

FORM NIS-1 (back)

8. Examination Dates 3/28/87 to 9/21/88 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 Nov 23 19 88 Signed Duke Power Co 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 North Carolina and employed by The HSBI & I-Co.* of Hartford, Co have inspected the components described in this Owners' Data Report during the period 3/28/87 to 9/21/88 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 Nov. 29 19 88
Rayford L. Elgin Commissions NC 828
Inspector's Signature National Board, State, Province and No.

* The Hartford Steam Boiler Inspection & Insurance Company
1117 Perimeter Center W.
Suite E-301
Atlanta, Georgia 30338

INSERVICE INSPECTION REPORT

UNIT 3 OCONEE 1988 REFUELING
OUTAGE 10

Location: Oconee County, South Carolina
NRC Docket No. 50-287
Commercial Service Date: December 16, 1974

Owner: Duke Power Company
422 S. Church St.
Charlotte, N. C. 28242

Revision 0

Prepared By: A. J. Hogg Jr. Date 11-15-88
Reviewed By: [Signature] Date 11-21-88
Approved By: [Signature] Date 11/23/88
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1.0 Summary of Inservice Inspection

This report describes the Inservice Inspection of Duke Power Company's Oconee Nuclear Station Unit 3 during the 1988 Refueling Outage (also referred to as Outage 10).

Included in this report are the final inservice inspection plan, the inspection results for each item, a summary for each category of examination and corrective action taken when unacceptable conditions were found. In addition, there is a section included for repairs and replacements required since March 28, 1987.

1.1 Class 1 Inspection

The Class 1 Inspection included examinations on Steam Generator 3B, Letdown Coolers, Reactor Coolant, Pressurizer Surge and High Pressure Injection System Piping.

Reactor Coolant Pump 3A1 Seal Gland Bolts, Washers and Nuts were examined. Examinations were also performed on Reactor Coolant Pump 3A2, 3B1 and 3B2 Seal Gland Nuts. Steam Generator 3A Inspection Cover Bolting, valve bolting, Reactor Vessel CRDM Bolting and Reactor Vessel CRDM Housing Welds received examinations.

Visual examinations were performed on the Class 1 Pressure Boundary during inservice leakage tests. Also, visual examinations were performed on Class 1 Component Supports of the Pressurizer Surge, Pressurizer Relief Valve Vent, Pressurizer Spray, High Pressure Injection, Low Pressure Injection and Reactor Building Component Drain Systems.

The Inconel 600 Tubing in Steam Generators 3A and 3B was inspected by eddy current during Outage 10. The results of the inspections are shown in Section 5 of this report.

Reportable indications were found on the Class 1 Inspections shown on the following pages. Inspection and evaluation data for each reportable indication found on Class 1 Items 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 Inspection included examinations on Steam Generator 3B Shell-to-Bottom Tubesheet Weld and Steam Generator 3A Outlