2-03A-H7	02/10/92	CLR	-	N	
F1.03.199	2-03A-SR35	01/13/92	REC	-	N	
F1.03.208	2-03A-0600	01/09/92	CLR	-	N	
F1.03.209	2-03A-H46	01/09/92	CLR	-	N	

PROGRAM: NISIR 3-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 45
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
F1.03.210	2-03A-0604	01/09/92	CLR	-	N	
F1.03.213	2-03A-SR101P0	01/09/92	REC	-	N	
F1.03.215	2-03A-SR13	01/09/92	REC	-	N	
F1.03.223	2-03A-H11	01/14/92	CLR	-	N	
F1.03.224	2-03A-H11A	01/14/92	CLR	-	N	
F1.03.225	2-03A-SR10	01/14/92	CLR	-	N	
F1.03.227	2-03A-H9	01/14/92	CLR	-	N	
F1.03.229	2-03A-H17	01/13/92	CLR	-	N	
F1.03.231	2-03A-SR6	02/06/92	REC	-	N	
F1.03.254	2-03A-SR1	02/05/92	CLR	-	N	
F1.03.256	2-03A-0701	02/06/92	REC	-	N	
F1.03.257	2-03A-SR16	12/17/91	REC	-	N	
F1.03.259	2-03A-H27	12/17/91	REC	-	N	
F1.03.281	2-03A-H74	12/11/91	CLR	-	N	
F1.03.282	2-03A-H75	11/20/91	CLR	-	N	

PROGRAM: NISIN--GAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 46
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
F1.03.317	2-03A-H2B	01/16/92	CLR	-	N	
F1.03.329	2-03A-H4A	02/07/92	CLR	-	N	
F1.03.331	2-03A-H6089	01/18/92	CLR	-	N	
F1.03.332	2-03A-H6112	01/18/92	CLR	-	N	
F1.03.333	2-03-H6111	01/18/92	CLR	-	N	
F1.03.334	2-03-H6110	01/18/92	REC	-	N	
F1.03.335	2-03A-H6113	01/14/92	CLR	-	N	
F1.03.369	2-07A-2102	12/11/91	CLR	-	N	
F1.03.370	2-07A-DE039	11/20/91	CLR	-	N	
F1.03.371	2-07A-DE045	12/11/91	CLR	-	N	
F1.03.372	2-07A-2101	12/11/91	CLR	-	N	
F1.03.373	2-07A-DE002	12/11/91	CLR	-	N	
F1.03.412	2-07A-DE046	11/20/91	CLR	-	N	
F1.03.414	2-07A-DE019	11/20/91	CLR	-	N	
F1.03.417	2-07A-SR4	11/20/91	CLR	-	N	

PROGRAM: NISIR-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 47
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
F1.03.432	2-07A-1102	12/11/91	CLR	-	N	
F1.03.434	2-07A-H33	11/20/91	CLR	-	N	
F1.03.435	2-07A-0900	11/20/91	CLR	-	N	
F1.03.437	2-07A-SR1	11/20/91	CLR	-	N	
F1.03.439	2-07A-SR26	11/20/91	CLR	-	N	
F1.03.440	2-07A-DE023	11/20/91	CLR	-	N	
F1.03.441	2-07A-H5	11/20/91	CLR	-	N	
F1.03.450	2-08-H1	12/10/91	CLR	-	N	
F1.03.451	2-08-H5	11/20/91	REC	-	N	
F1.03.453	2-08-DE001	02/09/92	CLR	-	N	
F1.03.497	2-14-H6094	01/30/92	CLR	-	N	
F1.03.498	2-14-H6095	01/30/92	CLR	-	N	
F1.03.499	2-14-H6096	01/30/92	CLR	-	N	
F1.03.510	2-03A-1001	11/20/91	CLR	-	N	
F1.03.523	2-03A-SR30	01/09/92	CLR	-	N	

PROGRAM: NISI-01-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 2
KEY: ITEM NUMBER F1.

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 2 INSERVICE INSPECTION RESULTS OUTAGE 12

PAGE 48
DATE 04/27/92

ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
F1.03.525	2-03A-SR22	11/20/91	REC	-	N	
F1.03.526	2-03A-SR16	01/30/92	CLR	-	N	
F1.03.527	2-03A-SR15	02/05/92	CLR	-	N	
F1.03.528	2-03A-SR13	01/12/92	REC	-	N	
F1.03.530	2-03A-SR23	11/20/91	REC	-	N	
F1.03.546	2-03A-DE004	01/12/92	CLR	-	N	
F1.03.547	2-03A-DE006	11/20/91	CLR	-	N	
F1.03.548	2-03A-DE007	12/11/91	CLR	-	N	
F1.03.550	2-03A-DE057	02/07/92	CLR	-	N	
F1.03.556	2-03A-SR25	02/13/92	REC	-	N	
F1.03.564	2-03A-SR25(A)	12/17/91	REC	-	N	

5.0 Class 1 Inspection Results

Examinations were performed during Outage 12 on the Reactor Vessel, Pressurizer, Steam Generators 2A and 2B, Letdown Cooler 2B, Piping Welds of the Reactor Coolant, Low Pressure Injection and High Pressure Injection Systems, Pump Bolting, Valve Bolting and on Class 1 Component Supports.

5.1 Reactor Vessel

Three (3) Reactor Vessel Circumferential Seam Welds, Lower Head to Shell Weld, Nozzle Belt to Flange Weld, eight (8) Nozzle to Shell Welds and six (6) Inside Radius Sections, and two (2) Nozzle to Safe-End Butt Welds located at "W" and "Y" Axis were volumetrically examined by remote ultrasonic techniques. The required surface examination for the Core Flood Nozzles-to-Safe End Butt Welds were not performed (See Request for Relief ONS-001 included in Section 10 of this report). No reportable indications were found.

During Outage 12, Reactor Vessel Outlet Nozzles to Vessel Welds, (Weld I.D. 2RPV-WR13, Item Number B03.090.001A), (Weld I.D. 2RPV-WR13A, Item Number B03.090.002A) respective Inside Radius Sections (I.D. 2RPV-WR13, Item Number B03.100.001, I.D. 2RPV-WR13A Item Number B03.100.002) and respective Nozzle to Pipe Welds (Weld I.D. 2PHA-1, Item Number B09.011.057 and Weld I.D. 2PHB-1, Item Number B09.011.069) were re-examined by ultrasonics per Duke Power Company's Request for Relief ONS-014. These examinations met the requirements of the 1989 ASME Section XI Code. Credit will be applied to the Third Inspection Interval, First Inspection Period requirements for the Outlet Nozzle-to-Vessel Welds, Table IWB-2500-1 Category B-D. No reportable indications were found. A copy of request for relief ONS-014 is included in Section 10 of this report.

The Reactor Vessel Closure Head Circumferential Weld, and Reactor Vessel Head to Flange Weld, intervals 240° to 0° were manually examined by ultrasonics during Outage 12. No reportable indications were found.

The Lower Head Cap Section to Lower Head Ring Section Weld (2RPV-WR35, Item Number B01.021.003) was not examined per exemption in 10CFR50.55A.B.2.

The Reactor Vessel Internal Surfaces and Core Support Structure were inspected by remote visual methods. No reportable conditions were found.

These examinations are described in more detail in Babcock and Wilcox's 1992 Reactor Vessel Examination Report" Summary included in Section 10 of this report.

Reactor Vessel CRD #58 Housing Welds received a dye penetrant examination. No reportable indications were found.

Thirty (30) Stud Hole Threads in the Reactor Vessel Flange received an ultrasonic examination. No reportable indications were found.

Sixty-nine (69) Reactor Vessel Closure Head J-Groove CRDM Nozzle Penetration Welds and fifty-two (52) Reactor Vessel Incore Monitoring Nozzle Partial Penetration Welds received a visual examination. No reportable conditions were found.

5.2 Pressurizer

Reportable indications in the Pressurizer Lower Head-to-Heater Bundle Weld (Item Number B02.011.006) detected during Outage 6 were re-examined by ultrasonics during Outage 12 per ASME Section XI, Paragraph IWB-2420(B). Indications were compared with previously accepted data from Babcock & Wilcox's Fracture Mechanics Analysis Report #32-1148321-00 included in previously submitted reports for Refueling Outages 6, 8, and 10. Evaluation indicated no weld indication growth since the previous refueling outages and therefore, declared acceptable. Refer to Duke Power Company's Ultrasonic Examination Data Sheet, Item Number B02.011.006, included in Section 10 of this report.

Three (3) Pressurizer Longitudinal Shell Welds received an ultrasonic examination. No reportable indications were found.

One (1) Pressurizer Sensing and Sampling Nozzle to Vessel Weld and Nozzle Inside Radius Section located between "Y" & "Z" Axis received an ultrasonic examination. No reportable indications were found.

One (1) Pressurizer Spray Nozzle to Safe-End Butt Weld received an ultrasonic and a dye penetrant examination. No reportable indications were found.

Reportable indications detected during Refueling Outages 6 and 8 on Pressurizer Support Lugs, located at X-Axis (Item Number B08.020.001), at Z-Axis (Item Number B08.020.005), between Z-W-Axis (B08.020.006), at W-Axis (Item Number B08.020.007), and between W-X-Axis (Item Number B08.020.008) were re-examined by the magnetic particle technique during Outage 12 per ASME Section XI, Paragraph IWB-2420(B). No reportable indications were found.

Sixteen (16) studs in the Pressurizer Lower Heater Bundle received a visual examination. No reportable conditions were found.

5.3 Steam Generators

Steam Generator 2B Upper and Lower Head Inspection Cover Bolting received a visual examination. No reportable indications were found.

5.4 Letdown Coolers

Letdown Cooler 2B Tubeside Inlet Nozzle to Vessel Weld and Inside Radius Section received an ultrasonic examination. No reportable indications were found.

5.5 Piping

Dissimilar Metal Butt Welds:

One (1) weld, nominal pipe size four inches and greater received an ultrasonic and a dye penetrant examination. No reportable indications were found.

Six (6) welds, nominal pipe size less than four inches, received a dye penetrant examination. No reportable indications were found.

Similar Metal Butt Welds:

Nominal pipe size four inches and greater:

Eight (8) circumferential welds were examined by remote ultrasonic techniques. These examinations are described in more detail in Babcock and Wilcox's "1992 Reactor Vessel Examinations Report" Summary included in Section 10 of this report.

One (1) circumferential weld received an ultrasonic and a dye penetrant examination. No reportable indications were found.

Nominal pipe size less than four inches:

Twenty-three (23) circumferential welds received a dye penetrant examination. No reportable indications were found.

Piping Integrally-Welded Attachments:

One (1) integrally-welded attachment on the Low Pressure Injection System received a dye penetrant examination. No reportable indications were found.

Piping Supports:

Eighteen (18) Class 1 Component Supports received a visual examination as required by ASME Section XI, Article IWF-2000. No reportable conditions were found.

5.6 Pumps

Reactor Coolant Pump 2A1 and 2A2 Main Flange Studs received an ultrasonic examination. No reportable indications were found.

Reactor Coolant Pump 2A2 and 2B2 Seal Gland Bolts received an ultrasonic examination. No reportable conditions were found.

Reactor Coolant Pump 2A1 and 2A2 Nuts, Bushings and Washers received a visual examination. No reportable conditions were found.

Reactor Coolant Pump 2A2 and 2B2 Seal Gland Nuts and Washers received a visual examination. No reportable conditions were found.

5.7 Valves

The pressure retaining bolting in Valves 2CF-11, 2CF12, 2LP-47, 2LP-2, 2HP-152 and 2LP-104 received a visual examination. No reportable conditions were found.

5.8 Steam Generator Tubing

The Inconel 600 tubing in the two Babcock and Wilcox Once-Through Steam Generators (OTSG's) "A" and "B" at Duke Power Company's Oconee Unit 2, were examined by eddy current techniques during January 1992. The tubing in the generators measures 0.625" nominal outside diameter X 0.037" nominal wall thickness. The examinations were performed by Babcock and Wilcox Nuclear Services (BWNS) Company during the 12th refueling outage.

Approximately 60% of the tubes in steam generators "A" and "B" were inspected full length with magnetic-bias bobbin coil probes. Also, all of the previously installed sleeves were examined with a combination bobbin/crosswound probe. Numerous tubes and rolled plugs were examined using Zetec's motorized rotating pancake coil (MRPC) probe.

The following is a summary of the results of the bobbin coil/MRPC eddy current examination for each generator.

OTSG A:

- Eddy Current examinations began on 1/15/92 and were completed on 2/1/92.
- 14 tubes were removed from service by plugging.
- 9,293 tubes were examined by bobbin coil for the full length of the tube.
- 11 tubes contained indications of 40% thru-wall (TW) or greater reported by bobbin coil.
- 11 tubes contained indications of 20 to 39% TW reported by bobbin coil.
- 124 previously installed sleeves were examined with a combination bobbin/crosswound probe.
- 220 tubes in the lane/wedge region were examined at the 15th tube support plate (TSP) and upper tubesheet secondary face (UTSF) intersections using Zetec's MRPC.
- 168 special interest tubes were examined using Zetec's MRPC.
- 28 rolled plugs were examined from the hot and cold legs using Zetec's MRPC.

- 2 tubes that were re-expanded approximately 5" from the tube ends in the cold leg tubesheet were examined using Zetec's MRPC.

OTSG B:

- Eddy Current examinations began on 1/15/92 and were completed on 2/7/92.
- 63 tubes were removed from service by plugging.
- 9,276 tubes were examined by bobbin coil for the full length of the tube.
- 14 tubes contained indications of 40% TW or greater reported by bobbin coil.
- 31 tubes contained indications of 20 to 39% TW reported by bobbin coil.
- 124 previously installed sleeves were examined with a combination bobbin/crosswound probe.
- 196 tubes in the lane/wedge region were examined at the 15th TSP and UTSP intersections using Zetec's MRPC.
- 331 special interest tubes were examined using Zetec's MRPC.
- 39 hot leg rolled plugs and 22 cold leg rolled plugs were examined using Zetec's MRPC.
- 2 tubes that were re-expanded approximately 5" from the tube ends were examined using Zetec's MRPC. Of these 2 tubes, 1 was in the hot leg tubesheet and the remaining one was in the cold leg tubesheet.

A detailed description of the Oconee 2 Refueling Outage 12 eddy current inspection is provided in the "Eddy Current Examination Report Oconee Unit 2 January 1992 Refueling Outage 12" on file at the Corporate Office in Charlotte, North Carolina.

5.9 System Leakage Test

The Class 1 Pressure Boundary was subjected to a system leakage test as required by ASME Section XI, Article IWB-5000. No reportable conditions were found.

5.10 Class 1 Repairs and Replacements

Repairs and replacements for work performed from October 26, 1990 to March 3, 1992 are itemized in Section 11 of this report.

Plant: Oconee Unit 2
Outage: 01/92 RFO

Steam Generator: A

QUERY: BOBBIN COIL INDICATIONS 40-100% TWD

TEST	ROW	COL	IND	XTW	VOLTS	CHN	DEG	LOCATION	EXTENT	LEG	TAPE	ANLST	PRB	COMMENTS
BOBBIN	5	4	ODI	43	0.72	17	93	10TH TSP+ 0.55	FL	LTPF	79	L7871	510	
BOBBIN	14	8	ODI	43	0.70	3	96	9TH TSP + 28.61	FL	LTPF	73	E0864	510	
BOBBIN	72	12	ODI	69	0.90	3	77	13TH TSP+ 24.49	FL	LTPF	57	B5371	510	
BOBBIN	78	124	ODI	54	0.54	3	92	11TH TSP+ 28.75	FL	UTPF	133	B0690	510	
BOBBIN	91	110	ODI	47	0.90	17	86	15TH TSP+ 0.96	FL	UTPF	122	L7871	510	
BOBBIN	107	119	WAR	45	0.74	17	85	11TH TSP+ 0.00	FL	UTPF	112	W6871	510	
BOBBIN	108	2	ODI	54	1.70	17	89	15TH TSP+ 0.88	FL	UTPF	32	B0690	510	
BOBBIN	108	118	WAR	43	1.10	17	86	14TH TSP+ 0.00	FL	UTPF	112	W6871	510	
BOBBIN	109	2	ODI	56	1.83	17	88	15TH TSP+ 0.72	FL	UTPF	32	B0690	510	
BOBBIN	114	111	WAR	55	1.60	17	86	14TH TSP+ 0.00	FL	UTPF	106	H8259	510	
BOBBIN	133	19	ODI	47	0.43	3	96	15TH TSP+ 42.89	FL	UTPF	51	M4780	510	

TOTAL TUBES FOUND = 11
TOTAL INDICATIONS FOUND = 11
TOTAL TUBES IN INPUT FILE = 15531

Plant: Oconee Unit 2
Outage: 01/92 RFO

Steam Generator: B

QUERY: BOBBIN COIL INDICATIONS 40-100% TWD

TEST	ROW	COL	IND	XTW	VOLTS	CHN	DEG	LOCATION	EXTENT	LEG	TAPE	ANLST	PRB	COMMENTS
BOBBIN	23	4	001	81	0.58	17	60	9TH TSP + 1.37	FL	LTPF	49	M0155	500	
BOBBIN	25	4	001	64	0.88	17	71	9TH TSP + 0.79	FL	LTPF	48	L7871	500	
BOBBIN	27	7	001	63	0.53	17	74	9TH TSP + 0.63	FL	LTPF	47	B0690	500	
BOBBIN	30	6	001	50	0.83	17	81	9TH TSP + 0.68	FL	LTPF	46	M0155	500	
BOBBIN	33	6	001	68	0.49	17	69	9TH TSP + 0.68	FL	LTPF	44	M4780	500	
BOBBIN	49	33	001	53	0.56	17	78	12TH TSP+ 0.37	FL	LTPF	38	H8259	500	
BOBBIN	49	51	001	46	1.09	17	82	12TH TSP+ 0.72	FL	LTPF	38	H8259	500	
BOBBIN	98	25	001	69	0.81	17	71	12TH TSP+ 0.69	FL	LTPF	9	W6871	500	
BOBBIN	112	62	001	48	1.28	3	88	12TH TSP+ 0.38	FL	UTPF	89	S4373	500	
BOBBIN	112	78	001	51	0.61	17	81	12TH TSP+ 0.66	FL	UTPF	89	S4373	500	
BOBBIN	113	69	101	59	1.35	3	24	15TH TSP+ 10.85	FL	UTPF	89	W6871	500	
BOBBIN			101	49	0.76	3	20	15TH TSP+ 20.39	FL	UTPF	89	W6871	500	
BOBBIN			101	61	0.89	3	25	15TH TSP+ 43.93	FL	UTPF	89	W6871	500	
BOBBIN	118	60	001	42	0.83	17	87	12TH TSP- 0.45	FL	UTPF	87	H8259	500	
BOBBIN	122	35	001	51	0.65	17	75	13TH TSP+ 0.45	FL	LTPF	22	R6452	500	
BOBBIN	122	70	001	52	0.51	17	81	12TH TSP+ 0.22	FL	UTPF	85	H8259	500	

TOTAL TUBES FOUND = 14
TOTAL INDICATIONS FOUND = 16
TOTAL TUBES IN INPUT FILE = 15531

6.0 Class 2 Inspection Results

Inspections were performed during Outage 12 on Steam Generator 2A and 2B, Core Flood Tanks 2A and 2B, piping integrally-welded attachments, piping welds of Low Pressure Injection, Spent Fuel Cooling, Reactor Building Spray, High Pressure Injection, Component Cooling, Feedwater and Main Steam Systems and Class 2 Component Supports.

6.1 Steam Generators and LP Coolers

Steam Generator 2B Circumferential Shell Weld, PC. 5 to PC 6 received an ultrasonic examination. No reportable indications were found.

Steam Generators 2A and 2B Steam Outlet Nozzles located between "W-X" and "W-Y" Axis received a magnetic particle examination. No reportable indications were found.

Low Pressure Injection Cooler A Head Flange to Stainless Steel Shell Weld received an ultrasonic examination. No reportable indications were found.

Low Pressure Injection Coolers A and B Inlet and Outlet Nozzle to Shell Welds received a dye penetrant examination. No reportable indications were found.

6.2 Core Flood Tanks

Core Flood Tank A Upper Head to Shell Weld received an ultrasonic examination. No reportable indications were found.

Core Flood Tank 2A Outlet Nozzle to Shell Weld received a magnetic particle examination. Core Flood Tank 2B Outlet Nozzle to Shell Weld received an ultrasonic and a magnetic particle examination. The inside radius section received an ultrasonic examination. No reportable indications were found.

Two (2) Core Flood Tanks 2A Support Integrally-Welded Attachments received a magnetic particle examination. No reportable indications were found.

6.3 Piping

Welds one-half inch and less nominal wall thickness:

Thirty-nine (39) circumferential welds and nine (9) longitudinal welds received a dye penetrant examination. Two (2) circumferential welds received a magnetic particle examination. No reportable indications were found.

One (1) circumferential weld received an ultrasonic and a dye penetrant examination. Twelve (12) circumferential welds and six (6) longitudinal welds received a radiographic and a magnetic particle examination. No reportable indications were found.

Two (2) branch connection welds received a magnetic particle examination. No reportable indications were found.

Piping integrally-welded attachments:

Nine (9) integrally-welded attachments [two (2) on Main Steam System, and one (1) on Steam Generator 2A Feedwater Header] received a magnetic particle examination. Six (6) integrally-welded attachments [one (1) on Main Feedwater, four (4) on Decay Heat System and one (1) on Reactor Building Spray System] received a dye penetrant examination. A reportable indication was found on Weld 2-03-H16A, (Item Number C03.040.032). The weld indication was repaired and re-examined and found acceptable (Refer to Problem Investigation Report 2-092-0013 included in Section 9 of this report). The scope of the inspection was extended to include one (1) additional attachment weld, per ASME Section XI, Paragraph IWC-2430(a). The inspection data sheets are included in this section.

No other reportable indications were found.

6.4 Component Supports

Seventy (70) Class 2 Component Supports received a visual examination as required by ASME Section XI, Article IWF-2000. Reportable conditions were found on support ID Number 2-01A-0-1441-R1 (Item Number F1.02.025). Refer to Problem Investigation Report 2-092-0027 included in Section 9 of this report. The support was removed per Duke Power Company Exempt Change OE#4462 included in Section 10 of this report. The scope of the inspection was extended per ASME Section XI, Paragraph IWF-2430(a) to include seven (7) additional supports. No other reportable conditions were found. The inspection data sheets are included in this section of the report.

6.5 System or Component Functional/Hydrostatic Tests

Class 2 Hydrostatic Tests were performed as required by ASME Section XI, Article IWC-5000. No reportable conditions were found.

6.6 Class 2 Repairs and Replacements

Repairs and replacements for work performed from October 26, 1990 to March 3, 1992 are itemized in Section 11 of this report.

DUKE POWER COMPANY

PROJECT OCONEE

MAGNETIC PARTICLE/LIQUID PENETRANT EXAMINATION REPORT

Weld No. 2-03-H16AUnit No. 2Date 2/11/92Diameter N/ASchedule/Thickness N/AType Material ☐ SS ☒ CSWork Order No. 92006270-01QA Condition 1Procedure NDE 35 A-1 / Rev 13NDE-98 Approved N/ARadiation Level N/A

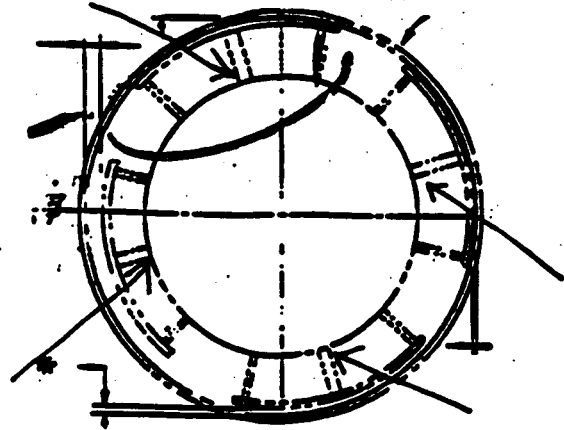
Inspector

Level

JURII

SKETCH OF ITEM EXAMINED

SHIELD WALL



Indication Number

Indication Dimensions
Length/Width/Dia., etc.

Acceptable

Reportable

Reference Documents

MT DATA

MT Method Used

☒ Fluorescent ☐ Nonfluorescent ☐ Wet ☐ Dry

MT Unit Serial No. _____

Particle Batch No. _____

MT Technique Used: _____

Circular

Direct Contact Amp _____

Central Conductor Amp _____

☒ MT Field Indicator Used☐ Yes/ ☐ No☐ Yoke☐ AC☐ DC☐ Prod☐ Longitudinal No. Turns in Coil

Amps

PT DATA

PT Batch Number

Cleaner 916015

Penetrant 87K043

Developer 89D05K

Remover

☐ Fluorescent ☒ NonfluorescentBlack Light Intensity Verified
Time

Ser.No. Lt. Meter

Ser. No. Blk Light

Remarks:

No Repeatable IndicationsFoundRef PIR 2-092-0013

ANI Review

Date

Final QA Review

Date

Item No.

R.F. ElmerANR2-12-92T.A. Coleman2-12-92C03.040.032

DUKE POWER COMPANY

PROJECT OCONEE

MAGNETIC PARTICLE/LIQUID PENETRANT EXAMINATION REPORT

Weld No. 2-03-H16A

Unit No. 2

Date 01/21/92

Diameter N/A

Schedule/Thickness N/A

Type Material ☐ SS ☒ CS

Work Order No. N/A

QA Condition 1

Procedure NDE 35 A-H / Rev 13

NDE-98 Approved N/A

Radiation Level N/A

Inspector

Level

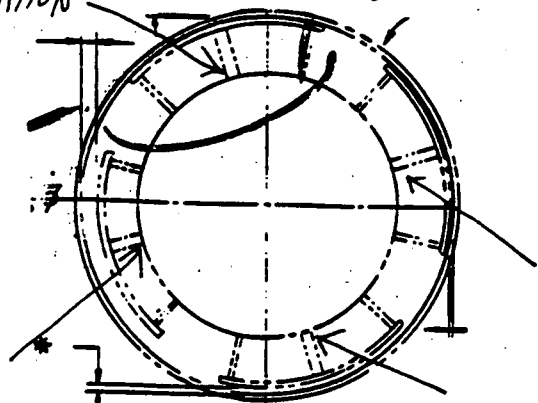
JUL

II

SKETCH OF ITEM EXAMINED

INDICATION

SHIELD WALL



Indication Number	Indication Dimensions Length/Width/Dia., etc.	Acceptable	Reportable	Reference Documents
1	1" X 1/32"		✓	

MT DATA

MT Method Used

☐ Fluorescent ☐ Nonfluorescent ☐ Wet ☐ Dry

MT Unit Serial No. _____

Particle Batch No. _____

MT Technique Used: _____

Circular

Direct Contact Amp _____

Central Conductor Amp _____

MT Field Indicator Used ☐ Yes / ☐ No☐ Yoke ☐ AC ☐ DC ☐ Prod☐ Longitudinal No. Turns in Coil _____ Amps

PT DATA

PT Batch Number

Cleaner 91G015

Penetrant 87K043

Developer 89D05K

Remover

☐ Fluorescent ☒ Nonfluorescent

Black Light Intensity Verified Time

Ser.No. Lt. Meter

Ser. No. Blk Light

Remarks:

1" LINEAR INDICATION ON THE LUG FACING THE SHIELD WALL. NEXT TO THE TOE OF THE WELD, 3" FROM THE TOP. ON THE SOUTH SIDE OF THE LUG.

PTR 2-092-0013

ANI Review

Date

R.F. Olin ANI 2-5-92

Final QA Review

Date

T. J. Olin 2-5-92

Item No.

C03.040.032

DUKE POWER COMPANY

PAGE 1 OF 5

PROJECT OCONEE UNIT 2

ISI VISUAL EXAMINATION VT-3 AND VT-4 HANGERS

SN/55

W.R. # / NSM N/A☐ PSI ☒ ISI

INSPECTOR

LEVEL

DATE 2-7-92PROCEDURE QAL-14REV. 12D. O. SalomeII

ACTUAL SYSTEM TEMPERATURE

N/A

VISUAL METHOD:

☒ DIRECT☐ REMOTE

SYSTEM STATUS

HOT

COLD

OTHER

☐☒☐

(EXPLAIN IN COMMENTS)

VISUAL AIDS/M&TE SN:

FLASHLIGHT, MIRROR

S/R NUMBER

2-01A-0-1441-R1

REV.

3

I.D. NUMBER

2-01A-R1

ITEM NUMBER

F1.02.025

RESULTS:

☐ ACCEPTABLE☒ UNACCEPTABLE, (REQUIRES NDE, EVALUATION OR REPAIR)IND.
NO.INDICATION
TYPE

LENGTH

WIDTH

REMARKS

① EXISTING EMBEDDED PLATE PULLED OUT OF CONCRETE; NELSON STUDS
SHEARED, BROKEN; SEE SKETCH

MECHANICAL SHOCK SUPPRESSOR

A

B

HOT SETTING

2 1/2"

COLD SETTING

3 1/2"

ACTUAL PISTON SETTING

* SEE
COMMENTS

MECHANICAL SHOCK SUPPRESSOR

C

D

HOT SETTING

COLD SETTING

ACTUAL PISTON SETTING

N/A

VARIABLE SPRING SUPPORTS

A

B

HOT LOAD

COLD LOAD

LOAD IND. READING

N/A

CONSTANT SUPPORT

A

B

HOT LOAD

COLD LOAD

POSITION IND. READING

N/A

TOTAL NO. OF DIV. SCALE

HYDRAULIC SHOCK SUPPRESSOR

A

B

FLUID LEVEL

HOT SETTING

COLD SETTING

ACTUAL PISTON SETTING

COMMENTS/DISPOSITION

* ACTUAL SETTING UNAVAILABLEDUE TO CONDITION OF HANGER;SUPPRESSOR HAS BEEN REMOVEDPIR: ☒ YES ☐ NO

SERIAL NO.

2-092-0027

QA REVIEW

T. J. Coleman

DATE

2-25-92

ANII REVIEW

R. F. Elgin ANI/ANII

DATE

2-25-92

ITEM NO.	NO. REQ'D	SIZE	DESCRIPTION	ASTM	LOT NUMBER	BY
1	1	P 3/8 x 8 x 1-3 LG.		A-36		EXISTS
2	2	P 3/8 x 8 x 2-10 LG.		A-36		"
3	1	SPEC. H.S. G5, 3/4" RAD, B=7 1/2", E=1-1/2"				"
4	4	P 3/8 x 4 1/2 x 0-5 LG. (SEE DETAIL 1)*		A-36		FBS
5	1	P 1/2 x 5 x 0-8 1/2 LG. *		A-36		"
6	1	TS 3 1/2 x 3 1/2 x 3 1/4 x 11-9" LG. } SEE 3 & 4		A-36		"
7	1	TS 3 x 3 x 1/4 x 1-6 LG.		"		"
8	1	P 1" x 3/4 x 2-7 LG. * } (SEE DET. 2		A-36		"
9	2	P 1/2 x 6 x 0-7 1/2 LG. * }		A-36		"
10	1	2 1/2" FIG. 55 WELDLESS LUG, SHORT			292-6017F	HC
11	2	P 1" x 8" x 0-8 LG.		A-36		FBS
12	1	TS 6 x 6 x 3/8 x 7-2 1/2" LG. *		A-36		"
13	1	SIZE 35 x 6" STROKE FIG. 307, MECHANICAL SHOCK SUPPRESSOR, HPS=2 1/2" CPS=3 1/2" WITH END ATTACHMENT, N=3'-0 1/4", LOAD=36207*			298-1537F	HC
14	1	ADDL. REAR BRACKET FOR SIZE 35 x 6" STROKE, FIG. 307			298-1976F	HC
15	1	P 1" x 10" x FIELD CUT TO SUIT LG.		A-36		EXIST.
16	2	P 1" x 24" x FIELD CUT TO SUIT LG.		A-36		"
17	1	TS 4 x 4 x 3/8 x 4-2" *		A-36		FBS
18	2	L 3 x 3 x 3/8 x 0-5 LG.		A-36		"
19	2	P 3/8 x 8 x 1-0 LG.		A-36		"
20	2	P 3/8 x 8 x 2-2 LG.		A-36		"
21	2	1 1/4" FIG. 291, CLEVIS PIN WITH COTTER		-	297-0909F	HC
22	1	2 1/4" FIG. 291, CLEVIS PIN WITH COTTER		-	297-0917F	HC
23	1	P 1/2 x 9 x 0-8 1/2 LG. * SEE DETAIL 3 & 4		A-36		FBS

* CUT TO SUIT

CONT. SHT. 2 OF 3

** ON ITEM #13 & #14 CUT
END PIECE TO 6 1/2 x 0-7 LG.

"FOR INSPECTION PURPOSES ONLY"

Notes: This drawing supersedes Grinnell Sketch

MT No. 2-124 Rev. 3 Dated: 12-27-73

CO3.040.005 2-DIA-R1 FL 02.025

LOCATION PLAN

DIRECTION	HOT MVT.	CBE MVT.	HOT LD.	COLD LD.	UPSET	FAULTED	HYDRO
VERTICAL	0.15		-		-	-	
N-S	1.01		-		17994N	17854S	35778N
E-W	0.39		-				35708S

ANALYSIS PROBLEM NO. 201-11/156-440

DATA PT. 136

STRUC. CALC. 056-0980-01-0018

DESIGNER / DATE BSN 11/12/81
DRAWN / DATE J. L. BSN 11/16/81
CHECKED / DATE J. L. BSN 11/16/81
INSPECTED / DATE WAIVED
INSPECTED / DATE WAIVED
APPROVED / DATE J. L. BSN 11/16/81

QA CONDITION 1

REFERENCE DRAWINGS

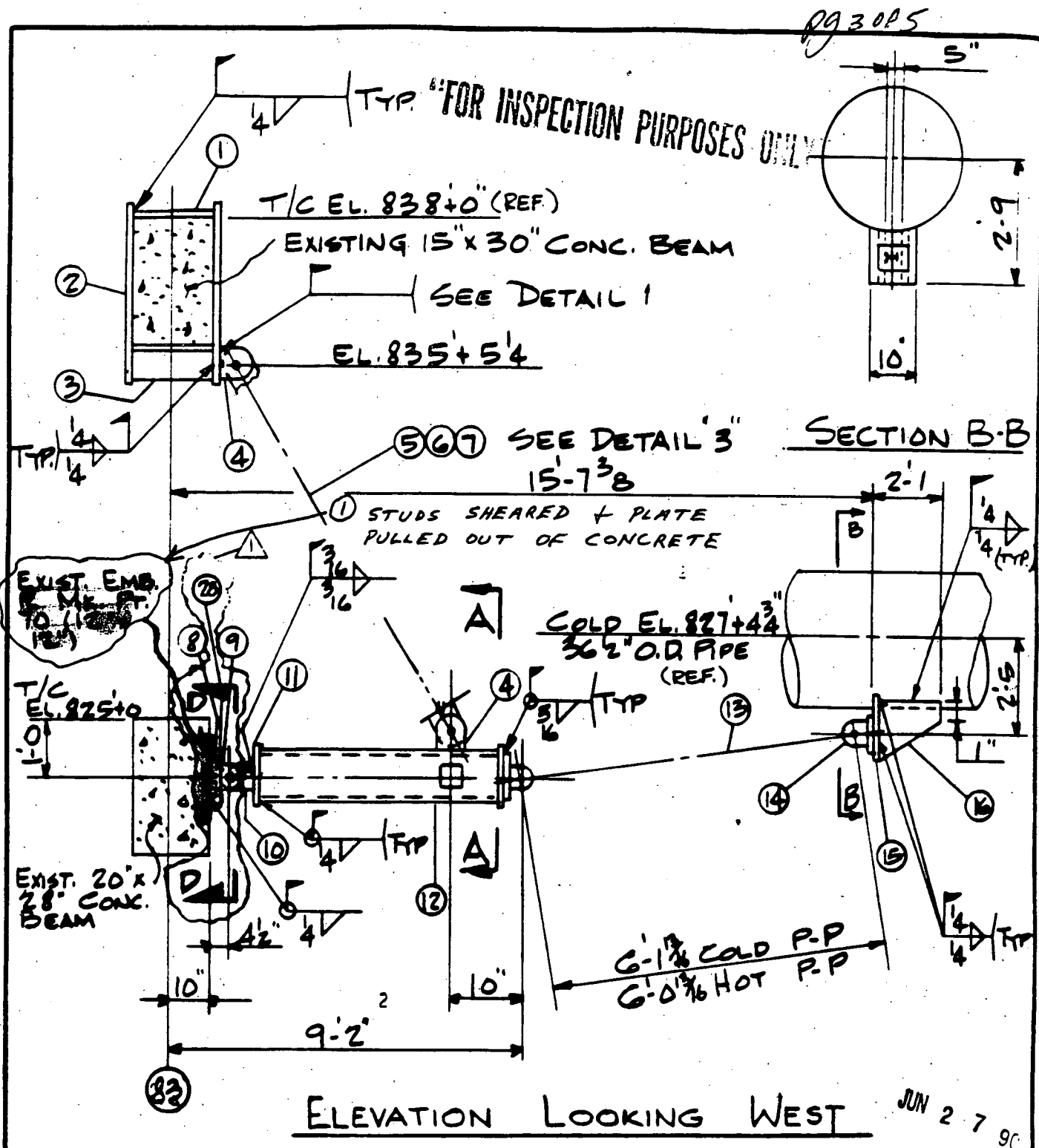
PIPE 0-144
CIVIL 0-156B
ELEC. N/A
N.V.A.C. N/A

PROJECT DUKE POWER COMPANY
OCONEE NUCLEAR STATION UNIT 2

REV.	BY	CK	DATE	INSTR.	DESCRIPTION	APP.	DATE
0	BSN	LW	11/12/81	MFL	REV. PER IEB 79-14	BSN	11/12/81
1	BSN	BSN	11/16/81	N/A	ADDED STIFFENER PLATES	BSN	11/16/81
2	BSN	BSN	11/16/81	GAM	REVISED PER IEB 79-14 (W/2735)	BSN	11/16/81
3	BSN	BSN	11/16/81		AS BUILT PER IEB 79-14 (W/2735)	BSN	11/16/81

SHEET NO. 1 OF 4 REV. 3

MARK NO. 2-DIA-0-1441-R1



B.O.M. CONT.

24	2	R. 1/2" x 3/4" x 0'-3" LG. (W/EPOXY SEALANT AROUND)	A36	-	FBS
25	2	R. 1/2" x 2" x 0'-2 1/2" LG. (W/EPOXY SEALANT AROUND)	"	-	"
26	1	R. 1/2" x 3/2" x 0'-3 1/2" LG. (W/EPOXY SEALANT AROUND)	"	-	"
27	2	R. 3/4" x 3" x 1'-0" LG. (SEE SEC. D-D SH. 4)	"	-	"
28	2	R. 3/4" x 3" x 0'-9 1/4" LG. (SEE SEC. D-D SH. 4)	"	-	"

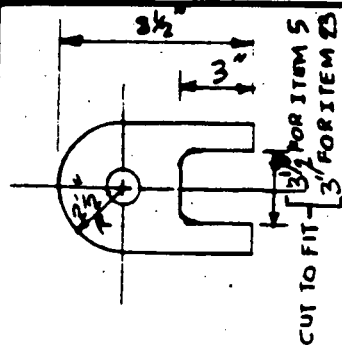


DUKE POWER COMPANY

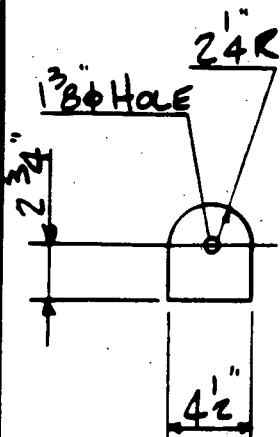
PROJECT OCONEE NUCLEAR STA. UNIT 2

Q A CONDITION 1

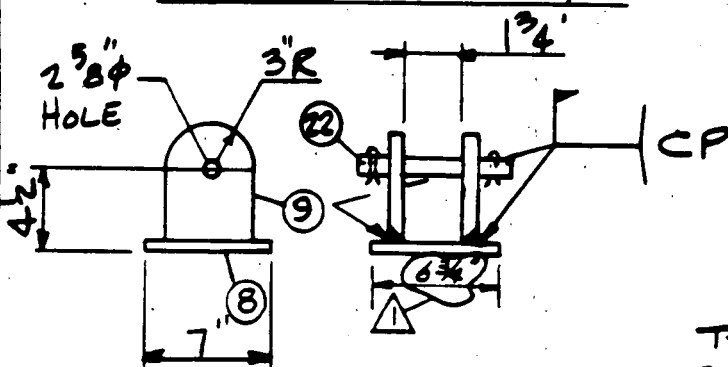
SHEET NO. 2 OF 4 REV. 3
MARK NO. 2-01A-0-441-R1



DETAIL 4
(ITEMS 5 & 23)



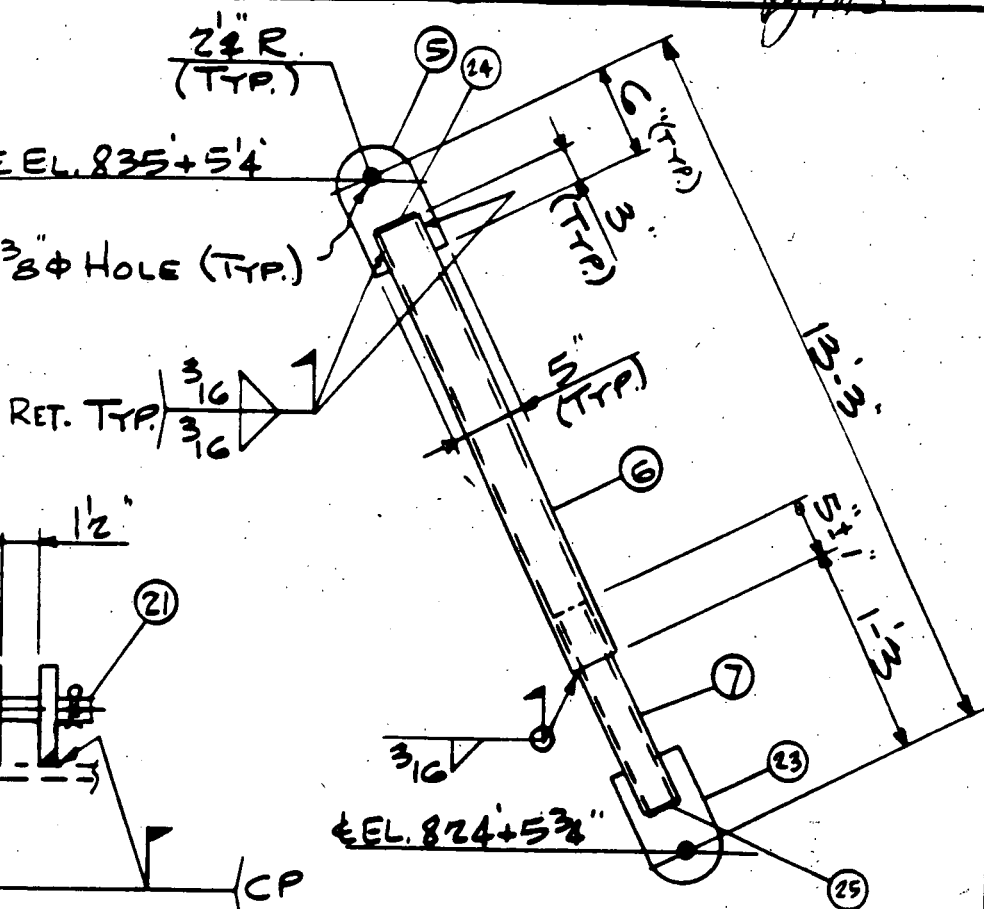
DETAIL 1 (ITEM 4)



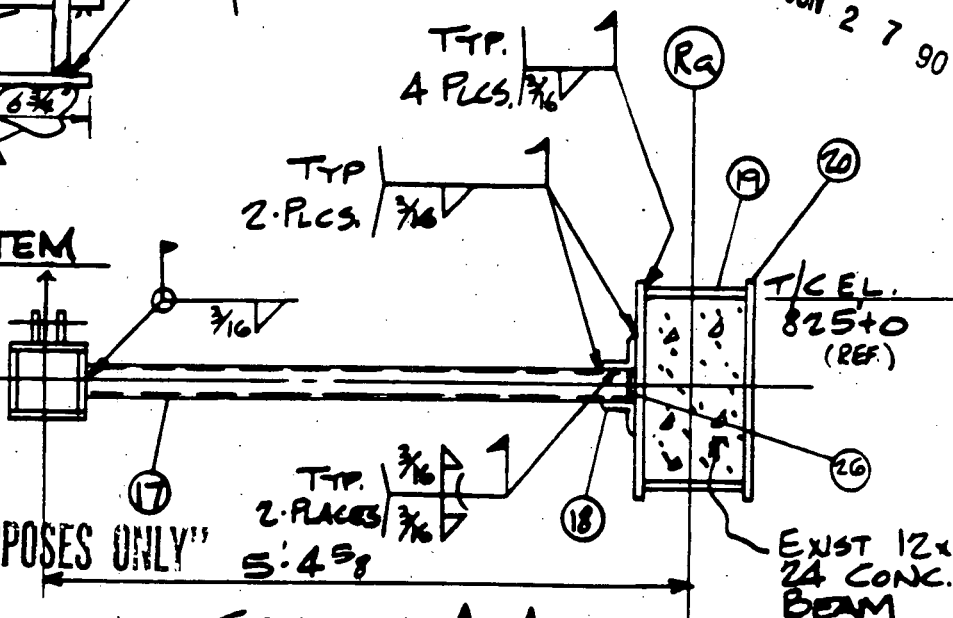
DETAIL 2 (ITEM 8 & 9)

± EL. 824+0

"FOR INSPECTION PURPOSES ONLY"



DETAIL 3 (ITEMS 5, 6 & 7)



SECTION A-A



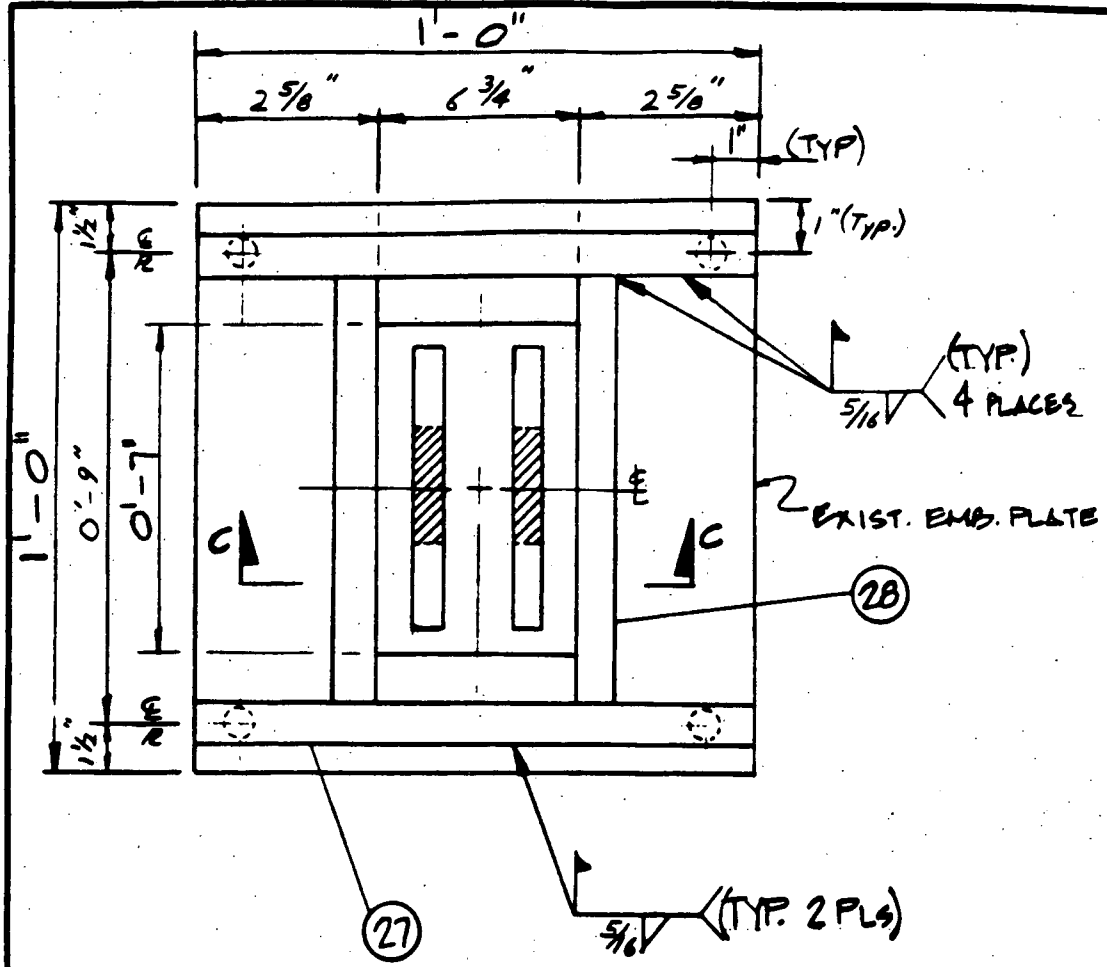
DUKE POWER COMPANY

PROJECT OCONEE NUCLEAR STA. UNIT 2

Q A CONDITION 1

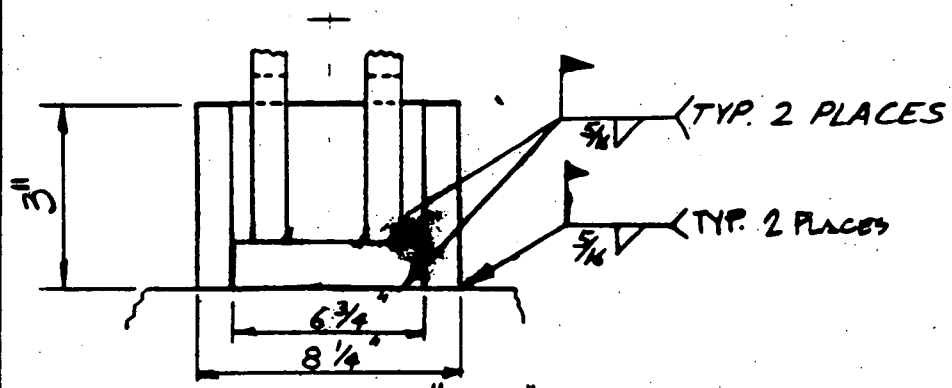
SHEET NO. 3 OF 4 REV. 3
MARK NO. 2-01A-0-441-R1

pg 50/5



SECTION "D-D"

"FOR INSPECTION PURPOSES ONLY"



SECTION "C-C"

JUN 27 90



DUKE POWER COMPANY

PROJECT OCONEE NUCLEAR STA. UNIT 2

Q A CONDITION 1

SHEET NO. 4 OF 4 REV 3
MARK NO. 2-01A-0-1441-R1

7.0 Augmented Inspection Results

Augmented inspections were performed on Reactor Coolant Pump 2A1, 2A2, 2B1 and 2B2 Flywheels, Pressurizer Surge Piping Drain Nozzle, Thermal Stress Piping (NRC Bulletin 88-08), Auxiliary Feedwater Header (PSC-21-82) Water Hammer Concern and on Pressurizer Sensing/Sampling Safe-Ends.

7.1 Reactor Coolant Pump Flywheels

Reactor Coolant Pump 2A1, 2A2, 2B1 and 2B2 Flywheels received an ultrasonic examination. No reportable indications were found.

7.2 Pressurizer Surge Piping Drain Nozzle

Pressurizer Surge Drain Nozzle to Pipe Weld received a dye penetrant examination. No reportable indications were found.

7.3 Thermal Stress Piping

Twelve (12) welds received an ultrasonic examination as required by NRC Bulletin 88-08. No reportable indications were found.

7.4 Auxiliary Feedwater Header (PSC-21-82) Water Hammer Examinations

Fifteen (15) welds received a magnetic particle examination in accordance with the Auxiliary Feedwater Header (PSC-21-82) Water Hammer Concern. No reportable indications were found.

7.5 Pressurizer Sensing/Sampling Nozzle Safe-Ends

Seven (7) nozzle to safe-end welds received a dye penetrant examination. No reportable indications were found.

8.0 Personnel, Equipment, and Material Certifications

All personnel who performed or evaluated results of inservice inspections from October 25, 1990 to March 3, 1992 at Oconee 2 were certified in accordance with the requirements of 1980 ASME Section XI with Addenda through Winter 1980. The appropriate certification record for each Duke Power Company inspector is on file at Oconee Nuclear Station or in the Corporate Office in Charlotte, North Carolina. The certification records for the Babcock & Wilcox inspectors are on file at the Babcock and Wilcox Offices in Lynchburg, Virginia.

All Babcock and Wilcox personnel who performed or evaluated results of inservice inspections during Outage 12 on the Reactor Vessel Outlet Nozzle Intermediate examinations were additionally certified to the ASME Code Section XI 1989 Edition, Appendix VII.

Records of periodic calibration of Babcock & Wilcox inspection equipment are on file at the Babcock & Wilcox Offices in Lynchburg, Virginia. Records of periodic calibration of Duke Power Company inspection equipment are on file at Oconee Nuclear Station or in the Corporate Office in Charlotte, North Carolina.

8.1 Personnel Equipment and Material Certifications - Eddy Current Testing

See Duke Power Company "Eddy Current Examination Report, Oconee Unit 2 January 1992 Refueling Outage 12" on file at the Corporate Office in Charlotte, North Carolina.

9.0 Problem Investigation Reports

A copy of each Problem Investigation Report resulting from reportable items, originated against scheduled inservice inspections performed during Outage 12, is included in this section. All were resolved and found acceptable before returning Unit 2 to service. The following Problem Investigation Reports were issued:

<u>P.I.R. NO.</u>	<u>DESCRIPTION</u>	<u>DATE ISSUED</u>
2-092-0013	CL.2 Hanger Linear Indication	01-23-92
2-092-0027	CL.2 Mechanical Snubber	02-04-92

COMPLETE FORM BY PRINTING WITH BLACK BALL POINT PEN OR TYPE

DUKE POWER COMPANY NUCLEAR STATION

Problem Investigation Report Serial No. 2-092-0013Station CYONCE

Licensee Event Report No. _____

I. Problem Occurred-Time/Date: 1-21-92 Discovered-Time/Date: 1-21-92
 Unit(s): II Unit Status At Time Problem Occurred/Discovered: Refueling Outage
 Description and Cause of Problem: During Liquid Penetrant Examination on Isot Item #
CO3.040.032 (Hanger # 03-D-1481A-H16A) A 1" Linear Indication was Found on a
weld connecting a 1" Plate (Lug) to the Main Flow Piping.

See Attached

Other Duke Stations Affected ☐ Yes ☒ No Determined By/Date: T.J. Coleman 1-23-92
 Comments: _____

Location of Problem: 3rd Floor Rx Bldg.Method Used to Discover Problem: Liquid Penetrant Examination

Immediate Corrective Actions Taken/To Be Taken: _____

Work Stoppage Notification (Form QCK-2A) Serial No.: N/AInformation Sources/References (Work Requests, Documents Violated, etc.): ASME Sec II, NDE 35

Originated By: T.J. Coleman Date: 1-23-92 Dept./Group/Section: Comp. Eng.

II. Compliance Evaluation-Item/System Operable ☒ Yes ☐ No ☐ Not Applicable
 Evaluated By/Date: Rick Matheson 2/4/92 Comments: Operability by Design
 Reportable ☐ Yes ☒ No Reportable Per: ☐ 50.73 Section ☐ 50.72 Section
☐ 73.71 Section ☐ T.S./Lic Cond Section ☐ Part 21 ☐ Other: ☐ Part 50.9
 Evaluated By/Date: Rick Matheson 2/4/92 Comments: Determined by Operability

III. Telecon/ENS Report to NRC Time/Date: _____
 NRC Contactee(s): _____ DPC Contactor(s): _____
 Telegraph/Mailgram/Facsimile Transmission to NRC-Date: _____
 Date Notified: NRC Res. Inspector: _____ Station Manager: _____
 General Office: _____ Comments: _____

IV. Investigation Assigned To: _____ NRC Report Due Date: _____
 Date Due to Compliance after Evaluation: _____
 PIR Review (Compliance): _____ Date: _____
 PIR Station Manager Approval: _____ Date: _____

V. Further Action/Evaluation Required ☒ Yes ☐ No (Explain Below):
 Page 2 Assigned To: Engineering (Berymills) & GSD/NDE Tech. Support (QA) Tim Tucker
 Comments: _____

Compliance Review: Rick Matheson Date: 3/26/92 QA Review: R. Blanton Date: 2-18-92

Distribution

Initial	Originator	Supt(5)	P. Harmon	R. Grean	B. Dobson	B. Wilson	M. Sills
1-23-92	T.J. Coleman	B. Barron	R. Henderson	R. Edgin	SR Atk	L. Firebaugh	CA Robinson
Final	Originator	Supt(5)	P. Harmon	R. Edgin	QA Tech Sup	D. Loran	J. Peck
3-26-92	T.J. Coleman	B. Barron	R. Henderson	R. Edgin	QA Tech Sup	B. Wilson	B. Miller
				L. Firebaugh	CA Robinson	J. Tucker	J. Brown

DUKE POWER COMPANY

PROJECT OCONEE

MAGNETIC PARTICLE/LIQUID PENETRANT EXAMINATION REPORT

Weld No. 2-03-H16AUnit No. 2Date 01/21/92Diameter N/ASchedule/Thickness N/AType Material ☐ SS ☒ CS

Work Order No. _____

QA Condition 1Procedure NDE 35 A-H / Rev 13

NDE-98 Approved _____

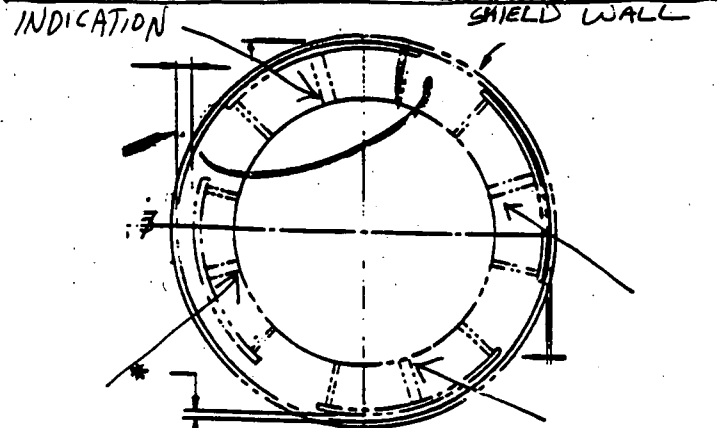
Radiation Level _____

Inspector

Level

subII

SKETCH OF ITEM EXAMINED

Indication
NumberIndication Demensions
Length/Width/Dia., etc.

Acceptable

Reportable

Reference Documents

11" X 1/32"☒

MT DATA

MT Method Used

☐ Fluorescent ☐ Nonfluorescent ☐ Wet ☐ Dry

MT Unit Serial No. _____

Particle Batch No. _____

MT Technique Used: _____

Circular

Direct Contact Amp _____

Central Conductor Amp _____

MT Field Indicator Used ☐ Yes / ☐ No☐ Yoke ☐ AC☐ DC☐ Prod☐ Longitudinal No. Turns in Coil

Amps

PT DATA

PT Batch Number

Cleaner 916015Penetrant 87K043Developer 89D05K

Remover

☐ Fluorescent ☒ NonfluorescentBlack Light Intensity Verified
Time

Ser.No. Lt. Meter

Ser. No. Blk Light

Remarks:

1" LINEAR INDICATION ON THE LUG FACING THE SHIELD WALL. NEXT TO THE TOE OF THE WELD, 3" FROM THE TOP. ON THE SOUTH SIDE OF THE LUG.

ANI Review

Date

Final QA Review

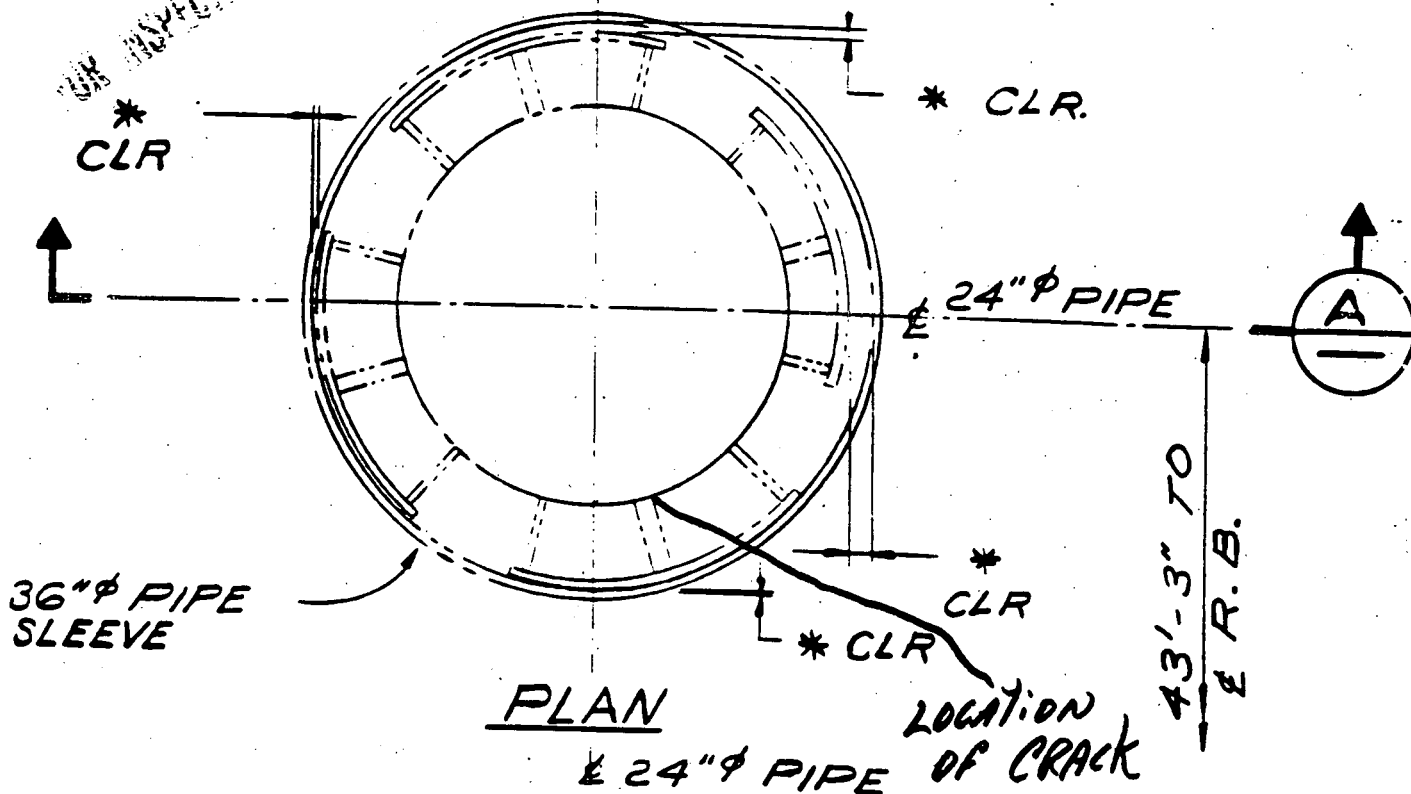
Date

Item No.

C03.040.032



± 24" ϕ PIPE
27'-0⁵/₁₆" TO ±
R.B.



EXIST
CONCRETE
FLOOR

PIPE SLEEVE

EL 844'-6"

JUN 05 1985

FOR INSERVICE INSPECTION USE ONLY

REF. DWG:
0-1490B-19
PIPING SUPPORT
DETAIL.

MT
C03.040.032 2-03-H16A

QA CONDITION 1 Fl. 02.115

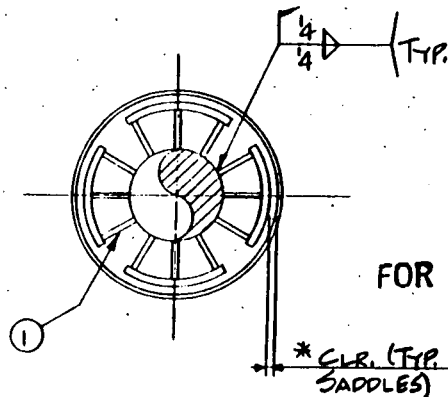
SECTION



Δ	4/1/85	AS BUILT PER IEB 79-14; IMPL. DATE: 3-18-85	Δ	AS	DRM	5/1/85	QSD	5/1/85
Δ		DESCRIPTION	Δ	BY	CHK	DATE	APPR	DATE
Δ	12/85	REVISED & REDRAWN PER IEB 79-14	RL	La	COM	12/85	APPR	12/85
REV. DATE	REVISIONS		BY	CHK	DESIGN SUPVR	ENG'G	PROJ. ENG'G	APPR

DUKE POWER CO. Oconee Nuclear Station			 GAITHERSBURG	STRESS ISO 0-1490B-3(S)	
Iso. Drawing No.	Item No.	Unit No.		REF. DWG. COMPOSITE	0-1481A
0-1490B-3	2	2		CIVIL	0-1065D
PIPE SUPPORTS			JOB. NO.	HANGER NO.	REV.
MAIN FEEDWATER WEST GENERATOR			13312-002	03-0-1481A-H16A SHT 1 OF 4	DI

00-000002 except shims are to extend as a minimum the full arc length of the saddle and have a minimum width of 3". Shim may extend 1/4" past edge of sleeve to allow welding outside of sleeve. Shim thickness shall be selected based on the minimum gap size over the shim area.



FOR INSERVICE INSPECTION USE ONLY

PLAN

* CLR. (TYP. 4 SADDLES)

LEGEND:

- * LOADS WITH FEEDWATER HEADER SUPPORTS
- ** LOADS WITHOUT FEEDWATER HEADER SUPPORTS
- ▲ DOES NOT INCLUDE SAM

This Drawing Supersedes Bechtel
Dwg. No. 0-4908, Rev. 1, Date 10-12-71

"X" RIGID

MVMTS."	X	Y	Z
THERMAL	-	.427	-
DBE	-	.104	-
▲ SEISMIC	-	-	-

PROBLEM NO. 2-08 SYSTEM NO. 03
ISSUE 0
DATA PT. 465 NUCLEAR CLASS

LOCATION PLAN

SYSTEM DATA		SUPPORT DATA		JOB NO.
DESIGN RATING	<u>A</u>	T (THERMAL LOAD)	<u>-7844</u>	<u>13312-002</u>
DESIGN PRESSURE	<u>103.4 PSIG</u>	D (DEAD LOAD)	<u>-691</u>	
DESIGN TEMPERATURE	<u>100°F</u>	DE (DBE)	<u>20794</u>	APPR.
OPERATING TEMPERATURE	<u>100°F</u>	MHE (SSE) (DBE)	<u>4153</u>	APPR.
PIPE	<u>3" SCH 40 A-106 GR. E</u>	DE+T+D+SAM (DBE)	<u>+21343 / -205.4</u>	
INSULATION	<u>2"</u>	MHE+T+D+SAM (DBE)	<u>+42137 / -313.3</u>	
		SAM (DBE)	<u>*1240</u>	

4 PLATE ASSEMBLYS (SEE SHEET 3 OF 4)

JUN 05 1985

QA CONDITION 1

DUKE POWER CO.

OCONEE NUCLEAR POWER STATION - UNITS 1, 2, & 3

PIPING SUPPORT DETAIL

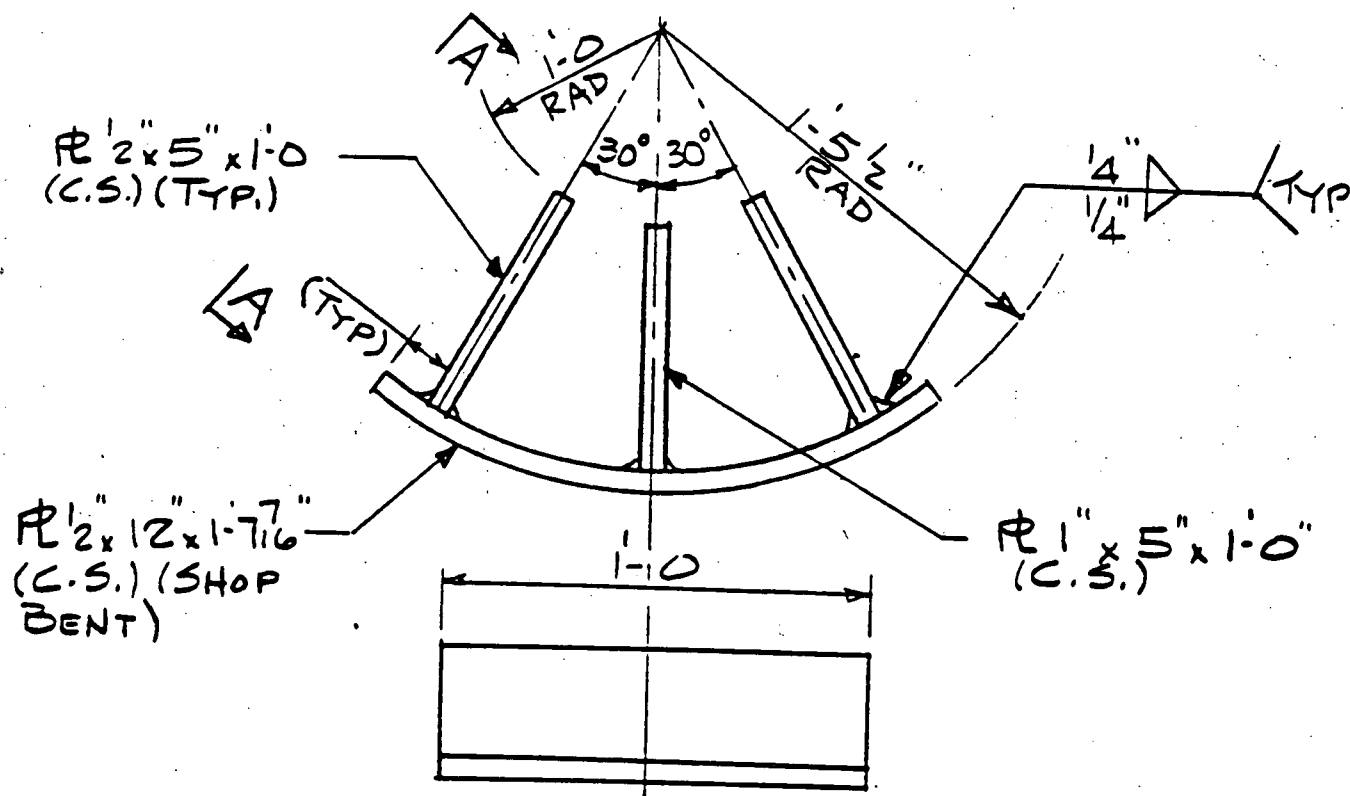
03-0-1481A-HIGA

DRN. HLU 5-22-81 CHKD. DI 9-8-81

INSP. 1/2 - APPR. 1/2 -

SCALE: NONE SHT. No. 2 of 4 REV. DI

"FOR INSPECTION PURPOSES ONLY"



SECTION - AA

PLATE ASSEMBLY

FOR INSPECTION PURPOSES ONLY

FOR INSERVICE INSPECTION USE ONLY

JUN 05 1985

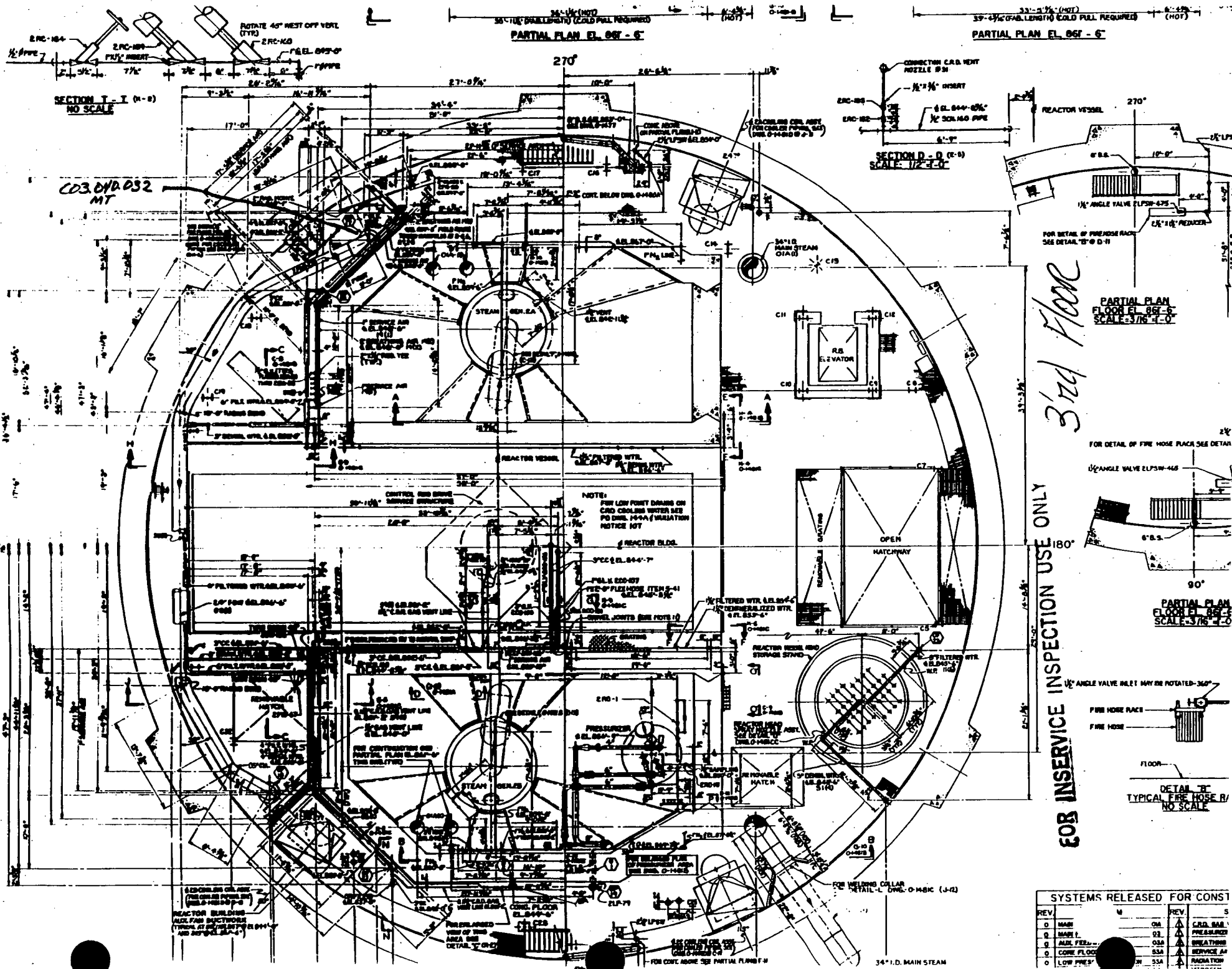


DUKE POWER COMPANY

PROJECT OCONEE NUCLEAR STA. UNIT 2

QA CONDITION 1

SHEET NO. 3 OF 4 REV. DI
MARK NO. 03-0-1481A-H16A



SECTION I-I (1-1)
NO SCALE

PARTIAL PLAN EL. 067 - 5'

PARTIAL PLAN EL. 067 - 6'

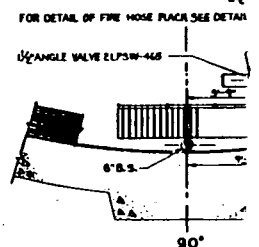
CO3.DVA.D32
MT

SECTION D-D (1-1)
SCALE 1/2"=1'-0"

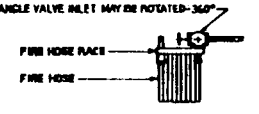
PARTIAL PLAN
FLOOR EL. 067 - 6'
SCALE 3/8"=1'-0"

3rd Floor

FOR INSERVICE INSPECTION USE ONLY



PARTIAL PLAN
FLOOR EL. 067 - 6'
SCALE 3/8"=1'-0"



DETAIL "B"
TYPICAL FIRE HOSE R/
NO SCALE

SYSTEMS RELEASED FOR CONST			
REV	DATE	BY	FOR CONST
0	01	01	C.R.D. BAR
0	02	02	PRESSURE
0	03	03	WELDS
0	04	04	REPAIRS
0	05	05	LOW PRESS

PROBLEM INVESTIGATION REPORT

Page 2 ^{page 1 of 2}
 PIR No. 2-092-0013

VI. Proposed Resolution of Problem

U.R. 53572 L WAS GENERATED TO REPAIR/GRIND THE DEFECT. THE CAUSE OF THE DEFECT IS NOT DETERMINED AT THIS TIME, BUT IS ASSUMED TO BE A DEFECT FROM CONSTRUCTION.

THIS PROBLEM IS NOT GENERIC TO OTHER UNITS OR DUKE SITES.

Other Approved _____

Date _____

Other Approved _____

Date _____

SCAE Required ☐ Yes ☒ No

SCAE Assigned To: _____

Remarks See additional pg 2.

TRR Steen 2/5/92
 Approved B. Hallgren 2/6/92
 Approved Debbie Blanton 2-18-92
 Determined By/Date Blanton 2-18-92
 QA QA Date

Serial No. _____

VII. QA Verification Requirements * See attached pg 2 resolution

Assigned To _____

Date _____

VIII. Corrective Action Completed

Approved _____

Date _____

IX. QA Verification Results

Completed By _____

Date _____

QA Approval _____

Date _____

Remarks _____

Final QA Review _____

Date _____

PROBLEM INVESTIGATION REPORT

Page 2 *page 2 of 2*
PIR No. *2-092-0013*

VI. Proposed Resolution of Problem

REMOVE THE 1" LINEAR INDICATION. AFTER FINAL GRINDING THE AFFECTED SURFACES SHALL BE EXAMINED BY THE LIQUID PENETRANT METHOD TO ENSURE THE LINEAR INDICATION HAS BEEN REMOVED.

THE AFFECTED AREA IS TO BE EVALUATED FOR VIOLATION OF MIN. PIPE WALL THICKNESS AND/OR MIN. WELD SIZE ON THE WELDED ATTACHMENT. IF WELDING IS REQUIRED A FINAL LIQUID PENETRANT EXAMINATION SHALL BE PERFORMED.

TL Tuck NDE Level III *1/27/92*
By Date

Other Approved _____

Approved _____

Date

Date

Other Approved _____

Approved *T.J. Coleman*

Date

Date

Date

SCAE Required ☐ Yes ☒ NoDetermined By/Date **C. Blanton*

QA

Date

SCAE Assigned To: _____

Serial No. _____

Remarks **all required considerations not applicable*
OB Blanton

VII. QA Verification Requirements *QC Tech. Support will verify the above corrective action has been performed in accordance with WR # 53572L*

Assigned To *QCTS (welding/NDE)**2-18-92*

Date

VIII. Corrective Action Completed *The linear indication was removed with minimum grinding and no weld repair was required. A liquid penetrant test was performed verifying removal of the indication. Ref WR 53572L. ISE Plan Addendum SN# 2-06N-0266 was written adding item #C03140,031 to comply with ASME Sec. XI TWF 2430(a).*

Approved *T.J. Coleman**3-2-92**3/3/92*

Date

IX. QA Verification Results *WR 53572L was final QA approved on 3-2-92. No further action is required.*

Completed By *Cecilia Blanton*

Date

QA Approval *T.J. Coleman*

Date

Remarks _____

Final QA Review *Cecilia Blanton**2/2/92*

Date

COMPLETE FORM BY PRINTING WITH BLACK BALL POINT PEN OR TYPE

DUKE POWER COMPANY NUCLEAR STATION

Problem Investigation Report Serial No. 2-092-0027
 Station OCONEE
 Licensee Event Report No. _____

I. Problem Occurred-Time/Date: 01-09-92 Discovered-Time/Date: 01-13-92
 Unit(s): 2 Unit Status At Time Problem Occurred/Discovered: Unit was coming offline
 Description and Cause of Problem: As the main steam line cooled down after the unit was shut down, thermal contraction caused a snubber support to be pulled out of the concrete columns around the main steam relief valves. The damage was caused by a mechanical snubber that locked up and restrained the expected thermal movement. SR 2-01A-0-1441-R1
 Other Duke Stations Affected: ☒ Yes ☐ No Determined By/Date: Freddie W. Duncley III
 Comments: Damage to mechanical snubbers caused by environmental conditions is a problem the other Duke Stations and the industry in general is
 Location of Problem: SR 2-01A-0-1441-R1 (col R-82) Lawrence St.
 Method Used to Discover Problem: Routine Observation during scaffold erection for IST insp.
 Immediate Corrective Actions Taken/To Be Taken: The snubber was removed and tested. It was found to be locked-up. Design Engineering was contacted. SR is being evaluated.
 Work Stoppage Notification (Form QCK-2A) Serial No.: NA
 Information Sources/References (Work Requests, Documents Violated, etc.): WO # 92003561

Originated By: F. W. Duncley III Date: 2-4-92 Dept./Group/Section: PEG/ONS/Comp. En

Compliance Evaluation-Item/System Operable ☒ Yes ☐ No ☐ Not Applicable
 Evaluated By/Date: Ed Duncley 2/20/92 Comments: Operability by Design
 Reportable ☐ Yes ☒ No Reportable Per: ☐ 50.73 Section ☐ 50.72 Section
☐ 73.71 Section ☐ T.S./Lic Cond Section ☐ Part 21 ☐ Other: ☐ Part 50.9
 Evaluated By/Date: Ed Duncley 2/20/92 Comments: Determined by Operability

III. Telecon/ENS Report to NRC Time/Date: _____
 NRC Contactee(s): _____ DPC Contactor(s): _____
 Telegraph/Mailgram/Facsimile Transmission to NRC-Date: _____
 Date Notified: NRC-Res. Inspector: _____ Station Manager: _____
 General Office: _____ Comments: _____

IV. Investigation Assigned To: _____ NRC Report Due Date: _____
 Date Due to Compliance after Evaluation: _____
 PIR Review (Compliance): _____ Date: _____
 PIR Station Manager Approval: _____ Date: _____

V. Further Action/Evaluation Required ☒ Yes ☐ No (Explain Below):

Page 2 Assigned To: Design Engineering

Comments: _____

Compliance Review: _____ Date: _____ QA Review: W. M. C. C. C. Date: 2/28/92

Distribution

Initial	Originator	<u>R. House</u>	<u>J. Coleman</u>	<u>S. Rose</u>	<u>J. Peterson</u>	<u>NDRB</u>	<u>CA Robison</u>
<u>2/5/92</u>	<u>F. Linsky</u>	<u>B. Brown</u>	<u>R. Elgin</u>	<u>G. L. L. L.</u>	<u>J. Brown</u>	<u>B. Dolar</u>	<u>L. L. L. L.</u>
Final	Originator						

VI. Proposed Resolution of Problem

Reanalysis of piping analysis problem 2-01-01 has determined that the piping system is acceptable with S/A 2-01A-01441-R1 removed. The majority of the load for this support will be absorbed by Penetration 26. This support should therefore be removed and the damage to the beam at the embedded plate failure repaired.

Other Approved _____

Date

Approved

Date

Other Approved _____

Date

Approved

Date

SCAE Required ☒ Yes ☐ No

Determined By/Date

QA

Date

SCAE Assigned To: _____

Serial No. _____

Remarks _____

VII. QA Verification Requirements

SUPPORT REMOVAL AND CONCRETE REPAIR WILL BE INSPECTED AND DOCUMENTED ON THE APPLICABLE STATION MAINTENANCE PROCEDURES. VERIFICATION OF THIS WILL BE MADE DURING "FINAL QA REVIEW."

Assigned To

MMQC SERVICES, TECH SUPPORT GROUP

2/28/92

Date

VIII. Corrective Action Completed

Approved _____

Date

IX. QA Verification Results

Completed By _____

Date

QA Approval _____

Date

Remarks _____

Final QA Review _____

10.0 Reference Documents

The following reference documents apply to the inservice inspection performed during Outage 12 at Oconee 2:

- Babcock & Wilcox "1992 Reactor Vessel Examination Report" (3.0 Examination Summary), dated February 24, 1992.
- Duke Power Company Request for Relief ONS-001.
- Duke Power Company Request for Relief ONS-002.
- Duke Power Company Request for Relief ONS-014.
- Duke Power Company Ultrasonic Examination Data Sheet B02.011.006.
- Duke Power Company, Oconee Engineering Exempt Change #4462, dated February 18, 1992.
- Design Engineering Stress Calculation #OSC-1318-06.
- Duke Power Company Problem Investigation Report 4-091-0093.
- Duke Power Company Design Engineering Stress Calculation OSC-1316-06.

Copy No.: 1
Controlled: YES

1992

REACTOR VESSEL EXAMINATION REPORT

FOR

DUKE POWER COMPANY

OCONEE NUCLEAR STATION UNIT 2

Revision: 0

Outage: #12

Owner: Duke Power Company
P.O Box 33189
Charlotte, NC 28242

BWNS Reference Number: Contract 583-2034 Task 406

MANUFACTURER: Babcock & Wilcox, Lynchburg, Virginia
NRC DOCKET NUMBER: 50-269
GROSS GENERATING CAPABILITY: 2568 MWT
COMMERCIAL SERVICE DATE: July 16, 1973

Prepared by: W.D. Minton Date: 2-24-92
W.D. Minton - NDE Technology - SPIS - BWNS

Reviewed by: H.W. Stoppelman Date: 2-24-92
H.W. Stoppelman - UT Level III - SPIS - BWNS

Approved by: D.B. Fairbrother Date: 2-24-92
D.B. Fairbrother - Mgr. NDE Services - SPIS - BWNS

B&W NUCLEAR SERVICE COMPANY
3315 Old Forest Road
Lynchburg, Virginia 24506

3.0 EXAMINATION SUMMARY

During January and February 1992 the B&W Nuclear Service Company performed the second ten-year interval examination of the Oconee 2 reactor vessel. The examination also included the adjacent piping welds terminating at the vessel. The examination was unique in that the examination exceeded the ASME Code requirements for scanning sensitivity and recording levels.

These enhancements were used to establish the condition of the vessel weldments to the extent that state-of-the-art ultrasonic examination technology can provide and where directed specifically at detecting the presence of planar reflectors. The results of the examination indicate that no planar flaws were detected. Several low amplitude volumetric reflectors were detected and are all dimensioned less than the maximum allowable flaw sizes permitted by ASME Section XI IWB-3500 acceptance standards.

The results of this examination were also compared to the last ten-year vessel examination. The results of this comparison is contained in Attachment #4, Page 3-50.

In addition to the standard ASME Section XI examination volumes for ultrasonic examination, the piping welds were also examined for flaws at the O.D. surface. This was done using specially qualified ultrasonic examination techniques in lieu of a surface examination at the O.D.

3.0 EXAMINATION SUMMARY (CONT'D)

Attachment #1 of this section is a summary table identifying the results of the examinations performed. This table defines, by Duke Power assigned Item Number and Weld Number, the date and times the examinations were completed, whether or not the examination revealed a recordable indication, if the examination was limited and if the indications recorded were geometric. Also contained in this section is Attachment #2 which is a reactor vessel drawing which illustrates the location of the welds examined. Attachment #3 are a series of summary sheets which identify the status of each Item Number.

Attachment #4 includes a comparison of the indications recorded during the first ten-year vessel examination in 1982 and the results of the second ten-year examination performed in 1992.

EXAMINATION SUMMARY TABLE
OCONEE UNIT 2

ITEM NUMBER (FIGURE NUMBER)	WELD ID NUMBER	INSP DATE(1)	INSP TIME(1)	INSP STATUS	INSP LIMITED	GEO. REF.
B01.011.001	2RPV-WR1A	1-24-92	0915	REC	-	Y
B01.011.002	2RPV-WR1	1-24-92	1655	REC	-	Y
B01.011.003	2RPV-WR18	2-1-92	0319	REC	-	Y
B01.021.002	2RPV-WR34	2-3-92	1642	REC	L	Y
B01.030.001	2RPV-WR19	2-1-92	0300	REC	L	Y
B03.090.001	2RPV-WR13	1-28-92	0106	REC	L	Y
B03.090.001A	2RPV-WR13	1-27-92	2136	REC	L	Y
B03.090.002	2RPV-WR13A	2-4-92	0059	REC	L	N
B03.090.002A	2RPV-WR13A	2-3-92	2240	REC	L	Y
B03.090.003	2RPV-WR12	1-29-92	0445	REC	L	Y
B03.090.003A	2RPV-WR12	1-30-92	1810	REC	L	Y
B03.090.004	2RPV-WR12A	1-28-92	0922	REC	L	Y
B03.090.004A	2RPV-WR12A	1-31-92	1314	REC	L	Y
B03.090.005	2RPV-WR12B	1-26-92	0150	CLR	L	N
B03.090.005A	2RPV-WR12B	1-31-92	1314	REC	L	Y
B03.090.006	2RPV-WR12C	1-26-92	1135	CLR	L	N
B03.090.006A	2RPV-WR12C	1-26-92	0458	REC	L	Y
B03.090.007	2RPV-WR54	1-26-92	1726	REC	L	Y
B03.090.007A	Exam Not Performed due to Flow Restrictor (2)					
B03.090.008	2RPV-WR54A	1-31-92	0903	REC	L	Y
B03.090.008A	Exam Not Performed due to Flow Restrictor (3)					
B03.100.001	2RPV-WR13	1-27-92	2136	REC	L	Y
B03.100.002	2RPV-WR13A	2-3-92	2240	REC	L	Y
B03.100.003	2RPV-WR12	2-3-92	2240	REC	L	Y
B03.100.004	2RPV-WR12A	1-28-92	1330	REC	L	Y
B03.100.005	2RPV-WR12B	1-25-92	2145	REC	L	Y
B03.100.006	2RPV-WR12C	1-26-92	0630	REC	L	Y
B03.100.007	Exam Not Performed due to Flow Restrictor (2)					
B03.100.008	Exam Not Performed due to Flow Restrictor (3)					
B05.010.001A	2RPV-WR53	2-1-92	2107	REC	-	Y
B05.010.001B	2RPV-WR53	2-1-92	2107	CLR	-	N
B05.010.002A	2RPV-WR53A	2-2-92	0247	CLR	-	Y
B05.010.002B	2RPV-WR53A	2-2-92	0247	CLR	-	N
B09.011.014	2PDA1-8	2-1-92	0644	REC	-	Y
B09.011.028	2PDA2-8	2-3-92	2013	REC	-	N
B09.011.042	2PDB1-8	2-1-92	0807	REC	-	Y
B09.011.056	2PDB2-8	1-31-92	1203	REC	-	Y
B09.011.057	2PHA-1	1-25-92	0107	REC	-	Y
B09.011.069	2PHB-1	1-27-92	1348	REC	-	Y
B09.011.151	2-53A-8.2-63	2-1-92	2249	REC	-	Y
B09.011.160	2-53A-8.3-64	2-2-92	0226	REC	-	Y

Legend: CLR = Clear , REC = Recordable

- = Not Limited, L = Limited

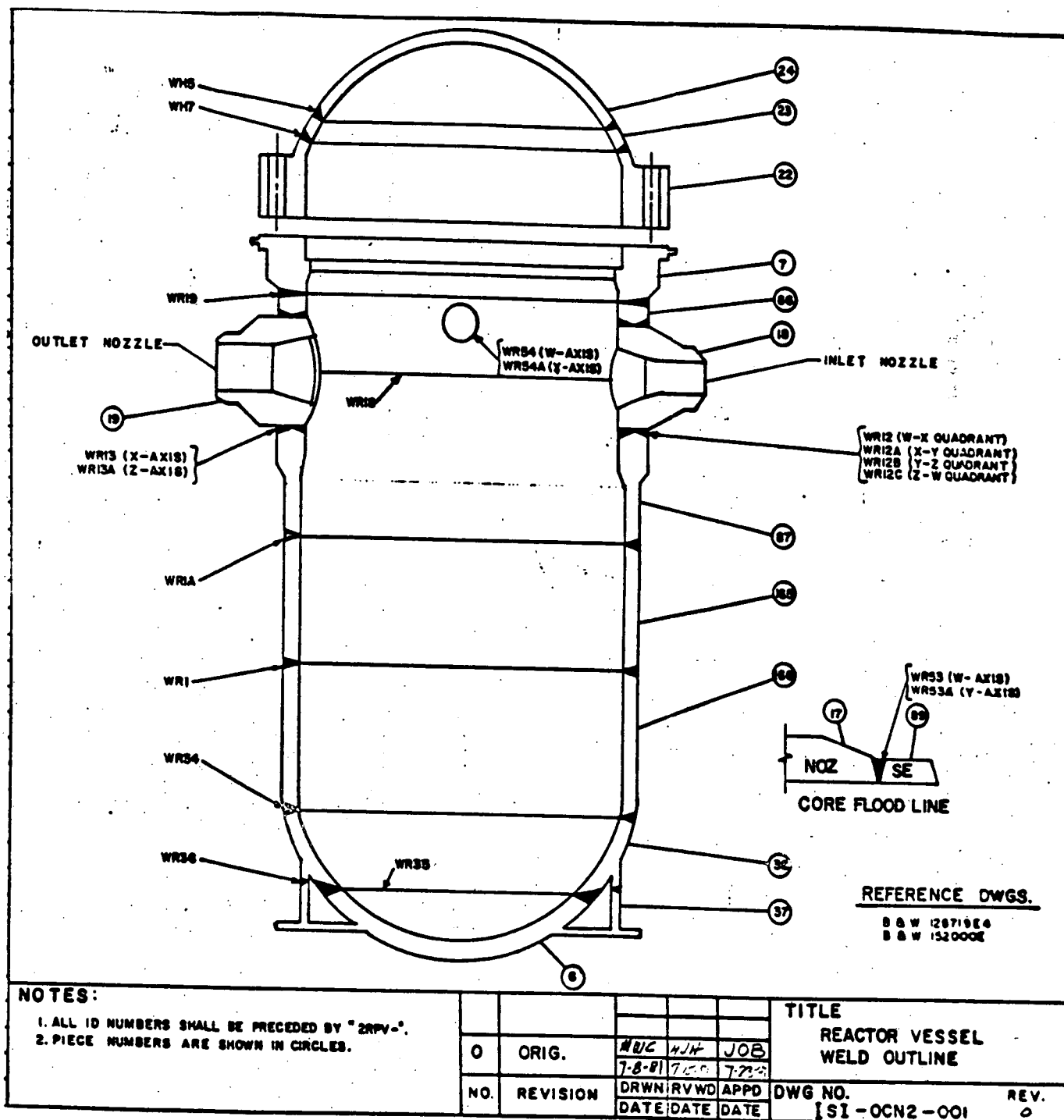
N = No Geometric Indications, Y = Geometric Indications

(1) Indicates Date and Time when examinations were completed.

(2) Exam satisfied by B03.090.007

(3) Exam satisfied by B03.090.008

3.0 EXAMINATION SUMMARY (CONT'D)

DUKE POWER COMPANY OCONEE UNIT 2
REACTOR VESSEL

3.0 EXAMINATION SUMMARY (CONT'D) EXAMINATION SUMMARY TABLES

Contained in this attachment are examination summary sheets which identify the status of each Figure Number. These sheets identify the following:

1. Figure Number: This number corresponds to the Duke Power Company Item Number identified in the DPC Inspection Plan.
2. Weld Number: This is the unique number assigned to a specific weld in the reactor vessel or associated piping welds.
3. Description: Narrative description of the weld.
4. Evaluation Report Number: If the weld contained a recordable indication, the Evaluation Report (ER) number generated to disposition the indication(s) is listed (e.g., ONS92-001). If the weld did not contain recordable indications, an N/A is entered in this location.
5. SIN NUMBER: The Scan Identification Number (SIN) used for examining the weld and the applicable segments and subscans comprising that SIN. For example, Figure Number B03.090.001 (Outlet Nozzle to Shell Weld from Vessel ID) was examined with SINS B11.1.1, B11.1.2, and B11.2.1. SIN B11.1.1 is comprised of segments A-3 and B-3. SIN B11.1.2 is comprised of segments A-3 and B-3 and B11.2.1 is comprised of segments A-4 through D-4.
6. Angles: The transducer angle beams used to perform the scans of each particular SIN are listed.
7. Cal Block: The calibration block used to calibrate the ultrasonic instruments. Calibration block 50304 was utilized to calibrate for examination of the near surface using the 70 degree transducers.
8. Disk: The disk number where the data is stored.
9. Analyst: The initials of the individual who analyzed the data. The initials and corresponding names are as follows:

DLR - D. Robinson	WM - W. McNeal	GAC - G.A. Cleveland
CEM - C.E. Martin, Jr.	WJP - W.J. Persinger	MWK - M.W. Key
MGH - M.G. Hacker		
10. Recordable Indication: If the data analysis determined that recordable indications existed according to the procedure ISI-138 criteria, the recordable indications column is marked in the YES column. If not, then the NO column is marked. Recordable indications may include either geometric or flaw indications.
11. The results of the Evaluation Report is listed. The description of this result is contained with the Evaluation Report included in Section 5.

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B01.011.001

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR1A

Description: Lower Shell Nozzle Belt to Intermediate Shell Weld.
(MK-87 to MK-165)

Evaluation Report No.: ONS92-002

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B4.1.1:A-5 Axial Scan	0, 45 60, 70	40393 50304	14	DLR WM	X		Acceptable
B4.1.1:B-5 Axial Scan	0, 45 60, 70	40393 50304	14	WM	X		Acceptable
B4.2.1:A-6 Circ Scan	45, 60 70	40393 50304	3	GAC		X	
B4.2.1:B-6 Circ Scan	45, 60 70	40393 50304	6	CEM	X		Acceptable
B4.2.1:B-6a Circ Scan	45, 60 70	40393 50304	6	GAC		X	

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B01.011.002

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR1

Description: Intermediate Shell to Lower Shell Weld.
(MK-165 to MK-166)

Evaluation Report No.: ONS92-001

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B5.1.1:A-5 Axial Scan	0, 45 60, 70	40393 50304	3	WM	X		Acceptable
B5.1.1:A-5a Axial Scan	0, 45 60, 70	40393 50304	3	GAC		X	
B5.1.1:A-5b Axial Scan	0, 45 60, 70	40393 50304	3 14	DLR WM		X	
B5.1.1:A-5c Axial Scan	0, 45 60, 70	40393 50304	3	DLR		X	
B5.1.1:B-5 Axial Scan	0, 45 60, 70	40393 50304	6	WM		X	
B5.2.1:A-6 Circ Scan	45, 60 70	40393 50304	3	WM		X	
B5.2.1:B-6 Circ Scan	45, 60 70	40393 50304	6	GAC		X	
B5.2.1:B-6a Circ Scan	45, 60 70	40393 50304	6	WJP	X		Acceptable

DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE

Figure No.: B01.011.003

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR18

Description: Upper Nozzle Belt to Lower Nozzle Belt Weld.
(MK-86 to MK-87)

Evaluation Report No.: ONS92-015

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B2.1.1:A-5 Axial	0, 45 60, 70	40390 50304	12	GAC		X	
B2.1.1:B-5 Axial	0, 45 60, 70	40390 50304	16	CEM	X		Acceptable
B2.1.1:C-5 Axial	0, 45 60, 70	40390 50304	16	CEM		X	
B2.1.1:D-5 Axial	0, 45 60, 70	40390 50304	20	DLR		X	
B2.1.1:E-5 Axial	0, 45 60, 70	40390 50304	22	GAC		X	
B2.1.1:F-5 Axial	0, 45 60, 70	40390 50304	14	WM		X	
B2.2.1:A-6 Circ	45, 60 70	40390 50304	12	CEM		X	
B2.2.1:B-6 Circ	45, 60 70	40390 50304	16	DLR		X	
B2.2.1:C-6 Circ	45, 60 70	40390 50304	16	CEM		X	
B2.2.1:D-6 Circ	45, 60 70	40390 50304	20	DLR		X	
B2.2.1:E-6 Circ	45, 60 70	40390 50304	22	CEM		X	
B2.2.1:F-6 Circ	45, 60 70	40390 50304	22	GAC		X	

DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE ATTACHMENT #3 (CONT'D)

Figure No.: B01.021.002

Page 1 of 4

Weld No. : 2RPV-WR34

Description: Lower Shell to Transition Piece Weld.
(MK-166 to MK-36)

Evaluation Report No.: ONS92-016

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B6.3.1:A-2 Axial	0, 45 60, 70	40393 50304	22	WM		X	
B6.3.1:A-2rh Axial	70	50304	24	WJP		X	
B6.3.1:B-2 Axial	0, 45 60, 70	40393 50304	22	WM	X		Acceptable
B6.3.1:B-2rh Axial	70	50304	24	WJP		X	
B6.3.1:C-2 Axial	0, 45 60, 70	40393 50304	22	WM	X		Acceptable
B6.3.1:C-2rh Axial	70	50304	24	WJP		X	
B6.3.1:D-2 Axial	0, 45 60, 70	40393 50304	22	WM		X	
B6.3.1:D-2rh Axial	70	50304	24	CEM		X	
B6.3.1:E-2 Axial	0, 45 60, 70	40393 50304	22	WM		X	
B6.3.1:E-2rh Axial	70	50304	24	GAC		X	
B6.3.1:F-2 Axial	0, 45 60, 70	40393 50304	22	WJP	X		Acceptable
B6.3.1:F-2rh Axial	70	50304	24	CEM		X	
B6.3.1:G-2 Axial	0, 45 60, 70	40393 50304	22	CEM		X	

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

ATTACHMENT #3 (CONT'D)

Figure No.: B01.021.002

Page 2 of 4

Weld No. : 2RPV-WR34

Description: Lower Shell to Transition Piece Weld.
(MK-166 to MK-36)

Evaluation Report No.: ONS92-016

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B6.3.1:G-2rh Axial	70	50304	24	WJP		X	
B6.3.1:H-2 Axial	0, 45 60, 70	40393 50304	24	GAC		X	
B6.3.1:H-2rh Axial	70	50304	24	CEM		X	
B6.3.1:I-2 Axial	0, 45 60, 70	40393 50304	24	GAC		X	
B6.3.1:I-2rh Axial	70	50304	24	GAC		X	
B6.3.1:J-2 Axial	0, 45 60, 70	40393 50304	24	GAC		X	
B6.3.1:J-2rh Axial	70	50304	24	CEM		X	
B6.3.1:K-2 Axial	0, 45 60, 70	40393 50304	24	GAC		X	
B6.3.1:K-2rh Axial	70	50304	24	GAC		X	
B6.3.1:L-2 Axial	0, 45 60, 70	40393 50304	24	GAC		X	
B6.3.1:L-2rh Axial	70	50304	24	CEM		X	
B6.2.1:A-4 Circ	45, 60 70	40393 50304	22	WM		X	
B6.2.1:A-4r Circ	45, 60 70	40393 50304	22	GAC		X	

DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE

ATTACHMENT #3 (CONT'D)

Figure No.: B01.021.002

Page 3 of 4

Weld No. : 2RPV-WR34

Description: Lower Shell to Transition Piece Weld.
(MK-166 to MK-36)

Evaluation Report No.: ONS92-016

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B6.2.1:B-4 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:C-4 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:D-4 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:E-4 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:F-4 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:G-4 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:H-4 Circ	45, 60 70	40393 50304	24	WJP		X	
B6.2.1:I-4 Circ	45, 60 70	40393 50304	24	CEM		X	
B6.2.1:J-4 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:K-4 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:L-4 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:A-3 Circ	45, 60 70	40393 50304	22 22	WM GAC		X	
B6.2.1:B-3 Circ	45, 60 70	40393 50304	22	GAC		X	

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

ATTACHMENT #3 (CONT'D)

Figure No.: B01.021.002

Page 4 of 4

Weld No. : 2RPV-WR34

Description: Lower Shell to Transition Piece Weld.
(MK-166 to MK-36)

Evaluation Report No.: ONS92-016

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B6.2.1:C-3 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:D-3 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:E-3 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:F-3 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:G-3 Circ	45, 60 70	40393 50304	22	GAC		X	
B6.2.1:H-3 Circ	45, 60 70	40393 50304	24	CEM		X	
B6.2.1:I-3 Circ	45, 60 70	40393 50304	24	CEM		X	
B6.2.1:J-3 Circ	45, 60 70	40393 50304	24	GAC		X	
B6.2.1:K-3 Circ	45, 60 70	40393 50304	24	GAC		X	
B6.2.1:L-3 Circ	45, 60 70	40393 50304	22	GAC		X	

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

ATTACHMENT #3 (CONT'D)

Figure No.: B01.030.001

Page 1 of 3

Weld No. : 2RPV-WR19

Description: Upper Nozzle Belt to Flange Weld.
(MK-7 to MK-86)

Evaluation Report No.: ONS92-010

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B1.1.1:A-1 Ax Below Tap	0, 45 60	40390	16	CEM		X	
B1.1.1:B-1 Ax Below Tap	0, 45 60	40390	12	DLR	X		Acceptable
B1.2.1:A-2 Ax Below Tap	0, 45 60, 70	40390 50304	19 20	WM CEM	X		Acceptable
B1.2.1:A-2a Ax Below Tap	0, 45 60, 70	40390 50304	20	GAC		X	
B1.2.1:A-2b Ax Below Tap	0, 45 60, 70	40390 50304	20	WM		X	
B1.2.1:B-2 Ax Below Tap	0, 45 60, 70	40390 50304	6/20 21	WM/WM GAC	X		Acceptable
B1.2.1:B-2a Ax Below Tap	0, 45 60, 70	40390 50304	20	WM		X	
B1.2.1:C-2 Ax Below Tap	0, 45 60, 70	40390 50304	19	WM WJP	X		Acceptable
B1.2.1:E-2 Ax Below Tap	0, 45 60, 70	40390 50304	19	DLR	X		Acceptable
B1.2.1:G-2 Ax Below Tap	0, 45 60, 70	40390 50304	19	GAC		X	
B1.2.1:I-2 Ax Below Tap	0, 45 60, 70	40390 50304	19	DLR	X		Acceptable
B1.2.1:K-2 Ax Below Tap	0, 45 60, 70	40390 50304	19	DLR	X		Acceptable
B1.3.1:A-4 Circ Below	45, 70	40390 50304	16 19	GAC GAC		X	

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

ATTACHMENT #3 (CONT'D)

Figure No.: B01.030.001

Page 2 of 3

Weld No. : 2RPV-WR19

Description: Upper Nozzle Belt to Flange Weld.
(MK-7 to MK-86)

Evaluation Report No.: ONS92-010

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B1.3.1:B-4 Circ Below	45, 70	40390 50304	20 22	WM GAC		X	
B1.3.1:B-4a Circ Below	45, 70	40390 50304	22	GAC		X	
B1.3.1:C-4 Circ Below	45, 70	40390 50304	19	DLR		X	
B1.3.1:E-4 Circ Below	45, 70	40390 50304	19	DLR		X	
B1.3.1:G-4 Circ Below	45, 70	40390 50304	19	DLR		X	
B1.3.1:K-4 Circ Below	45, 70	40390 50304	19	DLR		X	
B1.3.1:A-6 Circ Below	60	40390	19	DLR		X	
B1.3.1:B-6 Circ Below	60	40390	20	WM		X	
B1.3.1:B-6a Circ Below	60	40390	22	GAC		X	
B1.3.1:B-6b Circ Below	60	40390	22	CEM		X	
B1.3.1:C-6 Circ Below	60	40390	19	DLR		X	
B1.3.1:E-6 Circ Below	60	40390	19	DLR		X	
B1.3.1:G-6 Circ Below	60	40390	19	GAC		X	

ATTACHMENT #3 (CONT'D)

Page 3 of 3

Evaluation Report No.: ONS92-010

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

ATTACHMENT #3 (CONT'D)

Figure No.: B03.090.001

Weld No. : 2RPV-WR13

Description: Outlet Nozzle (X-Axis) to Shell
Weld from Vessel ID
(MK-19 to MK-86 & 87)

Evaluation Report No.: ONS92-017

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B11.1.1:A-3 Shell CCW	0, 45 60, 70	40390 50304	16	WJP		X	
B11.1.2:A-3 Shell CCW	0, 45 60, 70	40390 50304	16	WM		X	
B11.1.2:B-3 Shell CCW	0, 45 60, 70	40390 50304	16	WM		X	
B11.1.1:B-3 Shell CCW	0, 45 60, 70	40390 50304	16	WM		X	
B11.2.1:A-4 Shell CW	45, 70	40390 50304	16	WM		X	
B11.2.1:B-4 Shell CW	45, 70	40390 50304	16	WJP		X	
B11.2.1:C-4 Shell CW	45, 70	40390 50304	16	WJP		X	
B11.2.1:D-4 Shell CW	45, 70	40390 50304	16	WJP	X		Acceptable

ATTACHMENT #3 (CONT'D)

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

ATTACHMENT #3 (CONT'D)

Figure No.: B03.090.002

Weld No. : 2RPV-WR13A

Description: Outlet Nozzle (Z-Axis) to Shell
Weld from Vessel ID
(MK-19 to MK-86 & 87)

Evaluation Report No.: ONS92-004

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B12.1.1:A-3 Shell CCW	0, 45 60, 70	40390 50304	6	MWK		X	
B12.1.2:A-3 Shell CCW	0, 45 60, 70	40390 50304	6	MWK DLR		X	
B12.1.2:B-3 Shell CCW	0, 45 60, 70	40390 50304	6	GAC		X	
B12.1.1:B-3 Shell CCW	0, 45 60, 70	40390 50304	6	MWK		X	
B12.2.1:A-4 Shell CW	45, 70	40390 50304	6	MWK	X		Acceptable
B12.2.1:B-4 Shell CW	45, 70	40390 50304	6	MWK		X	
B12.2.1:C-4 Shell CW	45, 70	40390 50304	6	MWK		X	
B12.2.1:D-4 Shell CW	45, 70	40390 50304	6	MWK		X	
*B12.3.1:A-2s Nozzle Taper	0, 15 45	40390 50304	26	WJP MGH		X	
*B12.0.0:A-2s1 Vessel Shell	45, 60	40390 50304	26	WJP MGH		X	
*B12.0.0:A-2s2 Vessel Shell	45, 60	40390 50304	26	MGH		X	

* Sizing scan, using alternate head configuration, of the indication in the Z-Axis Outlet Nozzle to Shell Weld. (Also see figure numbers B03.090.002A and B03.100.002)

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B03.090.002A

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR13A

Description: Outlet Nozzle (Z-Axis) to Shell
Weld from the Nozzle Bore and Nozzle Taper.
(MK-19 to MK-86 & 87)

Evaluation Report No.: ONS92-003

[illegible]

* Sizing scan, using alternate head configuration, of the indication in the Z-Axis Outlet Nozzle to Shell Weld. (Also see Figure Numbers B03.090.002 and B01.100.002)

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B03.090.003

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR12

Description: Inlet Nozzle (W-X Axis) to Shell
Weld from Vessel ID
(MK-18 to MK-86 & 87)

Evaluation Report No.: ONS92-018

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B13.1.1:A-3 Shell CCW	0, 45 60, 70	40390 50304	19	GAC		X	
B13.1.1:B-3 Shell CCW	0, 45 60, 70	40390 50304	19	GAC		X	
B13.1.1:C-3 Shell CCW	0, 45 60, 70	40390 50304	19	CEM	X		Acceptable
B13.1.1:D-3 Shell CCW	0, 45 60, 70	40390 50304	19	CEM		X	
B13.2.1:A-4 Shell CW	60	40390	20	DLR		X	
B13.2.1:B-4 Shell CW	60	40390	20	DLR		X	
B13.2.1:C-4 Shell CW	60	40390	20	DLR		X	
B13.2.1:D-4 Shell CW	60	40390	20	DLR		X	

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

ATTACHMENT #3 (CONT'D)

Figure No.: B03.090.003A

Weld No. : 2RPV-WR12

Description: Inlet Nozzle (W-X Axis) to Shell
Weld from the Nozzle Bore and Nozzle Taper.
(MK-18 to MK-86 & 87)

Evaluation Report No.: ONS92-011

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B13.3.1:A-2 Axial Taper	15, 45 70	50304	20	DLR	X		Acceptable
B13.3.1:A-2a Axial Taper	15, 45 70	50304	20	DLR	X		Acceptable
B13.3.1:A-2b Axial Taper	15, 45 70	50304	20	CEM	X		Acceptable
B13.5.1:A-2 Axial Bore	0, 45	50304	20	CEM		X	
B13.5.1:A-2a Axial Bore	0, 45	50304	20	WJP		X	
B13.5.1:A-2b Axial Bore	0, 45	50304	20	WM		X	

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B03.090.004

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR12A

Description: Inlet Nozzle (X-Y Axis) to Shell
Weld from Vessel ID
(MK-18 to MK-86 & 87)

Evaluation Report No.: ONS92-006

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B14.1.1:A-3 Shell CCW	0, 45 60, 70	40390 50304	19	WM		X	
B14.1.1:B-3 Shell CCW	0, 45 60, 70	40390 50304	19	WM		X	
B14.1.1:C-3 Shell CCW	0, 45 60, 70	40390 50304	19	WM		X	
B14.1.1:D-3 Shell CCW	0, 45 60, 70	40390 50304	19	WM		X	
B14.2.1:A-4 Shell CW	60	40390	19	CEM		X	
B14.2.1:B-4 Shell CW	60	40390	19	CEM		X	
B14.2.1:C-4 Shell CW	60	40390	16	WJP	X		Acceptable
B14.2.1:D-4 Shell CW	60	40390	16	WJP		X	

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B03.090.004A

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR12A

Description: Inlet Nozzle (X-Y Axis) to Shell
Weld from the Nozzle Bore and Nozzle Taper.
(MK-18 to MK-86 & 87)

Evaluation Report No.: ONS92-019

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B03.090.005

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR12B

Description: Inlet Nozzle (Y-Z Axis) to Shell
Weld from Vessel ID
(MK-18 to MK-86 & 87)

Evaluation Report No.: N/A

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B15.1.1:A-3 Shell CCW	0, 45 60, 70	40390 50304	12	WM		X	
B15.1.1:B-3 Shell CCW	0, 45 60, 70	40390 50304	12	WM		X	
B15.1.1:C-3 Shell CCW	0, 45 60, 70	40390 50304	12	WM		X	
B15.1.1:D-3 Shell CCW	0, 45 60, 70	40390 50304	12	WM		X	
B15.2.1:A-4 Shell CW	60	40390	12	WJP		X	
B15.2.1:B-4 Shell CW	60	40390	12	WJP		X	
B15.2.1:C-4 Shell CW	60	40390	12	WJP		X	
B15.2.1:D-4 Shell CW	60	40390	12	WJP		X	

DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE

Figure No.: B03.090.005A

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR12B

Description: Inlet Nozzle (Y-Z Axis) to Shell
Weld from the Nozzle Bore and Nozzle Taper.
(MK-18 to MK-86 & 87)

Evaluation Report No.: ONS92-020

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B03.090.006

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR12C

Description: Inlet Nozzle (Z-W Axis) to Shell
Weld from Vessel ID
(MK-18 to MK-86 & 87)

Evaluation Report No.: N/A

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B16.1.1:A-3 Shell CCW	0, 45 60, 70	40390 50304	12	WM		X	
B16.1.1:B-3 Shell CCW	0, 45 60, 70	40390 50304	12	WM		X	
B16.1.1:C-3 Shell CCW	0, 45 60, 70	40390 50304	12 12	WM DLR		X	
B16.1.1:D-3 Shell CCW	0, 45 60, 70	40390 50304	12	WM		X	
B16.2.1:A-4 Shell CW	60	40390	12	WM		X	
B16.2.1:B-4 Shell CW	60	40390	12 14	WM DLR		X	
B16.2.1:C-4 Shell CW	60	40390	12	WM		X	
B16.2.1:D-4 Shell CW	60	40390	12	WM		X	

DUKE POWER COMPANY

OCONEE - 2

EXAMINATION SUMMARY TABLE

Figure No.: B03.090.006A

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR12C

Description: Inlet Nozzle (Z-W Axis) to Shell
Weld from the Nozzle Bore and Nozzle Taper.
(MK-18 to MK-86 & 87)

Evaluation Report No.: ONS92-012

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B03.090.007 (Page 1 of 2)

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR54

Description: Core Flood Nozzle (W-Axis) to Shell Weld From
Vessel ID
(MK-17 to MK-86)

Evaluation Report No.: ONS92-021

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B17.1.1:A-1 Axial Shell	0, 45 60, 70	40390 50304	12	DLR	X		Acceptable
B17.1.1:B-1 Axial Shell	0, 45 60, 70	40390 50304	12	DLR		X	
B17.1.1:C-1 Axial Shell	0, 45 60, 70	40390 50304	12	GAC		X	
B17.1.1:D-1 Axial Shell	0, 45 60, 70	40390 50304	12	DLR	X		Acceptable
B17.1.2:A-1 Axial Shell	0, 45 60, 70	40390 50304	12	DLR		X	
B17.1.2:B-1 Axial Shell	0, 45 60, 70	40390 50304	12	DLR		X	
B17.2.2:A-1 Axial Shell	0, 45 60, 70	40390 50304	12	DLR		X	
B17.2.2:B-1 Axial Shell	0, 45 60, 70	40390 50304	12	DLR		X	
B17.2.1:A-3 Shell CCW	45, 60 70	40390 50304	12	GAC		X	
B17.2.1:B-3 Shell CCW	45, 60 70	40390 50304	12	DLR		X	
B17.2.1:C-3 Shell CCW	45, 60 70	40390 50304	12	DLR		X	
B17.2.1:D-3 Shell CCW	45, 60 70	40390 50304	12	GAC		X	
B17.3.1:A-4 Shell CW	45, 60 70	40390 50304	12	DLR		X	

DUKE POWER COMPANY

OCONEE - 2

EXAMINATION SUMMARY TABLE

Figure No.: B03.090.007 (Page 2 of 2)

Weld No. : 2RPV-WR54

Description: Core Flood Nozzle (W-Axis) to Shell Weld From
Vessel ID.
(MK-17 to MK-86)

Evaluation Report No.: ONS92-021

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

ATTACHMENT #3 (CONT'D)

Figure No.: B03.090.008 (Page 1 of 2)

Weld No. : 2RPV-WR54A

Description: Core Flood Nozzle (Y-Axis) to Shell Weld From
Vessel ID.
(MK-17 to MK-86)

Evaluation Report No.: ONS92-009

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B18.1.1:A-1 Axial Shell	0, 45 60, 70	40390 50304	20	DLR		X	
B18.1.1:B-1 Axial Shell	0, 45 60, 70	40390 50304	20	GAC		X	
B18.1.1:C-1 Axial Shell	0, 45 60, 70	40390 50304	20	GAC		X	
B18.1.1:D-1 Axial Shell	0, 45 60, 70	40390 50304	20	DLR	X		Acceptable
B18.1.2:A-1r Axial Shell	0, 45 60, 70	40390 50304	20	DLR		X	
B18.1.2:B-1 Axial Shell	0, 45 60, 70	40390 50304	16	DLR	X		Acceptable
B18.2.2:A-1 Axial Shell	0, 45 60, 70	40390 50304	16	GAC		X	
B18.2.2:B-1 Axial Shell	0, 45 60, 70	40390 50304	16	DLR		X	
B18.2.1:A-3 Shell CCW	45, 60 70	40390 50304	16	DLR		X	
B18.2.1:B-3 Shell CCW	45, 60 70	40390 50304	16	DLR	X		Acceptable
B18.2.1:C-3 Shell CCW	45, 60 70	40390 50304	16	DLR		X	
B18.2.1:D-3 Shell CCW	45, 60 70	40390 50304	16	DLR		X	
B18.3.1:A-4 Shell CW	45, 60 70	40390 50304	16	CEM		X	

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR54A

Evaluation Report No.: ONS92-009

3-31

ATTACHMENT #3 (CONT'D)

Description: Circ and Axial scans of the Inner Radius
on the X-Axis Outlet Nozzle.
(MK-19 to MK-86 & 87)

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B03.100.002

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR13A (Inner Radius)

Description: Circ and Axial scans of the Inner Radius
on the Z-Axis Outlet Nozzle.
(MK-19 to MK-86 & 87)

Evaluation Report No.: ONS92-029

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B12.3.1:A-2 Axial	70	50304	6	DLR CEM	X		Acceptable
B12.3.1:A-3 Circ	70	50304	6	MWK DLR		X	
*B12.3.1:A-2 Nozzle Taper	0, 15 45	50304	22	MGH		X	
*B12.0.0:A-1 Vessel Shell	45, 60	50304	22	MGH		X	

* Sizing scan, using alternate head configuration, of the indication in the Z-Axis Outlet Nozzle to Shell Weld. (Also see Figure Numbers B03.090.002 and B03.090.002A)

DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE

Figure No.: B03.100.003

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR12 (Inner Radius)

Description: Circ and Axial scans of the Inner Radius
on the W-X Axis Inlet Nozzle
(MK-18 to MK-86 & 87)

Evaluation Report No.: ONS92-030

[illegible]

DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE

Figure No.: B03.100.004

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR12A (Inner Radius)

Description: Circ and Axial scans of the Inner Radius on the X-Y Axis Inlet Nozzle.
(MK-18 to MK-86 & 87)

Evaluation Report No.: ONS92-031

[illegible]

DUKE POWER COMPANY

OCONEE - 2

EXAMINATION SUMMARY TABLE

Figure No.: B03.100.005

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR12B (Inner Radius)

Description: Circ and Axial scans of the Inner Radius
on the Y-Z Axis Inlet Nozzle.
(MK-18 to MK-86 & 87)

Evaluation Report No.: ONS92-032

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B03.100.006

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR12C (Inner Radius)

Description: Circ and Axial scans of the Inner Radius
on the Z-W Axis Inlet Nozzle.
(MK-18 to MK-86 & 87)

Evaluation Report No.: ONS92-033

[illegible]

EXAMINATION SUMMARY TABLE

Figure No.: B05.010.001A

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR53

Description: Core Flood Nozzle (W-Axis) to Safe-End Weld
From Nozzle Side.
(MK-17 to MK-89)

Evaluation Report No.: ONS92-022

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B05.010.001B

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR53

Description: Core Flood Nozzle (W-Axis) to Safe-End Weld
From Safe-End Side.
(MK-17 to MK-89)

Evaluation Report No.: N/A

[illegible]

DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE

Figure No.: B05.010.002A

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR53A

Description: Core Flood Nozzle (Y-Axis) to Safe-End Weld
From Nozzle Side.
(MK-17 to MK-89)

Evaluation Report No.: ONS92-013

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B05.010.002B

ATTACHMENT #3 (CONT'D)

Weld No. : 2RPV-WR53A

Description: Core Flood Nozzle (Y-Axis) to Safe-End Weld
From Safe-End Side.
(MK-17 to MK-89)

Evaluation Report No.: N/A

[illegible]

DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE

Figure No.: B09.011.014

ATTACHMENT #3 (CONT'D)

Weld No. : 2PDA1-8

Description: Inlet Nozzle (Z-W Axis) to Pipe Weld.
(MK-18 to MK-38)

Evaluation Report No.: ONS92-023

[illegible]

EXAMINATION SUMMARY TABLE

ATTACHMENT #3 (CONT'D)

Description: Inlet Nozzle (Y-Z Axis) to Pipe Weld.
(MK-18 to MK-38)

Evaluation Report No.: ONS92-014

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B09.011.042

ATTACHMENT #3 (CONT'D)

Weld No. : 2PDB1-8

Description: Inlet Nozzle (W-X Axis) to Pipe Weld.
(MK-18 to MK-38)

Evaluation Report No.: ONS92-024

SIN NUMBER	ANGLES	CAL BLOCK	DISK	ANALYST	RECORDABLE INDICATION		RESULTS OF INDICATION
					YES	NO	
B13.6.1:A-2a Axial Pipe	45, 70	40350 50304	20	WJP	X		Acceptable
B13.6.1:A-2r Axial Pipe	45, 70	40350 50304	22	GAC		X	
B13.6.1:A-2ra Axial Pipe	45, 70	40350 50304	22	GAC		X	
B13.7.1:A-4a Circ Pipe	45, 70	40350 50304	20	WM		X	
B13.7.1:A-4rs Circ Pipe	45, 70	40350 50304	22	GAC		X	

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B09.011.056

ATTACHMENT #3 (CONT'D)

Weld No. : 2PDB2-8

Description: Inlet Nozzle (X-Y Axis) to Pipe Weld.
(MK-18 to MK-38)

Evaluation Report No.: ONS92-025

[illegible]

DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE

Figure No.: B09.011.057

ATTACHMENT #3 (CONT'D)

Weld No. : 2PHA-1

Description: Outlet Nozzle (X-Axis) to Pipe Weld.
(MK-19 to MK-32)

Evaluation Report No.: ONS92-005

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B09.011.069

ATTACHMENT #3 (CONT'D)

Weld No. : 2PHB-1

Description: Outlet Nozzle (Z-Axis) to Pipe Weld.
(MK-19 to MK-32)

Evaluation Report No.: ONS92-007

[illegible]

**DUKE POWER COMPANY
OCONEE - 2
EXAMINATION SUMMARY TABLE**

Figure No.: B09.011.151

ATTACHMENT #3 (CONT'D)

Weld No. : 2-53A-8.2-63

Description: Core Flood Nozzle (W-Axis) Safe-End
to Pipe Weld From Nozzle Side.
(MK-89 Safe-End to Pipe)

Evaluation Report No.: ONS92-026

[illegible]

DUKE POWER COMPANY

OCONEE - 2

EXAMINATION SUMMARY TABLE

Figure No.: B09.011.160

ATTACHMENT #3 (CONT'D)

Weld No. : 2-53A-8.3-64

Description: Core Flood Nozzle (Y-Axis) Safe-End
to Pipe Weld From Nozzle Side.
(MK-89 Safe-End to Pipe)

Evaluation Report No.: ONS92-027

[illegible]

3.0 EXAMINATION SUMMARY (CONT'D)

DUKE POWER COMPANY OCONEE UNIT 2

COMPARISON OF PREVIOUS ANGLE BEAM INDICATIONS

1982 OUTAGE					1992 OUTAGE				
WELD NO.	IND. NO.	%AMP	DEPTH	ANGLE	IND. NO.	%AMP	DEPTH	ANGLE	EVALUATION
2RPV- WR19	600	55%	2.28"	70°	600			70°	Not Detected
2RPV- WR34	200	56%	2.9"	45°	200	9%	3.2"	45°	Not Recordable
2RPV- WR34	400	316%	3.75"	60°	400			60°	Not Detected
2RPV- WR34	401	56%	1.8"	60°	401	18%	1.8"	60°	Not Recordable

DUKE POWER COMPANY
Request For Relief From
Inservice Inspection Requirement

Station: Oconee

Unit: 1, 2, and 3

Reference Code: ASME Boiler and Pressure Vessel Code, Section XI 1980 Edition
through Winter 1980 Addenda

I. Component for which exemption is requested:

a. Name and Identification Number:

Core Flood Nozzle-to-Safe End and Safe End-to-Pipe Welds Drawing OM-201-92

Isometrics: System 53A, Iso 1, Part 2 (Unit 1) Iso 15, Part 1 (Unit 3)
Iso 2, Part 3 (Unit 1) Iso 16 (Unit 3)
Sheet 8, Part 2 (Unit 2)
Sheet 8, Part 3 (Unit 2)

b. Function:

Provides reactor vessel core flooding capability

c. ASME Section III Code Class:

Class 1

d. Valve Category:

N/A

II. Reference Code Requirement that has been determined to be impractical:

Table IWB-2500-1; Category B-F; Item B5.10
Surface examination

III. Basis for Requesting Relief:

Relief requested from surface examination only.

Approximately 40 man-hours would be required to prepare each of the two core flood nozzle safe ends for inspection. The preparation would involve removal of the refueling canal seal plate, shielding bricks, shielding supports in the nozzle

DUKE POWER COMPANY

Request For Relief From
Inservice Inspection Requirement

III. Basis for Requesting Relief (cont.)

area, and insulation. The radiation levels in this area are expected to be 0.5-1 R/hr. An alternative approach is to enter from the bottom of the vessel and build a scaffold approximately 30 feet high to reach the nozzles. This approach would require approximately 80 man-hours, 40 in the 0.5-1 R/hr. area and the other 40 in the 1-2 R/hr. radiation present at the bottom of the reactor vessel, for a total exposure of 60-120 man-Rem. Shielding is considered impractical in this area. Any remote inspection would require practically the same preparation work.

IV. Alternate Examination:

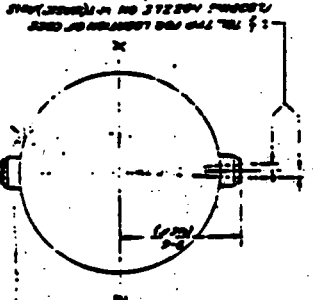
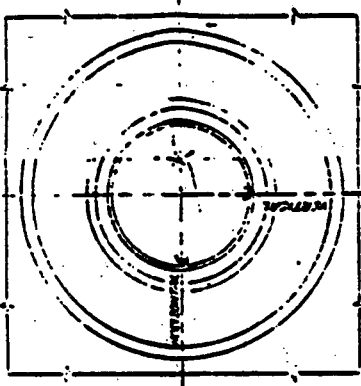
Welds will be inspected by UT from the inside surface. This will provide adequate assurance of weld integrity at the OD surface.

V. Implementation Schedule:

All core flood nozzle-to-safe end and safe end-to-pipe welds will be inspected at or near the end of the second ten-year interval.

1	1. LIST OF SHEET 34533C
2	2. FOR DESIGN NOTES SEE 34533C
3	3. ALL DIMENSIONS AND TOLERANCES ARE IN INCHES UNLESS OTHERWISE SPECIFIED
4	4. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
5	5. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
6	6. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
7	7. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
8	8. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
9	9. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
10	10. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED

- NOTES**
1. LIST OF SHEET 34533C
 2. FOR DESIGN NOTES SEE 34533C
 3. ALL DIMENSIONS AND TOLERANCES ARE IN INCHES UNLESS OTHERWISE SPECIFIED
 4. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
 5. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
 6. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
 7. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
 8. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
 9. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
 10. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED



KEY PLAN NOZZLE INSTALLATION
NO SHEET SHELL MUST SET ONE
OUTSIDE

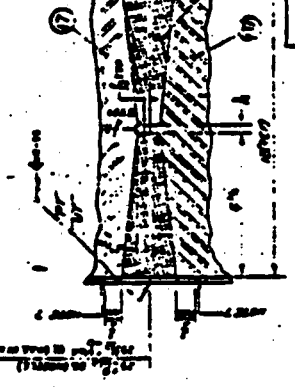
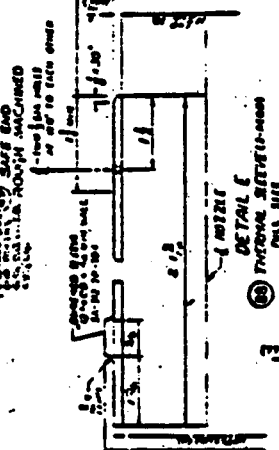
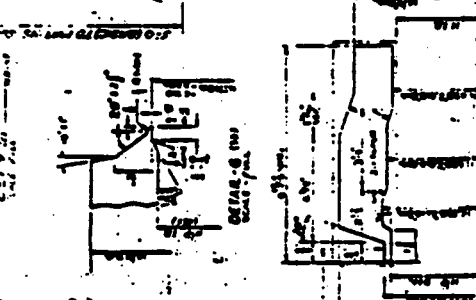


00000000

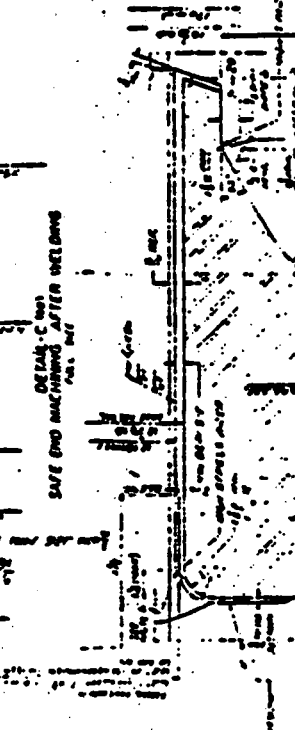
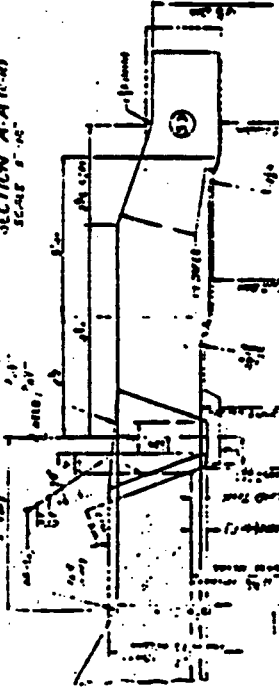
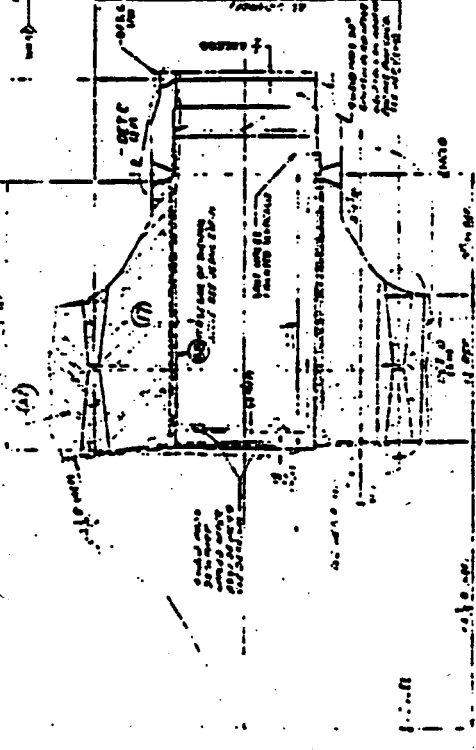
1	1. LIST OF SHEET 34533C
2	2. FOR DESIGN NOTES SEE 34533C
3	3. ALL DIMENSIONS AND TOLERANCES ARE IN INCHES UNLESS OTHERWISE SPECIFIED
4	4. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
5	5. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
6	6. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
7	7. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
8	8. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
9	9. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED
10	10. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED

CORE FLOODING
NOZZLE

00000000



DETAIL D IN
TYPE 304 STAINLESS STEEL



DETAIL F IN
TYPE 304 STAINLESS STEEL

00000000

DUKE POWER COMPANY
Request For Relief From
Inservice Inspection Requirement

Station: Oconee

Unit: 1, 2, and 3

Reference Code: ASME Boiler and Pressure Vessel Code, Section XI,
1980 Edition through Winter 1980 Addenda.

I. Component for which exemption is requested:

a. Name and Identification Number:

Reactor Vessel Nozzle to Pipe Welds.

Isometrics: System 50, Iso 26 (Unit 1)
9 (Unit 2)
29 (Unit 3)

b. Function:

Provides reactor coolant flow to steam generators

c. ASME Section III Code Class:

Class 1

d. Valve Category:

N/A

II. Reference Code Requirement that has been determined to be impractical:

Table IWB-2500-1; Category B-J; Item B9.11
Surface Examination

III. Basis for Requesting Relief:

Relief requested from surface examination only.

There are four inlet and two outlet nozzle to pipe welds in each Oconee Reactor Coolant System. These nozzles are SA 508 Cl. 2, welded to A106 Gr. C pipe. The inlet nozzle welds are 33.50" diameter, 2.33" nominal wall thickness, and the outlet nozzles are 36" diameter, 2.86" nominal wall thickness.

III. Basis for Requesting Relief (cont.)

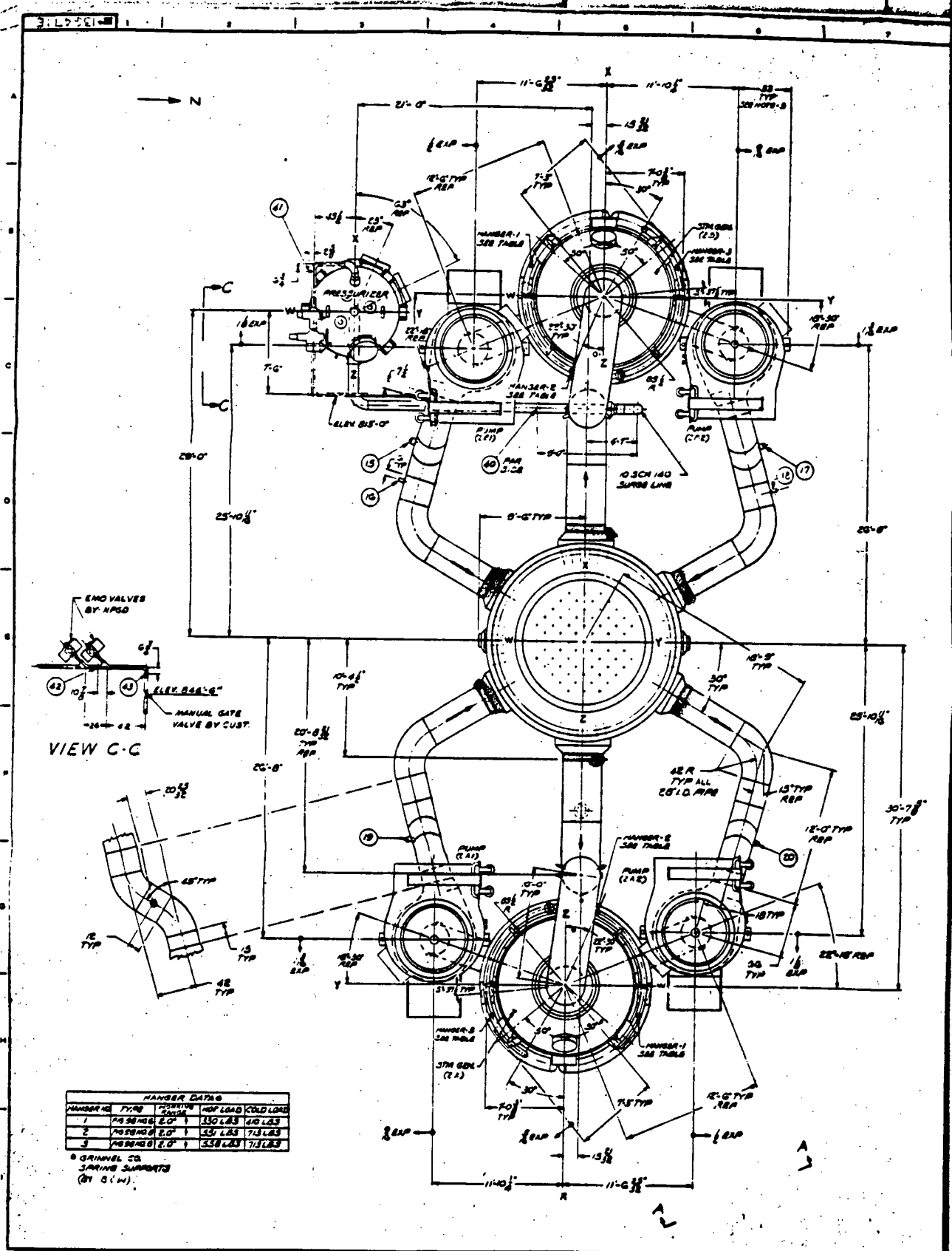
These welds will be volumetrically inspected from the inside surface using an immersion ultrasonic technique, which will not require access to the OD surface of the weld. Preparing these welds for surface inspection will require removal of the refueling canal seal plate, shielding bricks, shielding supports in the nozzle areas, and insulation. This would require approximately 300 man-hours of work in a 700-100 MR/hour area for each unit. Shielding would be impractical in this area due to the limited space and close proximity to the reactor vessel.

IV. Alternate Examination:

Welds will be inspected from the inside surface. This will provide adequate assurance of weld integrity at the OD surface.

V. Implementation Schedule:

The outlet nozzle to pipe welds will be inspected during the first inspection period of the second interval. The inlet nozzle to pipe welds will be inspected during the third inspection period of the second interval.



Serial No. ONS-014

NPD Licensing Serial No. _____

Page 1 of 2

DUKE POWER COMPANY

Request For Relief From
Inservice Inspection Requirement

Station: Oconee Nuclear Station

Unit: 1,2,3

Requesting Department: Quality Assurance

Reference Code: 1980 ASME Section XI, including addenda through Winter
1980

I. Component for which exemption is requested:

a. Name and Identification Number:

Reactor Pressure Vessel 36" outlet nozzle-to-vessel and
outlet nozzle-to-pipe welds.

b. Function:

Welded connection between the reactor pressure vessel and
respective reactor coolant piping providing a flow
path to the steam generator.

c. ASME Code Class:

ASME Section XI, Class I

II. Reference Code Requirement that has been determined to be
impractical:

ASME Section XI, Table IWB-2500-1; Category B-D, items B3.90 and
B3.100. NOTE (3); At least 25% but not more than 50% of the
nozzles shall be examined by the end of the first inspection
period and the remainder by the end of the third inspection
period of each inspection interval.

ASME Section XI, IWB-2420(a): The sequence of component
examinations established during the first inspection interval
shall be repeated during each successive inspection interval to
the extent practical.

Serial No. ONS-014

NPD Licensing Serial No. _____

Page 2 of 2

III. Basis for Requesting Relief:

During the first period of the second ten year inspection interval at Oconee Nuclear Station the reactor vessel 36" outlet nozzle-to-vessel welds, including nozzle-to-pipe welds, were examined using Babcock & Wilcox's Automated Reactor Inspection Tool (ARIS). The two nozzle welds examined met the 25% requirement of Table IWB-2500-1. No recordable indications were detected.

During the third period of the second ten year inspection interval all reactor vessel nozzle-to-vessel and respective nozzle-to-pipe welds will be examined using automated inspection equipment. Included in this examination will be the 36" outlet nozzle-to-vessel and nozzle-to-pipe welds examined during the first period. The re-examination of these 36" outlet nozzles will be performed meeting the requirements of the 1989 ASME Section XI Code. Credit will be applied to the third interval, first period requirement for the 36" outlet nozzle-to-vessel welds. Category B-D, items B3.90 and B3.100. These examinations will not be performed during the first period of the third inspection interval.

Following this inspection sequence will substantially reduce radiation exposure (2 man rem), critical path time (300 man hours), contaminated shipments, and generation of rad-waste, without effecting the safe operation or reliability of the reactor vessel.

IV. Alternate Examination:

Automated re-examination of all the reactor vessel nozzle-to-vessel welds, including respective nozzle-to-pipe welds will be deferred to the last period of the third ten year inspection interval.

V. Implementation Schedule:

Examinations are scheduled to be performed during the third inspection period for each of the Oconee units as follows:

Oconee Unit 1: RFO #13, 1991

Oconee Unit 2: RFO #12, 1992

Oconee Unit 3: RFO #13, 1992

DUKE POWER COMPANY

ULTRASONIC EXAMINATION DATA SHEET FOR PLANAR REFLECTORS

Exam Start: 11:15

FORM NDE-UT-2A

Exam Finish: 1:30

Revision 1

Station: OCONEE

Unit: 2

Component/weld ID: 2PZR-WP28

Date: 1/30/92

 Nominal Material Thickness: (in. / dia.)
4.750

 Weld Length (in.): * 11/2

 Surface Temperature: 72 deg F

Surface Condition: AS GROUND

 Lo: * np

 Pyrometer S/N: 32915 cal due
2/5/92

 Examiner: JW Fisher Level: II

 SCANS: ☒ 45 ⁺¹⁴ dB

 Examiner: JS Moss Level: II
☒ 45T ⁺¹⁴ dB ☐ 60 dB

 Configuration: HEAD TO SHELL

 Calibration sheet No.
9220054, 9220055

☐ 0 dB ☐ 60T dB

← Flow ←

 LOWER HEAD to SHELL

 Other: 35 dB

 Procedure No.
NDE-620


 Rev.
0

 F/C
91-06

Applies to NDE-680 only

Skew angle: N/A

 Applies only to
NDE-620, 640
and 680

IND NO.		Max % dac	W Max	L Max	MP Max	L1 20%dac HMA 50%dac	L2 20%dac HMA 50%dac	W1 20%dac HMA 50%dac	W2 20%dac HMA 50%dac	Mp1 20%dac HMA 50%dac	Mp2 20%dac HMA 50%dac	Beam Dir	Exam Surf.	Scan	Damps
1	45	50	9.0	45.4	9.7	44.25	45.85	8.5	9.25	9.6	10.18	2	1	AX	NO
2	45	40	9.2	43.7	9.6	43.2	43.9	8.5	9.4	9.44	10.15	2	1	AX	NO
3	45	50	9.05	50.3	9.7	50	50.65	8.8	9.4	9.6	9.90	2	1	AX	NO
4	35	63	7.5	45.4	8.6	45.15	45.9	7.25	7.70	8.3	8.7	2	1	AX	NO
5	35	50	7.2	44.7	8.4	44.2	44.9	6.8	7.5	8.10	8.70	2	1	AX	NO
6	35	50	7.5	50.3	8.4	50.0	50.7	7.3	7.65	8.25	8.70	2	1	AX	NO

 Remarks: FOR REINSPECTION OF INDICATIONS PREVIOUSLY RECORDED BY "B&W"
FOR DATA RECORDED TO "ISI 130" (B&W) SEE ATTACHED SHEETS.

☐ Limitations: see NDE-UT-4 ☐ None

 ACCEPTABLE/NO RECORDABLE INDICATIONS: ☐

 sheet 1 of 2

 Reviewed By: JSB

 Level: II

 Date: 2-5-92

 Authorized Inspector: R F Elgin

 Date: 2-9-92

Item No:

B02.011.006

DUKE POWER COMPANY

NDE-UT-5

UT PROFILE/PLOT/RESOLUTION SHEET

Revision 0

EXAMINATION SURFACE 1

WELD

EXAMINATION SURFACE 2

4 SHELL

3

2

1

1

2

LOWER HEAD

3

4

.5

1

1.5

2

2.5

3

Component ID/Weld No.

B 02.011.006

Resolution/Comments: RESULTS COMPARED WITH PREVIOUS
SCALE DATA, NO GROWTH NOTED - JWS. 3-9-92

1" = 4"

Examiner: JWS

Level: II

Date: 1-30-92

Reviewed By: JWS

Level: II

Date: 2-5-92

Authorized Inspector:

Date:

A F. E. ...

2-20-92 RFE 3-9-92

270

Profile taken
at: 3 to 4
4 to 5

90

180

Sheet 2 of 2

VOLUNTARY TEST DATA

BABCOCK & WILCOX COMPANY
UTILITY POWER GENERATION DIVISION

BWP-20602-4(11-82)

CUSTOMER: CONTRACT NO: COMPONENT:

DESCRIPTION:

ID#: PROCEDURE: MATERIAL: THICKNESS: IN. TEST SURFACE:
 NO. POSITIONS: DISTANCE: #1 REFERENCE: CAL. SHEET: CAL. SHEET: CAL. SHEET:
 BEAM DIRECTION LONG SHEAR LIMITED EXAM ☐ NO ☐ YES (IF SO WHY) ANGLE: ANGLE: ANGLE:
 EXAMINER: JWS ID#: 55643 LEVEL: II TIME START: NR. TIME START: NR. TIME START: NR.
 EXAMINER: JTM ID#: M-8250 LEVEL: II TIME STOP: NR. TIME STOP: NR. TIME STOP: NR.

NOTES:

PLEASE REFER TO FORM "NDE-UT 2A"

THERMOMETER ID#
 1ST SCAN 60° REQUIRED
 2ND SCAN 60° NOT REQUIRED
 DATE: DATE: DATE:
 CAL. BLOCK: WELD INFORMATION & 6° THICKNESS
 DWG. / SURFACE-12 NTH- SURFACE-01
 FCA(S) WD-
 MIN- MIN- MIN-
 MAX- MAX- MAX-

IND. NO.	A		B	ANGLE (DEG.)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LGTN	WDTH	100%	(INCHES)				THROUGH WALL DIMENSION								DAPS	REMARKS
	POSITION OR PART ITEM	MAX AMP % DAC						DEPTH (IN.)	20%				50% OR NMA	CRYSTAL	DISTANCE	FROM	MINIMUM				MAXIMUM					
																	DEPTH	POSITION IN.		DEPTH	POSITION IN.					
																		1	2		1	2				
																							A	B		
200	3	4	45	1	2	SPF	125	6.9			1.70		2.6		9.0									NO	MAX AMP.	
													2.15													100% EP
													3.75													100% EP
201	3-4		45	1	2	SPF	125	6.8			.70		4.3		9.2										NO	MAX AMP
													4.1													100% EP
													4.8													100% EP

REVIEWED BY: LEVEL: DATE REVIEWED: FIGURE NO: B02.011.006

ANGLE- 0 DEG. 45 DEG. 60 DEG. OTHER ER REQUIRED: ☐ NO ☐ YES
 IND. NOS. 1 TO 199 200 TO 399 400 TO 599 600 TO 799

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER:										CONTRACT NO:				COMPONENT:										
EXAMINER: <i>JWS/tye</i>					ID# S-5643		LEVEL <i>IF</i>		DATE(S):															
EXAMINER: <i>DJ/Mon</i>					ID# M-8250		LEVEL <i>IF</i>																	
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAW		LNTH	WDTH		(INCHES)				THROUGH WALL DIMENSION				DAPS	REMARKS				
						MAX AMP % DAC	DEPTH (IN.)				20%	50% OR HMA	100%	CRYSTAL	DISTANCE	FROM	MINIMUM				MAXIMUM			
																	DEPTH	POSITION IN.			DEPTH	POSITION IN.		
																		1				2	1	2
						LENGTH				A	B	I	2	A	B	A	B							
202	4-5	45	1	2	SPF	125	6.8			.60	2.3			9.0						No	MAX AMP			
											2.0										100% EP			
											2.6										100% EP			
100	3-4	35	1	2	SPF	159	6.9			.75	2.6			7.5						No	MAX AMP			
											2.1										100% EP			
											2.85										100% EP			
201	3-4	35	1	2	SPF	159	6.9			.70	3.3			7.2						No	MAX AMP			
											3.1										100% EP			
											3.8										100% EP			
202	4-5	35	1	2	SPF	80	6.9			.70	2.3			7.5						No	MAX AMP			
											2.0										100% EP			
											2.7										100% EP			

REVIEWED BY:

LEVEL:

DATE REVIEWED:

FIGURE NO.: B02.011.006

EXEMPT CHANGE

System	MS	QA Condition	1	EXEMPT CHANGE
Component or Structure	2-01A-0-1441-R1	Unit	2	
Resolution needed by (date):	02/28/92	[Y] Outage Related	2-12	OE # 4462
WR #	53736L	Field Contact	FRED LINSLEY	Exempt Change Type
		DE Contact	RUSSELL CHILDS	

Description of Change

REMOVE S/R 2-01A-0-1441-R1. THE S/R PULLED OUT OF THE CONCRETE WHEN THE SNUBBER LOCKED UP. PER THE REANALYSIS THAT WAS DONE BECAUSE OF THIS PROBLEM (PIR 2-092-0027), IT HAS BEEN DETERMINED THIS SUPPORT CAN BE DELETED.
 UPDATE DRAWINGS AND ANY OTHER DOCUMENTATION TO SHOW THE DELETION OF THIS SUPPORT RESTRAINT.
 THE CONCRETE WILL BE REPAIRED UNDER A MAINTENANCE WORK REQUEST.

Remove lug from bottom of pipe (Items # 14, 15 and 16 on sketch) leave bottom 1/2" of plates so as not to grind into pipe.

ATTACHED: ☒ 50.59 Evaluation
☐ 72.48 Evaluation (ISFSI)
☒ Sketch ☐ Other

B. J. Linsley ^{WR} *2/18/92*
 Station Approval Date

Distribution (number of copies)

Design Engineering (original)	1
Accountable Engineer	1
DE Contact	1
Document Control	1
DIANE ROWELL	1
L R DAVIDSON	1
RICK MATHESON	1
Lanny Wilkie	1

RESOLVED STAGE

☒ No exceptions
☐ Technical exception
☐ Corrections to document list *
☐ Other editorial exception

(Describe below & Call Field Contact)

Field Contact
 Called _____ Date: _____

The design affected by this Exempt Change has been performed and verified to permit safe station operation

Performed *Russell Childs* Date: *2/19/92*
 Checked *B. J. Linsley* Date: *2/19/92*
 Approved *Lanny A. Kelly* Date: *2/19/92*

Document List

VTO	Rev	Rev
<input type="checkbox"/> 1	2-01A-1441-R1	3
<input type="checkbox"/> 2		
<input type="checkbox"/> 3		
<input type="checkbox"/> 4		
<input type="checkbox"/> 5		
<input type="checkbox"/> 6		
<input type="checkbox"/> 7		
<input type="checkbox"/> 8		

Attach extra page if necessary

CLEARED STAGE

☐ Corrections to document list* ☐ Call Station Projects
Support has been deleted. No document issue Reg'd. Rev. 3 will be deleted

Station Projects

Called _____ Date: _____

Cleared *Russell Childs* Date: *4/15/92*

Approved *Lanny A. Kelly* Date: *4/8/92*

*Revise Document List above to show additions and deletions

PMT PLAN

☐ DRAFT PMT Plan☒ FINAL PMT Plan

Rev # _____

Page _____ of _____

1

NSM #/Exempt Change # OE 4462

Rev. # _____

Part # _____

Unit # _____

2

BRIEF NSM DESCRIPTION

3

INSTALLATION TESTS

Type of Test	Documentation	Performed by

4

VERIFICATION TESTS

Type of Test	Documentation	Performed by

5

RETESTS

Type of Test	Documentation	Performed by

6

PMT Plan Completed By _____

Date: _____

7

Distribution:

8

DUKE POWER COMPANY

10CFR50.59 EVALUATION

Page 1

(1) STATION: OCONEE NUCLEAR STATION

UNIT(s): 2

(2) EVALUATION FOR: OE#4462

REMOVE S/R 2-01A-O-1441-R1. THE S/R PULLED OUT OF THE CON-
CRETE WHEN THE SNUBBER LOCKED UP. PER THE REANALYSIS THAT
WAS DONE BECAUSE OF THIS PROBLEM (PIR 2-092-0027), IT HAS

(3) SCREENING FOR 10CFR50.59 APPLICABILITY:

Does this evaluation item:

YES NO

affect structures, systems, or components that are addressed in the FSAR in a significant manner?

[] [X]

appear significant enough as to require inclusion in the FSAR?

[] [X]

involve procedures as described in the FSAR?

[] [X]

involve tests or experiments not addressed in the FSAR?

[] [X]

FSAR Sections Consulted: 10.3

(4) TECHNICAL SPECIFICATION REVIEW:

Will this item require a change to the Station Technical Specifications? Affect Tech. Specs. Section(s)
consulted and Licensing personnel contacted:

YES NO
[] [X]

3.14, 4.8, 4.18

Check appropriate block	Part 3 and answer is	Part 4 answer is	Go to Part	Page
[X]	No	No	5	1
[]	Yes	No	6	2
[]	Yes	Yes	7	2
[]	No	Yes	7	2

(5) PARTS 1-4

Prepared by/Date

Robert W. Deneley III

2-17-92

Reviewed by/Date

Ted K. Royal

2/18/92

DUKE POWER COMPANY

10CFR50.59 EVALUATION

Page 2

(1) STATION: OCONEE NUCLEAR STATION

UNIT(s): 2

(2) EVALUATION FOR: OE#4462

REMOVE S/R 2-01A-0-1441-R1. THE S/R PULLED OUT OF THE CON-
CRETE WHEN THE SNUBBER LOCKED UP. PER THE REANALYSIS THAT
WAS DONE BECAUSE OF THIS PROBLEM (PIR 2-092-0027), IT HAS

(6) UNREVIEWED SAFETY QUESTION (USQ) EVALUATION:

As a result of the item to which this evaluation is applicable:

YES NO

May the probability of an accident previously evaluated in the FSAR be increased?

[] []

May the consequences of an accident previously evaluated in the FSAR be increased?

[] []

May the possibility of an accident which is different than any already evaluated in the FSAR be created?

[] []

May the probability of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?

[] []

May the consequences of a malfunction of equipment important to safety previously evaluated in the FSAR be increased?

[] []

May the possibility of malfunctions of equipment important to safety different than any already evaluated in the FSAR be created?

[] []

Will the margin of safety as defined in the bases to any Technical Specification be reduced?

[] []

•Provide an attachment to substantiate all "Yes" or "No" answers.

•If the answer is "Yes" for any of the questions in Part (6), an Unreviewed Safety Question is involved, proceed to Part (7).

•If the answer is "No" for all questions in Part (6), an Unreviewed Safety Question does not exist, proceed to Part (8).

(7) LICENSING ACTION REQUIRED FOR:

Technical Specification Change []

Unreviewed Safety Question []

•Check appropriate block and contact Nuclear Production Department, General Office-Licensing or Station Compliance.

(8) PARTS 6 AND/OR 7

Prepared by/Date _____

Reviewed by/Date _____

February 17, 1992

ATTACHMENT TO NUCLEAR SAFETY EVALUATION CHECKLIST

The purpose of this exempt change is to physically remove S/R 2-WP-0-1441-RH and to update all pertinent documentation. This support restraint was discovered to have pulled out of the concrete following the shutdown of Unit 2. PIR 2-092-0027 was written to determine the cause of this failure. Testing of the PSA 35 mechanical snubber showed it to be locked up. A reanalysis of this section of Main Steam piping showed this support restraint could be deleted and the line would still be adequately supported.

Deleting this support restraint will not effect any other system, structure, or component as currently addressed in the FSAR. The change will not increase the likelihood or the consequences of an accident as described in the FSAR on will it create the likely possibility of an accident not already described in the FSAR.

Prepared By:

Frederic W. Dineley

Date:

2-17-92

Reviewed By:

Ted K. Royal

Date:

2/18/92

COMPONENT DATA ENTRY SHEET

RESP. ENG.....FRED LINSLEY

OE#.....4462

WR#.....53736L

C-1 EQUIPMENT ID NO....

C-4 SERVICE.....

C-49 LOCATION.....

C-5 MANUFACT.....

C-9 S/N.....

C-246 MMIS #.....

C-40 OFD#.....

C-45 O DRAWING #..

C-8 MODEL.....

C-14 DESIGN ENG. NO..

C-11 QA COND..... 1

C-41 COORDINATES.....

C-47 MANUF. OUTLINE..

C-48 MANUF. INST. MANUAL.....

C-100 MISC. INFORMATION.....

C-52 PIPE SIZE.....

C-26 SIZE.....

C-29 OPERATING PRESSURE..

C-31 OPERATING TEMP.....

C-150 ANSI CLASS.....

C-53 DUKE CLASS.....

C-54 ISI CLASS.....

ITEM NO.	NO. REQ'D	SIZE	DESCRIPTION	ASTM	LOT NUMBER	BY
1	1	R 3/8 x 8 x 1-3 LG.		A-36		EXISTS
2	2	R 3/8 x 8 x 2-10 LG.		A-36		"
3	1	SPEC. H.S. G5, 3/4" RAD. B=7 1/2", C=1 1/2"				"
4	4	R 3/8 x 4 1/2 x 0-5 LG. (SEE DETAIL 1)*		A-36		FBS
5	1	R 1/2 x 5 x 0-8 1/2 LG. *		A-36		"
6	1	TS 3 1/2 x 3 1/2 x 3/16 x 11-9" LG. } SEE 3 & 4		A-36		"
7	1	TS 3 x 3 x 1/4 x 1-6 LG.		"		"
8	1	R 1" x 6 1/2 x 2-7 LG. * } (SEE DET. 2		A-36		"
9	2	R 7/8 x 6 x 0-7 1/2 LG. *		A-36		"
10	1	2 1/2" FIG. 55 WELDLESS LUG, SHORT			292-6017F	HC
11	2	R 1" x 8" x 0-8 LG.		A-36		FBS
12	1	TS 6 x 6 x 3/8 x 7-2 1/2" LG. *		A-36		"
13	1	SIZE 35 x 6" STROKE FIG. 307			298-1537F	HC
** MECHANICAL SHOCK SUPPRESSOR						
HPS = 2 1/2" CPS = 3 1/2" WITH END						
ATTACHMENT, W=3'-0 1/2", LOAD=						
36207*						
14	1	"ADDL. REAR BRACKET" FOR SIZE			298-1976F	HC
** 35 x 6" STROKE, FIG. 307						
15	1	R 1" x 10" x FIELD CUT TO SUIT LG.		A-36		EXIST.
16	2	R 1" x 24" x FIELD CUT TO SUIT LG.		A-36		"
17	1	TS 4 x 4 x 3/8 x 4-2" *		A-36		FBS
18	2	L 3 x 3 x 3/8 x 0-5 LG.		A-36		"
19	2	R 3/8 x 8 x 1-0" LG.		A-36		"
20	2	R 3/8 x 8 x 2 1/2 LG.		A-36		"
21	2	1 1/2" FIG. 291, CLEVIS PIN WITH COTTER		-	297-0909F	HC
22	1	2 1/2" FIG. 291, CLEVIS PIN WITH COTTER		-	297-0917F	HC
23	1	R 1/2 x 5 x 0-8 1/2 LG. * SEE DETAIL 3 & 4		A-36		FBS

* CUT TO SUIT

CONT. SHT. 2 OF 3

** ON ITEM #13 & 14 CUT
END PIECE TO 6 1/2 x 0-7 LG.

"FOR INSPECTION PURPOSES ONLY"

Notes This drawing supersedes Grinnell Sketch

NO 2-124 Rev 3 Dated: 12-27-73

JUN 27 90

CD3.040.005 MT 2-DIA-R1 F1.02.025 Main Steam Outside

LOCATION PLAN

DIRECTION	HOT MVT.	COLD MVT.	HOT LB.	COLD LB.	UPSET	FAULTED	HYDRO
VERTICAL	0.153		-		-	-	-
N-S	1.016		-		17924N	17854S	35778N
E-W	0.39E		-		-	-	35708S

ANALYSIS PROBLEM NO. 204-H/05C-440

DATA PT. 136

STRUC. CALC. 05C-0980-01-0018

DESIGNER / DATE BSN 11/17/81

INSPECTED / DATE WAIVED

DRAWN / DATE 1/16/82

INSPECTED / DATE WAIVED

CHECKED / DATE 1/16/82

APPROVED / DATE 1/16/82

DUKE POWER COMPANY

PROJECT OCONEE NUCLEAR STATION

UNIT 2

REV.	BY	CHK	DATE	INSTR.	DESCRIPTION	APP.	DATE
0	BSN	W	11/17/81	MR. RAY	FOR IEB 79-14	11/17/81	11/17/81
1	BSN	W	1/16/82	MR. RAY	ADDED STIFFENER PLATES	1/16/82	1/16/82
2	BSN	W	1/16/82	MR. RAY	REVISED FOR IEB 79-14 (W) 735	1/16/82	1/16/82
3	BSN	W	1/16/82	MR. RAY	As Bmt R. IEB 79-14 Ind. Dtd 3/19/90	1/16/82	1/16/82

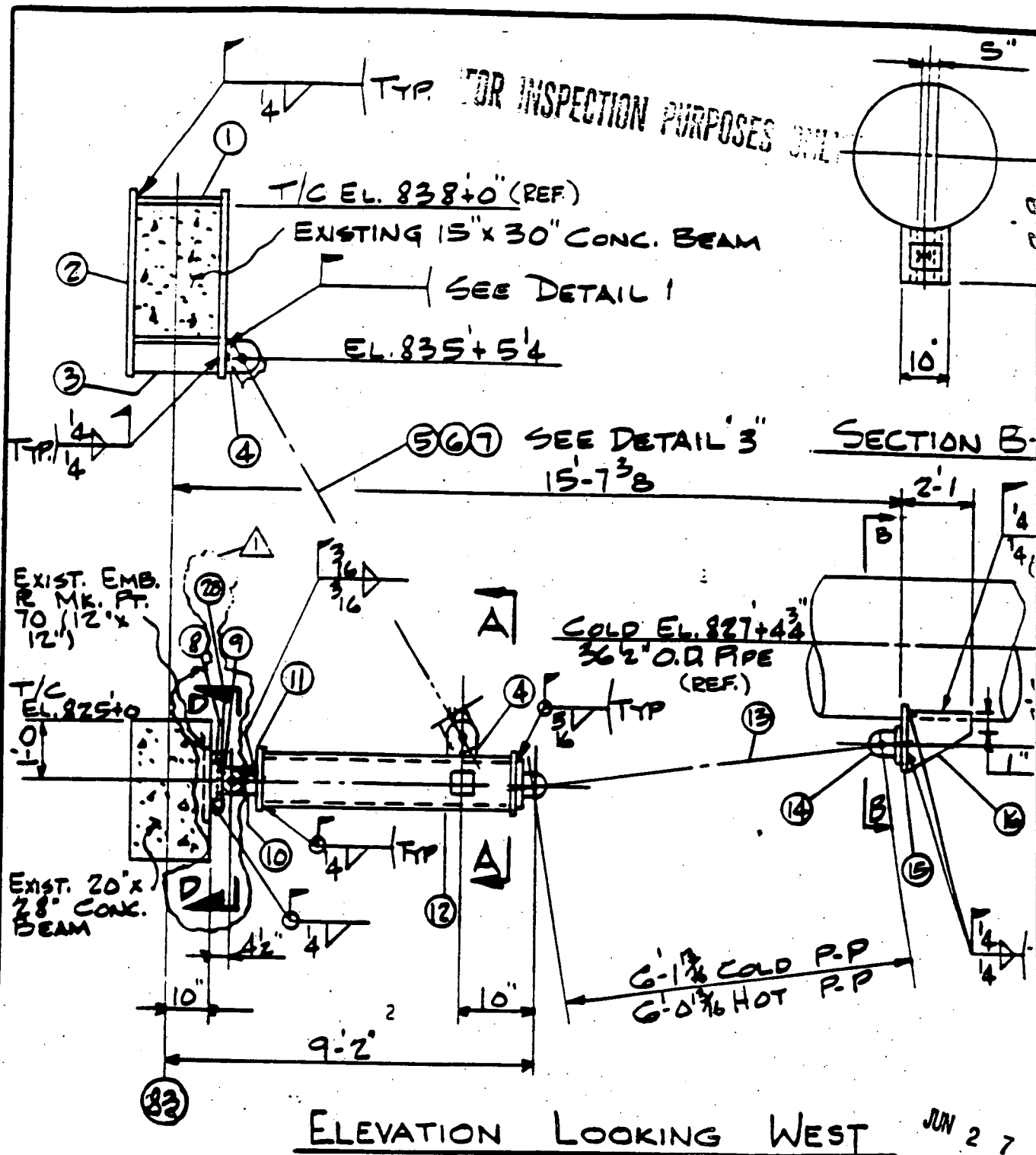
QA CONDITION 1

REFERENCE DRAWINGS

PIPE	0-1441	REV.	-
CIVIL	0-156B	REV.	-
ELEC.	N/A	REV.	-
M.V.A.C.	N/A	REV.	-

SHEET NO. 1 of 24 REV. 3

MARK NO. 2-DIA-0-1441-R1



B.O.M. CONT.

24	2	R. 1/2 X 3 X 0'-3" LG. (W/ EPOXY SEALANT AROUND)	A 36	-	FAS
25	2	R. 1/2 X 2 X 0'-2 1/2" LG. (W/ EPOXY SEALANT AROUND)	"	-	"
26	1	R. 1/2 X 3 1/2 X 0'-3 1/2" LG. (W/ EPOXY SEALANT AROUND)	"	-	"
27	2	R. 3/4 X 3 X 1'-0" LG. (SEE SEC. D-D SH. 4)	"	-	"
28	2	R. 3/4 X 3 X 0'-9 1/4" LG. (SEE SEC. D-D SH. 4)	"	-	"

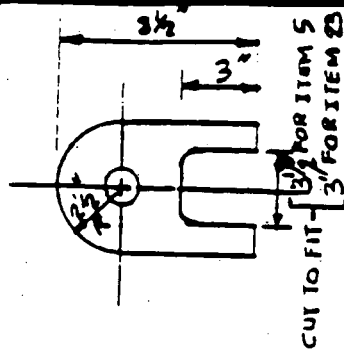


DUKE POWER COMPANY

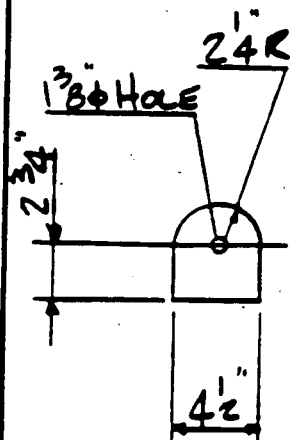
PROJECT OCONEE NUCLEAR STA. UNIT 2

Q A CONDITION 1

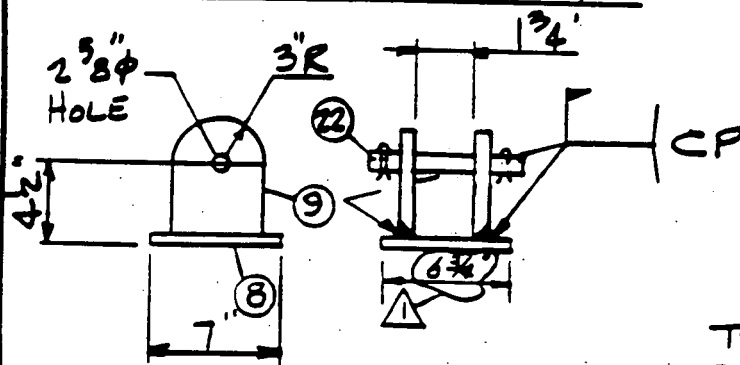
SHEET NO. 2 OF 4 REV. 3
MARK NO. 2-01A-0-1441-R1



DETAIL 4
(ITEMS 5 & 23)

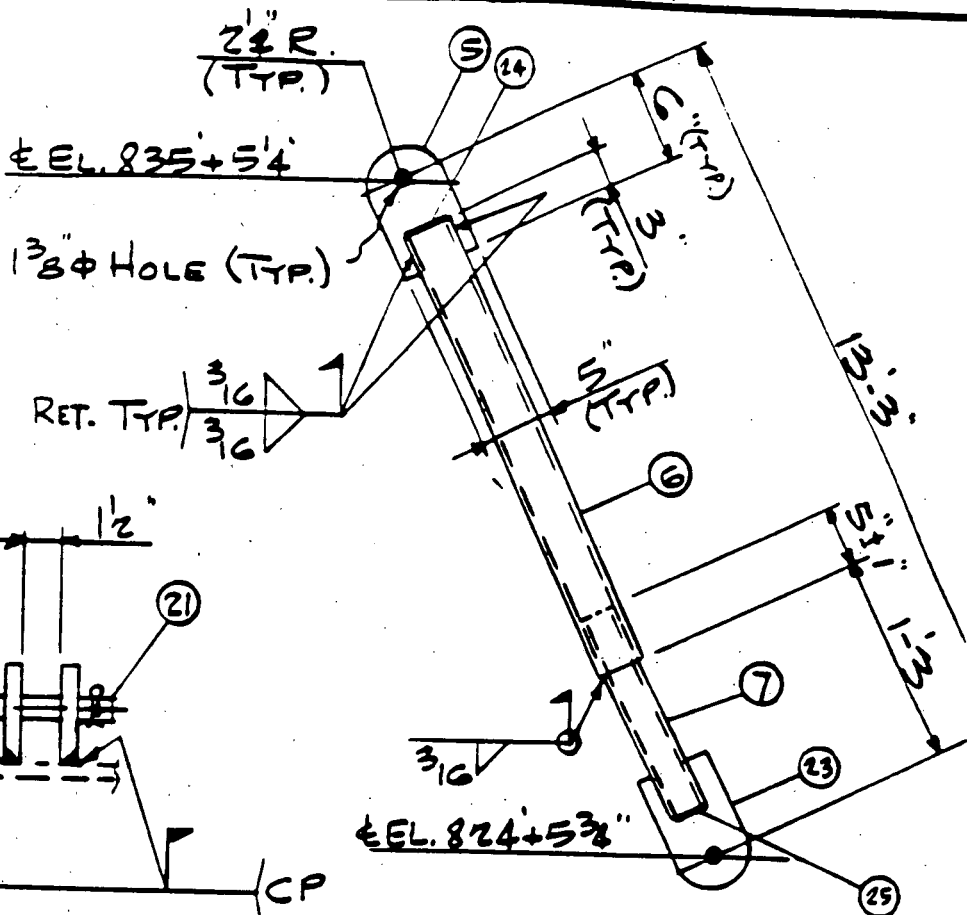


DETAIL 1 (ITEM 4)

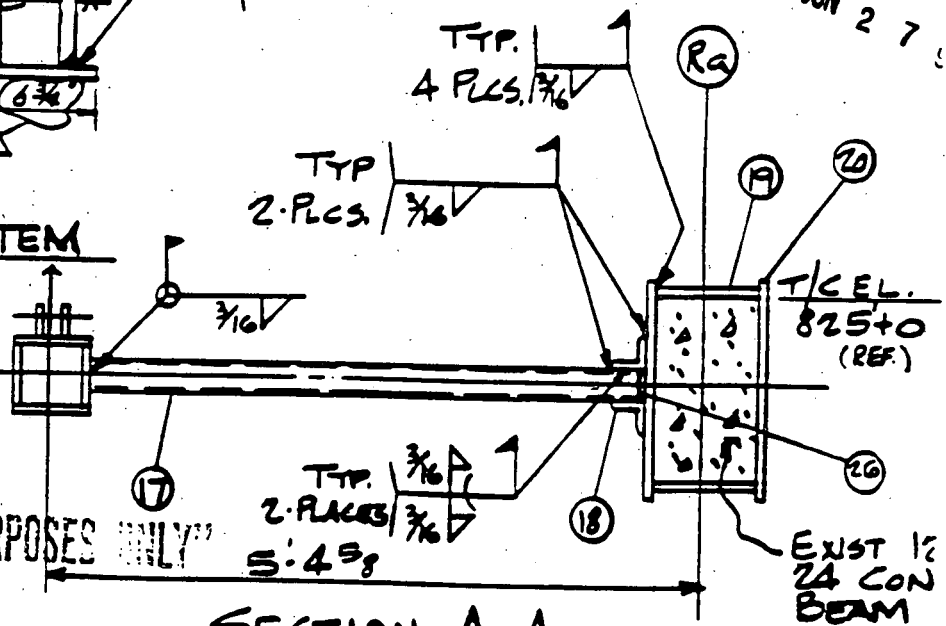


DETAIL 2 (ITEM 8 & 9)

± EL. 824+0



DETAIL 3 (ITEMS 5, 6 & 25)



SECTION A-A



DUKE POWER COMPANY

PROJECT OCONEE NUCLEAR STA. UNIT 2

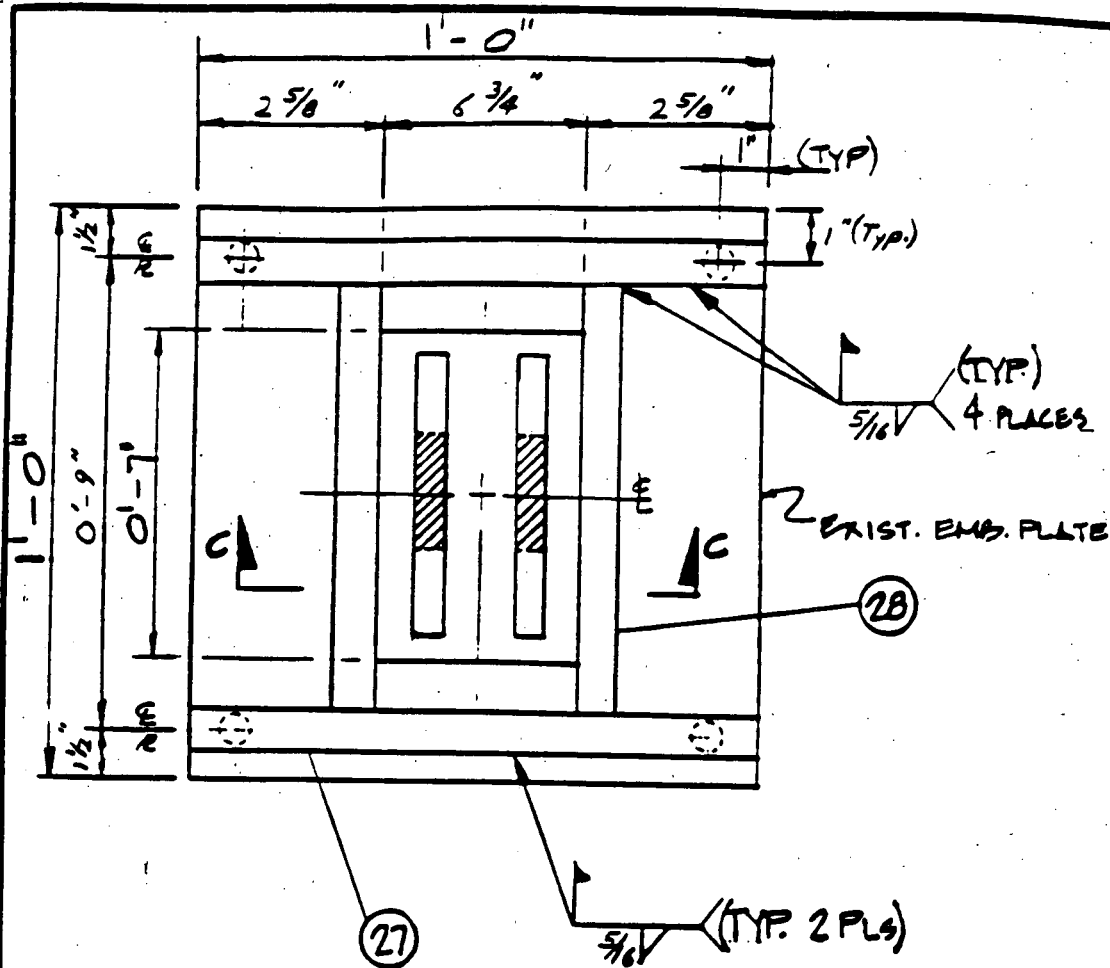
QA CONDITION 1

SHEET NO. 3 OF 4 REV. 3
MARK NO. 2-01A-0-1441-R1

FOR INSPECTION PURPOSES ONLY

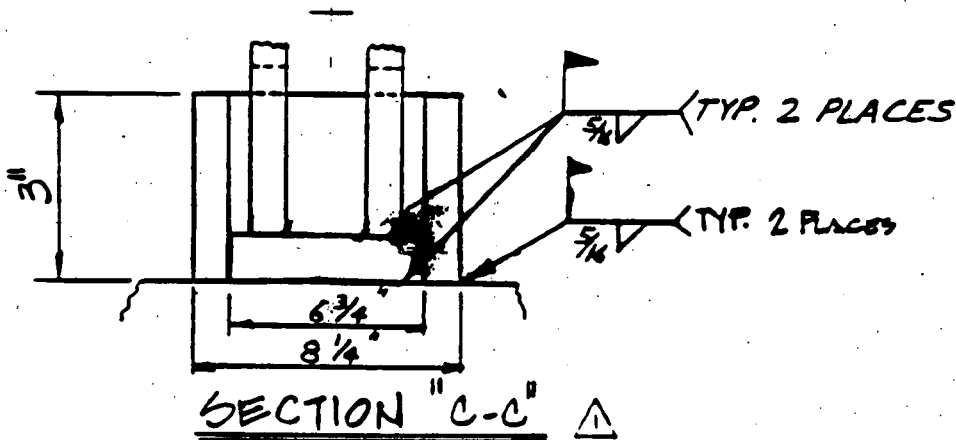
JUN 27

EXIST 12
24 CON
BEAM



SECTION "D-D"

FOR INSPECTION PURPOSES



JUN 27 90



DUKE POWER COMPANY

PROJECT OCONEE NUCLEAR STA. UNIT 2

Q A CONDITION 1

SHEET NO. 4 OF 4 REV 3
MARK NO. 2-01A-0-1441-R1

COMPLETE FORM BY PRINTING WITH BLACK BALL POINT PEN OR TYPE

DUKE POWER COMPANY NUCLEAR STATION

Problem Investigation Report Serial No. 2-092-0027Station OCONEE

Licensee Event Report No. _____

- I. Problem Occurred-Time/Date: 01-09-92 Discovered-Time/Date: 01-13-92
 Unit(s): 2 Unit Status At Time Problem Occurred/Discovered: Unit was coming off line
 Description and Cause of Problem: As the main steam line cooled down after the unit was shut down, thermal contraction caused a snubber support to be pulled out of the concrete column around the main steam relief valves. The damage was caused by a mechanical snubber that locked up and restrained the expected thermal movement. SR 2-01A-0-1441-R1
 Other Duke Stations Affected: ☒ Yes ☐ No Determined By/Date: Frankie W. Hensley III
 Comments: Damage to mechanical snubbers caused by environmental conditions is a problem the other Duke Stations and the industry in general.
 Location of Problem: SR 2-01A-0-1441-R1 (col R-82) Lawrence
 Method Used to Discover Problem: Routine Observation during scaffolding for TST ins.
 Immediate Corrective Actions Taken/To Be Taken: The snubber was removed and tested. It was found to be locked-up. Design Engineering was contacted. SR is being evaluated.
 Work Stoppage Notification (Form QCK-2A) Serial No.: NA
 Information Sources/References (Work Requests, Documents Violated, etc.): MO # 92003561

 Originated By: F. W. Hensley III Date: 2-4-92 Dept./Group/Section: PSA/ONE/Comp.

- II. Compliance Evaluation-Item/System Operable ☐ Yes ☐ No ☐ Not Applicable
 Evaluated By/Date: _____ Comments: Operability by Design
 Reportable ☐ Yes ☐ No Reportable Per: ☐ 50.73 Section ☐ 50.72 Section
☐ 73.71 Section ☐ T.S./Lic Cond Section ☐ Part 21 ☐ Other: ☐ Part 50.9
 Evaluated By/Date: _____ Comments: Determined by Operability

- III. Telecon/ENS Report to NRC Time/Date: _____
 NRC Contact(s): _____ DPC Contactor(s): _____
 Telegraph/Mailgram/Facsimile Transmission to NRC-Date: _____
 Date Notified: NRC Res. Inspector: _____ Station Manager: _____
 General Office: _____ Comments: _____

- IV. Investigation Assigned To: _____ NRC Report Due Date: _____
 Date Due to Compliance after Evaluation: _____
 PIR Review (Compliance): _____ Date: _____
 PIR Station Manager Approval: _____ Date: _____

- V. Further Action/Evaluation Required ☒ Yes ☐ No (Explain Below):

Page 2 Assigned To: Design Engineering

Comments: _____

Compliance Review: _____ Date: _____ QA Review: _____ Date: _____

Distribution

Initial	Originator	<u>Frankie W. Hensley III</u>	<u>P. Hensley</u>	<u>P. Hensley</u>	<u>P. Hensley</u>	<u>P. Hensley</u>	<u>P. Hensley</u>	<u>P. Hensley</u>
<u>2/5/92</u>	<u>F. Hensley</u>	<u>R. Hensley</u>	<u>R. Hensley</u>	<u>R. Hensley</u>	<u>R. Hensley</u>	<u>R. Hensley</u>	<u>R. Hensley</u>	<u>R. Hensley</u>
Final	Originator							

PROBLEM INVESTIGATION REPORT

Page 2

PIR No.

2-092-0027

VI. Proposed Resolution of Problem

Reanalysis of piping analysis problem 2-01-01 has determined that the piping system is acceptable with S/A 2-01A-01441-R1 removed. The majority of the load for this support will be absorbed by Penetration 26. This support should therefore be removed and the damage to the beam at the embedded plate failure repaired.

Other Approved

Date

Approved

Date

Other Approved

Date

Approved

Date

SCAE Required ☐ Yes ☐ No

Determined By/Date

QA

Date

QA

Date

SCAE Assigned To:

Serial No.

Remarks

VII. QA Verification Requirements

Assigned To

Date

VIII. Corrective Action Completed

Approved

Date

IX. QA Verification Results

Completed By

Date

QA Approval

Date

Remarks

Final QA Review

Date

DESIGN ENGINEERING DEPARTMENT
OPERABILITY EVALUATION

Station: Oconee Unit: 2 PIR Number: 2-092-0027

Structure, system, or component (SSC) in question: S/R 2-01A-0-1441-R1

Design basis references applicable: N/A

Technical Specification sections applicable: N/A

The SSC in question is recommended to be:

☒ OPERABLE

☐ CONDITIONALLY OPERABLE

☐ INOPERABLE

Operability Evaluation expiration date: _____

FSAR change required ☐ Yes ☒ No

10 CFR 50.59 Evaluation required ☐ Yes ☒ No

Summary/Comments:

The piping system (01A) has been analyzed with support 2-01A-0-1441-R1 inactive. The beam at the embedded plate failure has been reviewed for the maximum potential load due to the snubber lock-up and adjacent supports have been reviewed for additional thermal loads due to this condition. All were found to be acceptable.

Originated by: Russell Childs

Date: 2/11/92

Reviewed by: Phillip A. W. Jr.

Date: 2/12/92

Approved by: R. A. Cope

Date: 2-12-92

Duke Power Company
Oconee Nuclear Station
Project Services
P.O. Box 1439
Seneca, SC 29679



DUKE POWER

DE RECV. DATE
MAR 12 1992

(803) 882-5363
(803) 885-3411 FAX

Complete Document

Update By

Date 5-12-92

March 10, 1992

S. G. Crews, Manager
Project Management
Design Engineering/Oconee Projects

SUBJECT: Oconee Nuclear Station
Exempt Change OE- OE4462
Unit 2

The subject Exempt Change was implemented on 2-25-92 Please
clear the exempt change. (date)

The VNs written on this Exempt Change are as follows:

OP-3715



Scott H. Karriker
Component Engineering Supervisor

xc: Lanny Wilkie
Master File

Rev. D2 added by: BFL 6/21/89
checked by: RLA 6/2/89
Rev. D2 added this page & made the
flagged revisions.

STATION Oconee UNIT 2 FILE NO. OSC-1318-06
SUBJECT RESULTS /LOCATIONS (WELD POINTS) REQUIRING INSERVICE INSPECTION (ISI)

SHEET NO. (61)-28 REV. _____ BY WMM DATE 10-19-84
PROBLEM NO. 2-53-12 CKD BY BFL DATE 11/15/84

The second ten year interval Inservice Inspection Plan (ISI) for Oconee Units 1-3 is written to the ASME Boiler and Pressure Vessel Code (ASME BPVC), Section XI, Winter 1980 Addenda.

Selection of piping welds to be examined is predicated upon the calculated stress levels at weld joints within the system. Therefore, the piping analyst must provide input in this area to the Quality Assurance Department.

Original piping systems at Oconee were designed to the Nuclear Power Piping Code, USAS B31.7 and the Power Piping Code, USAS B31.1.0. However, ISI (for the second ten year interval) will be per the ASME BPVC. The applicable Inservice Inspection classes are defined on the OFD drawings. These classifications are also noted in the Nuclear Production Department's "Safety-Related Structures, Systems and Components" Manual.

J. O. Barbour's letter of March 27, 1984 (Reference # 3) defined the applicable systems for ASME Class 1 and 2 piping from an Inservice Inspection standpoint. R. L. Cope's letter of May 18, 1984 (Reference # 1) provided our response to the Quality Assurance Department, and the method to be used to generate the data needed by the Quality Assurance Department.

1341

0386

0386

Rev. D2
added by: B72 6/21/89
checked by: JAA 6/21/89
Rev. D2 added this page & revised the problem #.

STATION Ocone UNIT 2 FILE NO. OSC- 1318-06
SUBJECT RESULTS /LOCATIONS(WELD POINTS) REQUIRING INSERVICE INSPECTION (ISI)

REV. WMM BY WMM DATE 10-19-84
SHEET NO. 6(1)-29 PROBLEM NO. 2-001-12 CKD BY Bef DATE 11/15/84

Criteria for Identification of Locations (Weld Points) Requiring Inservice Inspection is as follows:

Class 1 Piping - Reference IWB-1000 and Table IWB-2500-1

For all piping greater than 1 inch nominal pipe size identify all terminal ends and joints in each pipe or branch run connected to other components where stress levels exceed the following limits:

(1) primary plus secondary stress intensity range of $2.4 S_m$ for ferritic and austenitic steel; and

(2) cumulative usage factor of 0.4

Welded attachments shall also be reviewed to the above criteria when the attachment base material design thickness is 5/8 inch and greater.

Class 2 Piping - Reference IWC-1000 and Table IWC-2500-1

For all piping greater than 4 inch nominal pipe size with an operating pressure above 275 psig or an operating temperature above 200°F identify all welds at locations where the stresses under the loadings resulting from normal and upset plant conditions as calculated by the sum of equations 9 and 10 exceed 0.8 ($1.2 S_h + S_A$).

Welded attachments shall also be reviewed to the above criteria when the attachment base material design thickness is 3/4 inch and greater.

General Notes:

- 1 - All locations exceeding stress levels for Class 1 or 2 piping (as applicable) shall be identified to the Quality Assurance Department, not just known pipe weld locations. The Quality Assurance Department can use this information in conjunction with field weld isos to determine if two pieces of pipe were welded in these areas.
- 2 - Stress levels in overlap regions shall be reviewed in all overlapping problems.
- 3 - If Class 2 piping analysis includes a "Class 2 Break Location Summary" (with the appropriate input parameters), then SUPERPIPE has tabulated stresses levels for evaluation. Locations where stress ratios exceed 1.0 (stresses exceeding $0.8 [1.2 S_h + S_A]$) require identification to the Quality Assurance Department for ISI. Welded attachments still require review by the analyst as noted above.

Rev. DZ
added by B72 4/21/89
checked by JRA 6/21/89
Rev. DZ added this page & made the flagged
revisions.

STATION Oconee UNIT 2 FILE NO. OSC-1318-06
SUBJECT RESULTS / LOCATIONS (WELD POINTS) REQUIRING INSERVICE INSPECTION (ISI)

REV. _____ BY WMM DATE 10-19-84
SHEET NO. 6(1)-30 PROBLEM NO. 2001 CHECKED BY [Signature] DATE 11/15/84
2-53-12

Stress levels in this analysis calculation have been reviewed per the criteria defined in the ASME Boiler and Pressure Vessel Code, Section XI, Winter 1980 Addenda.

Piping System ESA LPI

Flow diagram(s) OED-102A-2.3, OED-102A-2.2, PD-100A-2

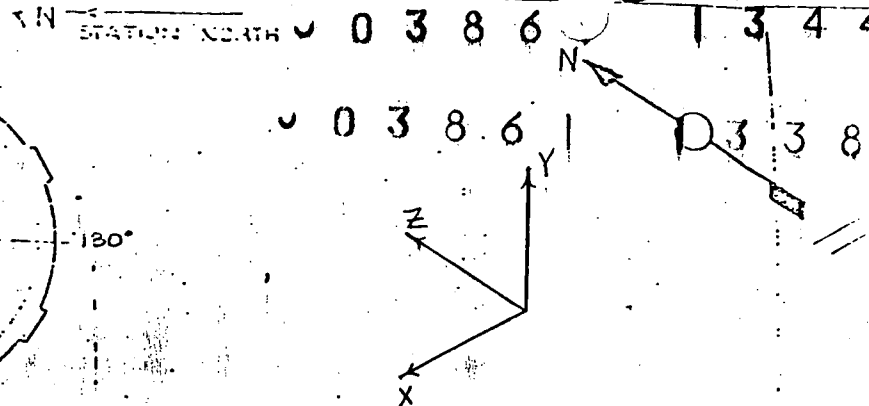
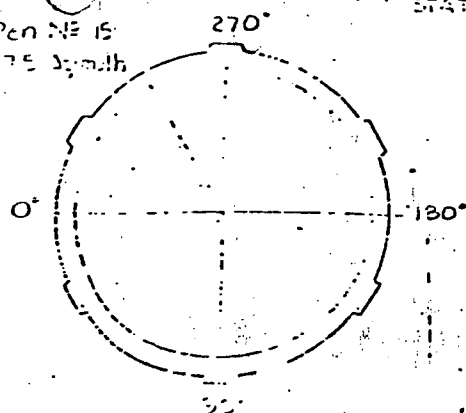
☐ No locations identified in this analysis which require inservice inspection.

☒ 2 locations identified in this analysis which require inservice inspection. Any locations identified which are not obvious weld location(s) should be reviewed by the Quality Assurance Department in conjunction with field weld isos to determine if any weld(s) exist in these area(s). Summary of locations provided below:

LOCATION NO.	DCP (s)	PIPE SIZE	TEMPERATURE (°F)/ PRESSURE (PSIG)	ISI CLASS
1	40*	10"	300°/2500	A
2	140*	14"	300°/2500	A
3				
4				
5				
6				
7				
8				
9				
10				

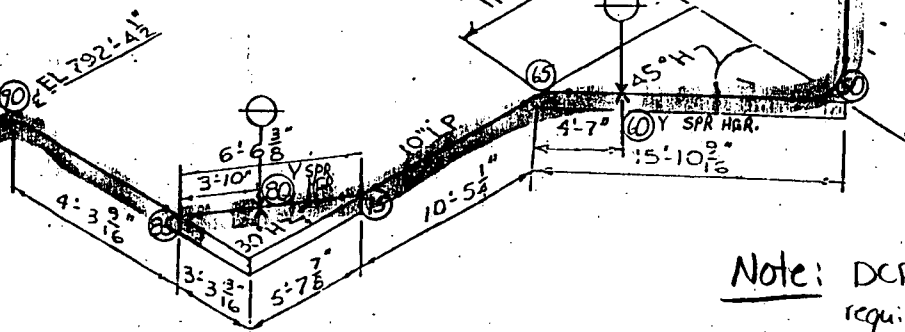
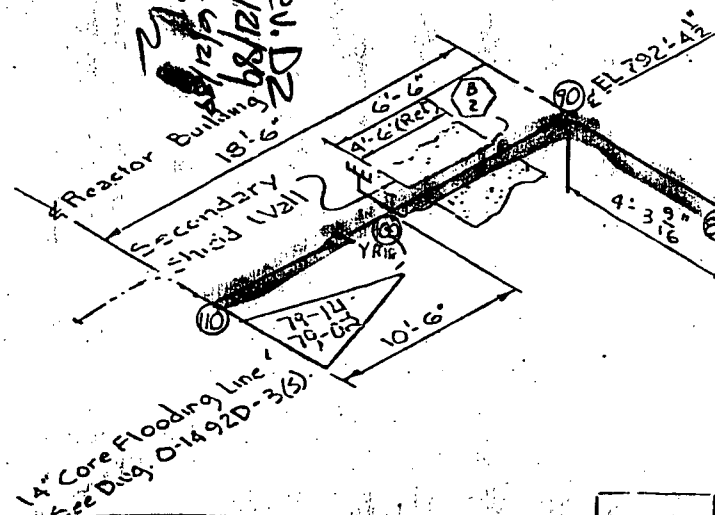
- Notes:
- Locations requiring inservice inspection are shown on the attached isometrics/sketches, pages 40-30 to 40-31 ~~40-32 to 40-33~~
 - ASME Class 1 = ISI Class A.
ASME Class 2 = ISI Class B.
 - Welded attachments (as applicable) in OSC-1318-07 have been reviewed with results noted above.
- * Local stresses due to welded attachment at this DCP have not been calculated. Stress levels assumed to exceed the stress criteria for ISI. If local stresses are evaluated and resulting stress levels do not exceed stress criteria for ISI these points may be deleted from ISI requirements.

Pen NE 15
1975 South



KEY PLAN-UNIT 2

OSC 138-04 Rev. D2
added by: BSK 6/17/89
checked by: JEC 6/17/89
Page 6(11)-312
Problem 2-53-12



EL 797'-6"
Ground Floor

GENERAL

- 1) Pipe Spec: 10" SCH 160 ASTM A-3
- 2) Design Data: 2500 PSIG @ 300
- 3) Dimensions As Shown
- 4) Typical Shielding Penetration
- 5) Operating Temp. 250°F

Unit 2
Item 4
Prob. 2 101

Class B ISI
Class A ISI

Note: DCP's circled in red require ISI. (DCP 40)

CHKD: BSK 11/15/84

	EXIST		RESTRAINT
	SPRING HANGER		RIGID HANGER
	DIRECTION OF MOVEMENT		DIRECTION OF EXPANSION

Analyst	Date	Chk.	Date	Appv.	Date
D. Madhuprat	10/25/80	VP	10-28/80	(S. J.)	10/28/80
D. Madhuprat	9/25/81	VP	9/28/80	VP	10/9/80

JOB NO.
13312-002

AFPR
AFPR

0	ISSUED FOR STRESS ANALYSIS	AFH	6	B-13-20
NO	REVISION 1	CHRD	APPR	DATE

DUKE POW
LOW PRESSURE IN
EAST ISON

DRN TR 5-30-80
NEP

OSC 1318 GEN.

- 1) Pipe Spec:
 a) 14" Sch. 40 Stainless
 b) 14" Sch. 40 Stainless
 c) 14" Sch. Std. wt. St.
 2) Design Data:
 a) 2500 PSIG @ 650'
 b) 2500 PSIG @ 300'
 c) 700 PSIG @ 300'

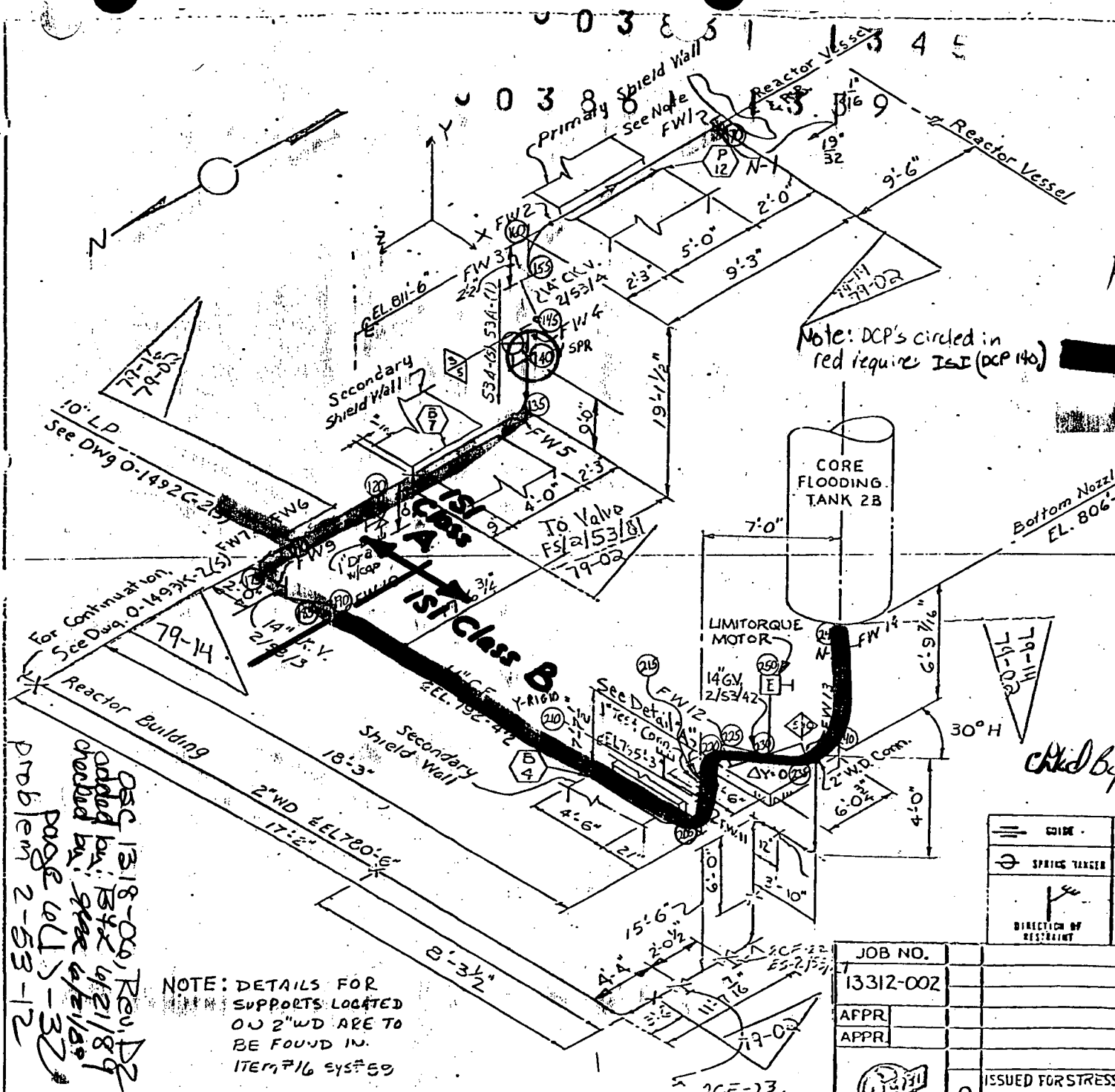
Unit 2
 Item 4
 Prob. 2-001

- 3) FW = Field Weld.
 4) Dimensions As Sh.
 The Cold Erector
 5) Typical Shielding.
 6) Pipe Between FW
 Installed Before Con
 And Secondary Shie
 7) Response Curve

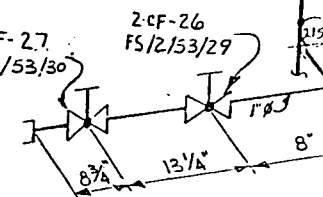
Note: DCP's circled in
 red require ISI (DCP 140)

Class B ISI

Class A ISI



Bottom Nozzle
 EL. 806'-9 7/16"



DETAIL 'A'

chkd by: bny 11/15/84

NOTE: DETAILS FOR
 SUPPORTS LOCATED
 ON 2" WD ARE TO
 BE FOUND IN
 ITEM #16 SYSTEM 59

OSC 1318-00, Rev. D2
 added by: BSK 4/21/89
 checked by: gte 4/21/89
 page 6(1) - 32
 problem 2-53-12

WIDE	RESTRAINT	SECTION	ANALYST
SPRING TENSION	RIGID HANGER	SECTION	ANALYST
DIRECTION OF RESTRAINT	DIRECTION OF EXPANSION	SECTION	ANALYST

JOB NO.	13312-002	DUKE	CONEE NUCLEAR
AFPR		CORE FLOOR	
AFPR			
ISSUED FOR STRESS ANALYSIS	RELATIVE TO NRC IEB 7914	CHD	APPR
NO.	0	CHD	APPR
REVISION		CHD	APPR
DATE		CHD	APPR

COMPLETE FORM BY PRINTING WITH BLACK BALL POINT PEN OR TYPE

DUKE POWER COMPANY
NUCLEAR STATION

INFORMATION
ONLY

Problem Investigation Report Serial No. 4-091-0093
Station CRONCE
Licensee Event Report No. _____

I. Problem Occurred-Time/Date: UNKNOWN Discovered-Time/Date: 9-9-91 / 14:30
Unit(s): All Unit Status At Time Problem Occurred/Discovered: Unit 1 Refueling Outage
Description and Cause of Problem: During removal of ISI CFA it was discovered that
inspections had been performed using the wrong acceptance standards for
ND376 to vessel welds.

Other Duke Stations Affected ☒ Yes ☐ No Determined By/Date: TJ Coleman 9-9-91
Comments: _____

Location of Problem: CRONCE
Method Used to Discover Problem: REVIEW PROCESS
Immediate Corrective Actions Taken/To Be Taken: NONE

Work Stoppage Notification (Form QCK-2A) Serial No.: N/A
Information Sources/References (Work Requests, Documents Violated, etc.): NDI-25

Originated By: TJ Coleman Date: 9-9-91 Dept./Group/Section: QA Tech Sup

II. Compliance Evaluation-Item/System Operable ☒ Yes ☐ No ☐ Not Applicable
Evaluated By/Date: Rick Matheson 9/10/91 Comments: _____
Reportable ☐ Yes ☒ No Reportable Per: ☐ 50.73 Section ☐ 50.72 Section
☐ 73.71 Section ☐ T.S./Lic Cond Section ☐ Part 21 ☐ Other: _____ ☐ Part 50.9
Evaluated By/Date: Rick Matheson 9/10/91 Comments: _____

III. Telecon/ENS Report to NRC Time/Date: _____
NRC Contactee(s): _____ DPC Contactor(s): _____
Telegraph/Mailgram/Facsimile Transmission to NRC-Date: _____
Date Notified: NRC Res. Inspector: _____ Star Manager: _____
General Office: _____ Comments: _____

IV. Investigation Assigned To: _____ NRC Rep: _____ Due Date: _____
Date Due to Compliance after Evaluation: _____
PIR Review (Compliance): _____ Date: _____
PIR Station Manager Approval: _____ Date: _____

V. Further Action/Evaluation Required ☒ Yes ☐ No (Explain Below):
Page 2 Assigned To: QA-G.O.
Comments: _____

Compliance Review: _____ Date: _____ QA Review: TJ Coleman Date: 10-23-91

Distribution

25 9/10/91

Initial	Originator	<u>Suppl 4</u>	<u>P. Harman</u>	<u>P. Blum</u>	<u>B. Heston</u>	<u>B. Reese</u>	<u>R. Ryan</u>
<u>9-10-91</u>	<u>T. Coleman</u>	<u>H. Brown</u>	<u>B. Brown</u>	<u>P. Blum</u>	<u>B. Heston</u>	<u>B. Reese</u>	<u>R. Ryan</u>
Final	Originator						

PROBLEM INVESTIGATION REPORT

Page 2
PIR No.

4-091-0093

VI. Proposed Resolution of Problem SEE ATTACHMENT 1

Other Approved TL Tucker 10/7/91

Date

Other Approved _____

Date

SCAE Required ☐ Yes ☒ No

SCAE Assigned To: _____

Approved

By

Date

Approved

Date

Determined By/Date

Date

Date

Serial No.

Remarks The root cause and corrective action to prevent recurrence is adequately addressed in Section VI. PIR 1491-0174 was written at McLean-Norfolk station and PIR 6-191-0439 was written at Potomac addressing its system.

VII. QA Verification Requirements Verify the actions identified in Section VI are performed with appropriate procedures

Assigned To QA Tech Support

11-20-91

Date

VIII. Corrective Action Completed

Approved

Date

IX. QA Verification Results

Completed By

Date

QA Approval

Date

Remarks

Final QA Review

Date

Proposed Resolution to PIR 4-091-0093

All of the nozzle-to-shell welds (ASME Section XI C-B Welds) for the second interval at Oconee Units 1, 2, and 3 have been reviewed to determine the extent of this situation. This review revealed that this was not an isolated case and the incorrect acceptance criteria was used for all nozzle-to-shell welds.

The following corrective actions will be taken:

- Procedure NDE-25 will be revised to clarify when to use Appendix A vs the other ISI acceptance Appendices. As a result of this revision, training will be conducted for all Level II MT/PT Inspectors at Oconee. (During the process of investigating this situation, it was identified that procedure NDE-35 is worded similar to NDE-25 and also will be revised for clarification).
- The training program will be reviewed by the NDE Level III Examiner to ensure that the lesson plan adequately addresses how to go about selecting the acceptance criteria in different situations.
- An Addenda will be written to the ISI Plan to re-schedule the nozzle-to-shell welds for re-examination.

The following is a list of the ASME Section XI Item Numbers assigned to the nozzle-to-shell welds which were reviewed for this disposition:

UNIT 1

C02.010.001
C02.010.002
C02.010.003
C02.010.004
C02.021.001A
C02.021.002A
C02.021.003A
C02.021.004A
C02.021.005A
C02.021.006A

UNIT 2

C02.010.001
C02.010.002
C02.010.003
C02.010.004
C02.021.001A
C02.021.002A
C02.021.003A
C02.021.004A
C02.021.005A
C02.021.006A

UNIT 3

C02.010.001
C02.010.002
C02.010.003
C02.010.004
C02.021.001A
C02.021.002A
C02.021.003A
C02.021.004A
C02.021.005A
C02.021.006A

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9/25/89
9/29/21

STATION Oconee UNIT 2 FILE NO. OSC- 1316-06
SUBJECT RESULTS /LOCATIONS (WELD POINTS) REQUIRING INSERVICE INSPECTION (ISI)
REV. 24 BY JMM DATE 10-19-84
SHEET NO. 601-105 PROBLEM NO. 2-03-05 CKD BY JWP DATE 11-8-84

The second ten year interval Inservice Inspection Plan (ISI) for Oconee Units 1-3 is written to the ASME Boiler and Pressure Vessel Code (ASME BPVC), Section XI, Winter 1980 Adenda.

Selection of piping welds to be examined is predicated upon the calculated stress levels at weld joints within the system. Therefore, the piping analyst must provide input in this area to the Quality Assurance Department.

Original piping systems at Oconee were designed to the Nuclear Power Piping Code, USAS B31.7 and the Power Piping Code, USAS B31.1.0. However, ISI (for the second ten year interval) will be per the ASME BPVC. The applicable Inservice Inspection classes are defined on the OFD drawings. These classifications are also noted in the Nuclear Production Department's "Safety-Related Structures, Systems and Components" Manual.

J. O. Barbour's letter of March 27, 1984 (Reference # 4) defined the applicable systems for ASME Class 1 and 2 piping from an Inservice Inspection standpoint. R. L. Cope's letter of May 18, 1984 (Reference # 5) provided our response to the Quality Assurance Department, and the method to be used to generate the data needed by the Quality Assurance Department.

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9/29/89

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STATION Oconee UNIT 2 FILE NO. OSC-1316-06
SUBJECT RESULTS/LOCATIONS(WELD POINTS) REQUIRING INSERVICE INSPECTION (ISI)
REV. DA BY WMM DATE 10-19-84
SHEET NO. 6612-106 PROBLEM NO. 2-03-05 CKD BY JWP DATE 11-9-84

Criteria for Identification of Locations (Weld Points) Requiring Inservice Inspection is as follows:

Class 1 Piping - Reference IWB-1000 and Table IWB-2500-1

For all piping greater than 1 inch nominal pipe size identify all terminal ends and joints in each pipe or branch run connected to other components where stress levels exceed the following limits:

- (1) primary plus secondary stress intensity range of $2.4 S_m$ for ferritic and austenitic steel; and
- (2) cumulative usage factor of 0.4

Welded attachments shall also be reviewed to the above criteria when the attachment base material design thickness is 5/8 inch and greater.

Class 2 Piping - Reference IWC-1000 and Table IWC-2500-1

For all piping greater than 4 inch nominal pipe size with an operating pressure above 275 psig or an operating temperature above 200°F identify all welds at locations where the stresses under the loadings resulting from normal and upset plant conditions as calculated by the sum of equations 9 and 10 exceed 0.8 ($1.2 S_h + S_A$).

Welded attachments shall also be reviewed to the above criteria when the attachment base material design thickness is 3/4 inch and greater.

General Notes:

- 1 - All locations exceeding stress levels for Class 1 or 2 piping (as applicable) shall be identified to the Quality Assurance Department, not just known pipe weld locations. The Quality Assurance Department can use this information in conjunction with field weld isos to determine if two pieces of pipe were welded in these areas.
- 2 - Stress levels in overlap regions shall be reviewed in all overlapping problems.
- 3 - If Class 2 piping analysis includes a "Class 2 Break Location Summary" (with the appropriate input parameters), then SUPERPIPE has tabulated stresses levels for evaluation. Locations where stress ratios exceed 1.0 (stresses exceeding $0.8 [1.2 S_h + S_A]$) require identification to the Quality Assurance Department for ISI. Welded attachments still require review by the analyst as noted above.

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9/29/87

STATION Oconee UNIT 2 FILE NO. OSC-1316-06
SUBJECT RESULTS / LOCATIONS (WELD POINTS) REQUIRING INSERVICE INSPECTION (ISI)
REV. 2A BY WMM DATE 10-19-84
SHEET NO. 661-101 PROBLEM NO. 2-03-05 CKD BY JWP DATE 11-9-84

Stress levels in this analysis calculation have been reviewed per the criteria defined in the ASME Boiler and Pressure Vessel Code, Section XI, Winter 1980 Addenda.

Piping System Feedwater

Flow diagram(s) OFD-121B-23

- ☐ No locations identified in this analysis which require inservice inspection.
- ☒ 1 locations identified in this analysis which require inservice inspection. Any locations identified which are not obvious weld location(s) should be reviewed by the Quality Assurance Department in conjunction with field weld isos to determine if any weld(s) exist in these area(s). Summary of locations provided below:

LOCATION NO.	DCP (s)	PIPE SIZE	TEMPERATURE (°F)/ PRESSURE (PSIG)	ISI CLASS
1	460*	24"	475 / 275	3
2				
3				
4				
5				
6				
7				
8				
9				
10				

- Notes:
- Locations requiring inservice inspection are shown on the attached isometrics/sketches, pages 661-101 to 661-110.
 - ASME Class 1 = ISI Class A.
ASME Class 2 = ISI Class B.
* No evaluation of local stresses performed at this welded attachment (thickness 3/4"). Stress levels assumed to exceed criteria for ISI. If stresses are evaluated and resulting stress levels do not exceed stress criteria for ISI, this location DCP may be deleted from ISI requirements.
 - Welded Attachments (as applicable) have been reviewed in OSC-1316-07 and OSC-1335-07. Results of this review noted above.

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A diagram of a circle with a horizontal diameter and a vertical diameter. The horizontal axis is labeled with 0° at the left end and 180° at the right end. The vertical axis is labeled with 90° at the bottom and 270° at the top. A dashed arc is drawn in the upper-left quadrant, starting from the 0° point and ending at a point on the circle. A line segment connects the center of the circle to this point on the dashed arc.

1. PIPE SPEC.
Ⓐ 24" OD SCH. 80 ASTM ,
2. DESIGN DATA.
Ⓐ 1275 PSIG @ 475° F.
3. DIMENSIONS AS SHOWN
IN THE COLD ERECTED
4. FW.= FIELD WELD.
5. TYPICAL SHIELDING PEN
6. PIPE SECTION WELDED
AND FW-B-18 SHALL BE
PENETRATION ROOM.
7. MAX. OPER. TEMP.
1253 PSIG @ 460° F.

Unit 2
Item 2
Prob. 2-03-05

~~unclassified~~ Denotes
area requiring ISI
Class B review.

FOR CONT. SEE
DWG. NO. O-1490B-4(S)

CALC. NO. OSC: 1316 06

PAGE 6(1)-108 Rev. D4

ADDED BY: *[Signature]*

DATE 9-25-87

CHECKED BY: *LSA*

DATE 9/29/82

△			DATE 1/2/80
△			
△			
△	11-12-80	REDRAWN FOR STRESS ANALYSIS DUE TO ILLEGIBILITY	PRC
REV.	DATE	REVISIONS	BY

**DUKE POWER COMPANY
OCONEE NUCLEAR STATION
UNITS 1, 2, & 3**

MAIN FEEDWATER
WEST GENERATOR - 2B



BECHTEL

GAITHERSBURG

ISO 0
PIPE
STEEL

JOB NO.

DRAWING A

13312-002

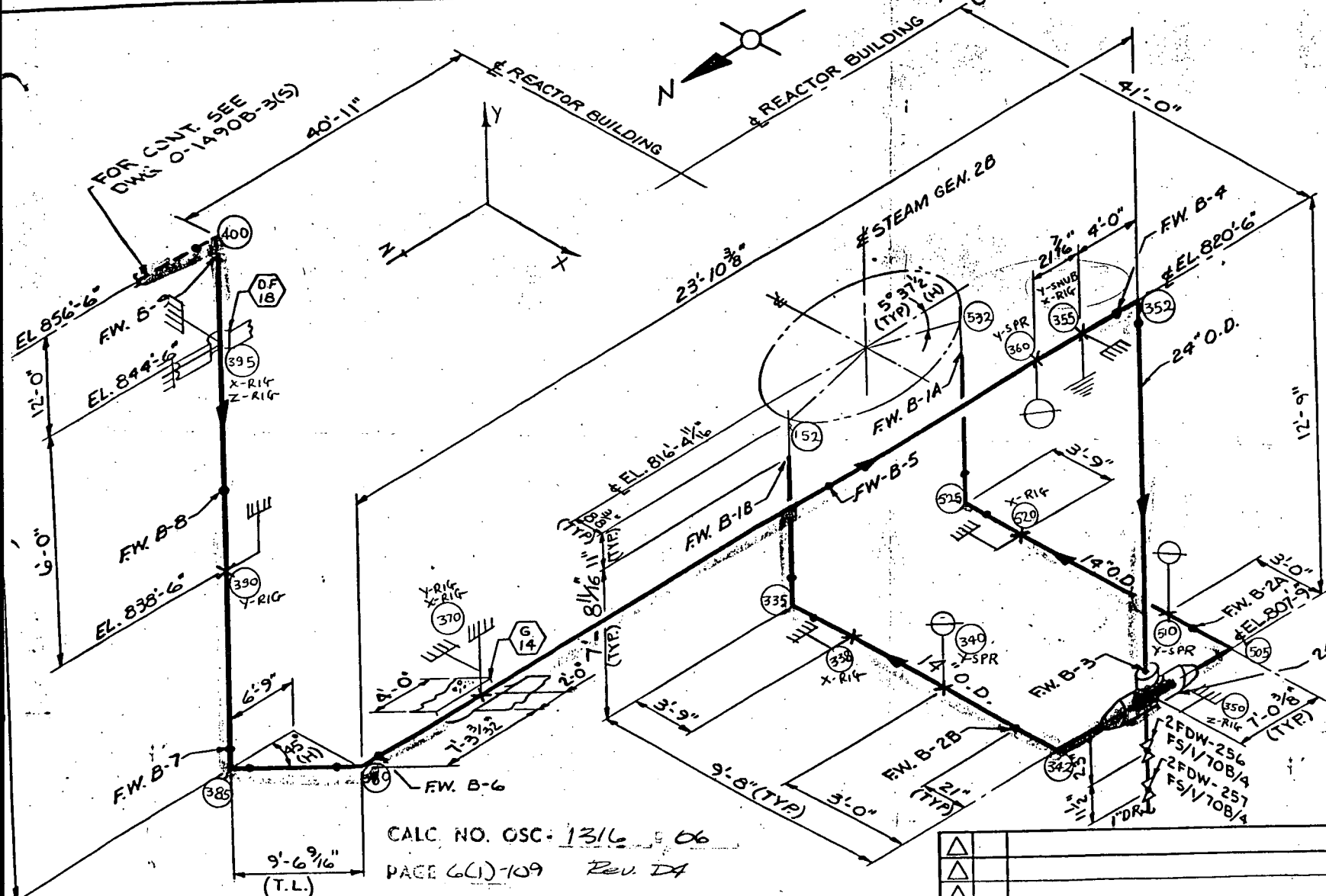
O-14

GENERAL NC

- 1) PIPE SPEC:
 Δ 14" O.D. SCH. 80, AS
 Δ 24" O.D. SCH. 80, AS
- 2) DESIGN DATA:
 Δ 1275 PSIG @ 475
- 3) DIMENSIONS AS SH.
 PIPE IN THE COLD
- 4) F.W. = FIELD WELD.
- 5) TYPICAL SHIELDING
- 6) MAX OPER. TEMP.:
 1253 PSIG @ 460°

Unit 2
Item. 2
Prob. 2-03-05

Denotes
area requiring ISI
Class B review



CALC. NO. OSC: 1316 06









PAGE 6(1)-109 Rev. DA

ADDED BY: *JRG*


DATE 7-25-89

CHECKED BY: *BL*

DATE 9/29/84

	GUIDE		RESTRAINT	
	SPRING HANGER		RIGID HANGER	
	DIRECTION OF		DIRECTION OF	
				SNUBBER

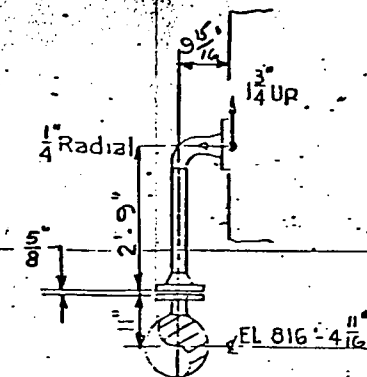
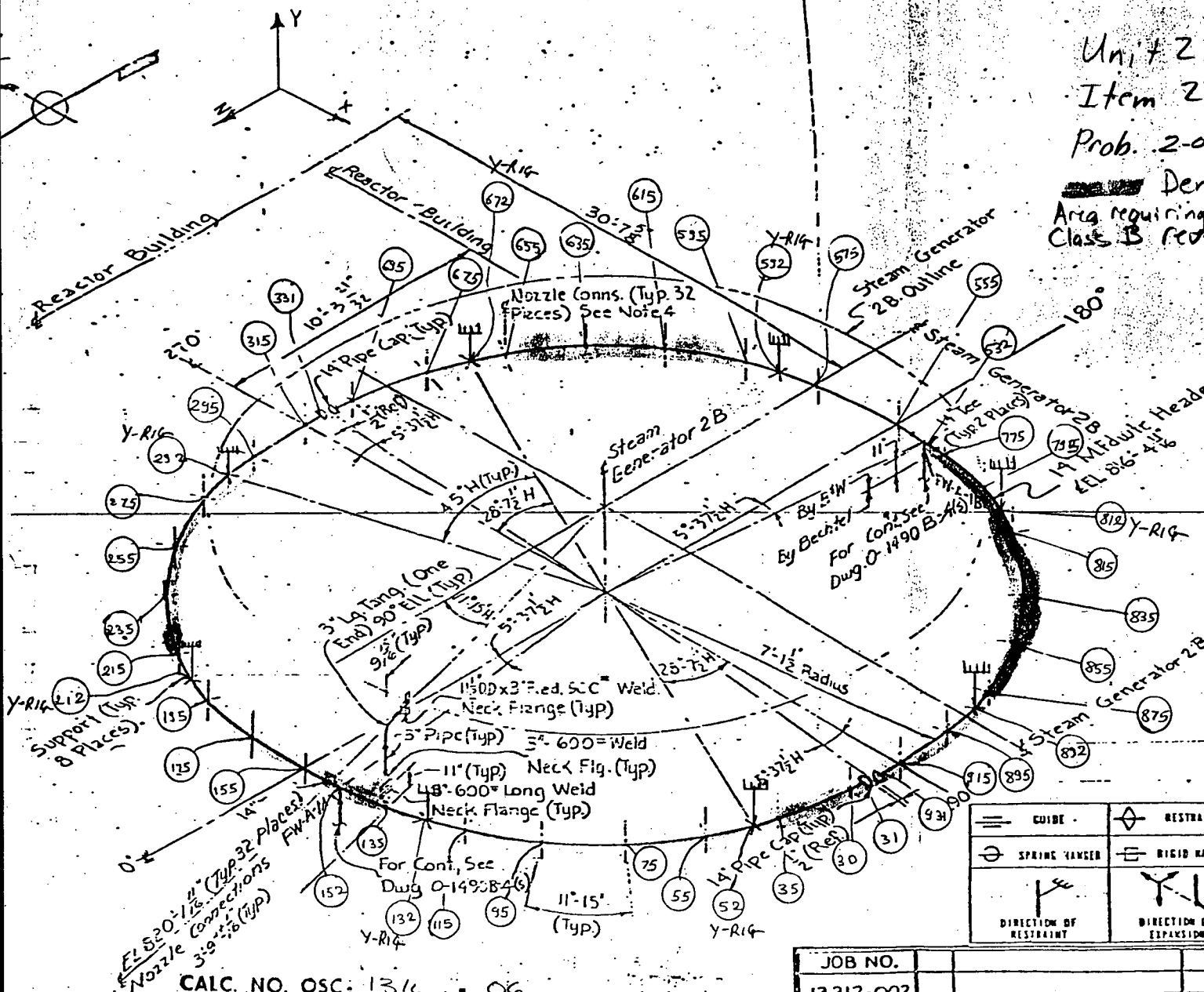
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△			
△			
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△	141280	REDRAWN FOR STRESS ANALYSIS DUE TO ILLEGIBILITY	
REV. DATE	REVISIONS		BY
DUKE POWER COMPANY OCONEE NUCLEAR STATION UNITS 1, 2, & 3		 GAITHERSBURG	ISO - PIPE DWGS. STEEL
MAIN FEEDWATER SYSTEM WEST GENERATOR-2B		JOB NO.	DRAWING
		13312-002	O-SHEET

GENERAL NOTE

- 1) Pipe Spec
 - △ 3" OD, Sch 80, ASTM A-106
 - △ 14" OD, Sch 80, ASTM A-106
- 2) Design Data:
 - △ 1050 PSIG @ 600° F, Oper. Temp.
 - Oper. Press. 1216 PSIG.
- 3) Dimensions As Shown Are For Cold Erected Position.
- 4) For Details On Nozzle Conns.,
N=146422E, 146423E & 146424E

Unit 2
Item 2
Prob. 2-03-05
Denotes
Area requiring ISI
Class B Review



Movements Due To Thermal Expansion Of Steam Generator (Typical Of 32 Nozzle Conns.)

	GUIDE		RESTRAINT				
	SPRING HANGER		RIGID HANGER		ANCHOR		
	DIRECTION OF RESTRAINT		DIRECTION OF EXPANSION		SKETCHER		

R. D. (Signature)	8-26-80	DN	9/12/80
Analyst	Date	Chk.	Date
Prob. #	Rev.		Sys

JOB NO.	13312-002
AFPR	
ISSUED FOR STRESS ANALYSIS	RELATIVE TO NRC IEB 794
NO.	REVISION
CHKD	APPR
DATE	DATE

DUKE POWER CO	
CONNEE NUCLEAR STATION UNIT	
MAIN FEEDWATER	
WEST STEAM GENER	
DRN. TW	2-2-70 CHKD.
INSP.	APPR.
SCALE: NONE	No. 0-1

CALC. NO. OSC: 1316 - 06

PAGE 6(1)-110 Rev. 1A

APPR. BY: (Signature)

DATE 9-25-89

CHECKED BY: (Signature)

DATE System No. 03

9/27/89

11.0 Class 1 and 2 Repairs and Replacements

As required by ASME Section XI, 1980 Edition, a record of the Class 1 and 2 Repairs and Replacements for work performed from October 26, 1990 through March 3, 1992 is provided and is included in this section of the report. The individual work request documents are on file at the Oconee Nuclear Station.

REPAIRS/REPLACEMENT LOG

ASME SECTION XI - 1980

OCONEE NUCLEAR STATION

Interval Covered: From: 10-26-90 To: 03-03-92

Note: (1) Unit #2 Refueling Outage #12 Start-Up Leak
Test * Indeterminate from Work Request Review

Prepared By: C.R. Hyson Date: 3-5-92

Reviewed By: T.J. Coleman Date: 3-9-92

Transmitted to
ISI Supervisor By: T.J. Coleman Date: 3-9-92

REPAIRS/REPLACEMENT LOG
UNIT 2, RFO-12
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	ASME	DESCRIPTION
57714B	1	REPLACED BOLTING UPPER & LOWER MANWAYS B OTSG
57715B	1	REPLACED BOLTING UPPER & LOWER MANWAYS A OTSG
57470D	1	REPLACE VALVE & BOLTING 2RC-66
51534I	2	REPLACE B/B BOLTING 2LP-17
53682I	2	REPLACED BOLTING 2 'C' LPI PUMP FLANGE
51245K	1	REPLACED BOLTING 2A-OTSG UPPER PRIMARY HANDHOLE
57647F	2	REPLACED BOLTING 2SSH-22
54445G	1	REPLACED SEAL GLAND BOLTING 2B2 RCP - REFUELING OUTAGE 10
54446G	1	REPLACED SEAL GLAND BOLTING 2B1 RCP- REFUELING OUTAGE 10
54447G	1	REPLACED SEAL GLAND BOLTING 2A2 RCP, REFUELING OUTAGE #10
54448G	1	REPLACED SEAL GLAND BOLTING 2A1 RCP- REFUELING OUTAGE 10
57004E	2	REPLACED FLANGE BOLTING RBCU 'A'
93795C	2	REPLACE PLUG 2PR-42
57708F	2	REPLACED BOLTING 2A LPI COOLER
64701C	2	REPLACED B/B BOLTING 2LP-32
21314C	2	REPLACED B/B BOLTING 2BS-1
51028K	2	REPLACED VALVE 2-BS-10
93784C	2	REPLACED IN-LINE FLANGE BOLTING 2CC-7
21021C	2	REPLACED DISC 2LP-69

REPAIRS/REPLACEMENT LOG
UNIT 2, RFO-12
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	ASME	DESCRIPTION
24500C	1	REPLACED IN-LINE FLANGE BOLTING 2HP-334
50954K	2	REPLACED BOLTING AFW RISER #1 A-OTSG
50949K	2	REPLACED BOLTING MFW RISER #19 A-OTSG
50948K	2	REPLACED BOLTING MFW RISER #14 A-OTSG
57362C	1	REPLACED IN-LINE FLANGE BOLTING & VALVE 2RC-68
57361C	1	REPLACED VALVE 2RC-67
50524J	1	REPLACED BOLTING B OTSG LOWER PRIMARY HANDHOLE
50938K	2	REPLACED BOLTING MFW RISER #2 A-OTSG
50920K	1	REPLACED BOLTING CRDM FLANGE # 68
50917K	1	REPLACED BOLTING CRDM FLANGE #1
50918K	1	REPLACED BOLTING CRDM FLANGE #20
50919K	1	REPLACED BOLTING CRDM FLANGE # 26
57187F	1	VT & PT OF NOZZLE DAM HOLD-DOWN, RING FILLET WELDS ON 2B OTSG
57714B	1	MT'D UPPER & LOWER MANWAY STUDS ON 'B' GENERATOR
57715B	1	MT'D UPPER & LOWER MANWAY STUDS ON 'A' GENERATOR
33994C		REPLACED BOLTING MATERIAL ON HANGER # 2-07A-0-2400A-H28

REPAIRS/REPLACEMENT LOG
UNIT 2, RFO-12
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	ASME	DESCRIPTION
92002171		REPLACED U-BOLT ON SUPPORT FOR 2LP23,NO ID HAS BEEN ASSIGNED.
50894K		INSTALLED MISSING COMPONENTS ON HANGER 2-01A-0-1441-R8
50909K		REINSTALLED PREVIOUSLY REMOVED HANGER,2-53B-10-0-435B-H4
51464J		REINSTALLED PREVIOUSLY REMOVED HANGER, 2-54A-435B-EMOH-R2-2
51002K		REPLACED BOLTING MATERIAL ON HANGER 2-57-0-1481A-RJP-H0801
57742B		REPLACED SNUBBER ON HANGER 2-50-0-1481A-H7
51242K		REWELDED HANGER BACK IN PLACE, 2-54A-435B-DE12
91081841		MODIFIED HANGER 2-07A-6-0-1400A-H65
91081841		REPLACED SPRING CAN AND BOLTING 2-07A-6-0-1400A-H55
91081841		CHANGED SPRING CAN SETTINGS 2-07A-6-0-1400A-H57
91081841		REMOVED HANGER 2-07A-6-0-1400A-H68
91081841		REMOVED HANGER 2-07A-6-0-1400A-H50
91081841		REMOVED HANGER 2-07A-6-0-1400A-H51
91081841		REMOVED HANGER 2-07A-6-0-1400A-H52
91081841		REMOVED HANGER 2-07A-6-0-1400A-H53
91081841		REMOVED HANGER 2-07A-6-0-1400A-H54

REPAIRS/REPLACEMENT LOG
UNIT 2, RFO-12
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	ASME	DESCRIPTION
91081841		MODIFIED HANGER 2-07A-6-0-1400A-H69
91081841		INSTALLED HANGER 2-07A-1400A-H4089
91081841		INSTALLED HANGER 2-07A-1400A-H4090
91081841		INSTALLED HANGER 2-07A-1400A-H4091
91081841		INSTALLED HANGER 2-07A-1400A-H4092
91081841		MODIFIED HANGER 2-07A-0-1400A-H16
91082855		REMOVE HANGER 2-03A-1-0-1401A-SR50
91082855		MODIFIED HANGER 2-03A-1401A-DE33
91082855		INSTALLED HANGER 2-03A-1401A-H4087
91082855		INSTALLED HANGER 2-03A-1401A-H4088
91090707		INSTALLED NEW S/R #2-51A-1479D-H6511
91090707		INSTALLED NEW S/R #2-51A-1478D-H6512 AND H6513
90036534		MODIFIED S/R #2-14B-0-1401A-JB-1901
90036534		MODIFIED S/R #2-14B-1400A-JEJ-2001
91077988		PERMANENTLY REMOVED S/R'S 2-59-0-1478A-H1,H2,H3,H8, H9,H19,H20
91077988		MODIFIED S/R #2-59-0-1478A-H24,H7

REPAIRS/REPLACEMENT LOG
UNIT 2, RFO-12
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	ASME	DESCRIPTION
91077988		WELDS REPLACED FOR REINSTALLATION ON S/R # 2-59-0-1478A-H4,H6
91077988		ADDED AND WELDED SHIMS TO S/R #2-59-0-1478A-H23,H21
91077988		MODIFIED S/R #2-59-0-1478A-H10, H11
92011982		PERMANENTLY REMOVED S/R #2-01A-0-1441-R1
91077988		MODIFIED S/R #2-59-0-1478A-H12,H16,H17,H18, H28,H29,H30
91077988		INSTALLED NEW S/R #2-59-0-1478D-H6404 THROUGH H6410
92005293		MODIFIED S/R #2-64-1479D-H6451,H6515,H6514
92012337		ADDED WELD TO S/R #2-54A-3-0-1436A-R7
92012338		MODIFIED S/R #2-53A-0-1478A-H4B
92006539		RESET SPRING CAN SETTING ON S/R #2-53-0-1479A-H1
91081674	2	INSTALLED VALVES 2LPSW-878,2LPSW-879
92002796	1	STABILIZE AND PLUG TUBES OTSG B
92002802	1	STABILIZE AND PLUG TUBES OTSG A
91080584	2	REPLACED B/B BOLTING 2LP16
92000839	2	MODIFIED WAFER 2PR-6
92000725	2	MODIFIED WAFER 2PR-5

REPAIRS/REPLACEMENT LOG
UNIT 2, RFO-12
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	ASME	DESCRIPTION
92005050	2	REPLACED 2CC-24
92005049	2	REPLACED 2CC-20
91080624	2	REPLACED B/B BOLTING 2HP-107
91077988	1	REPLACED REACTOR BLDG COMPONENT DRAIN HEADER AND PIPING
92006831	2	REPLACED VALVE 2HP-20
92006594	2	REPLACED VALVE 2FDW-233
91084349	2	REPLACED DISC 2MS-76
91081674	2	INSTALLED R.B. COOLING VALVES
90036534	2	REPLACED VALVES 2LPSW 18, 21, 24
92000903	2	MODIFIED 2PR-2
91094738	2	MODIFIED 2PR-1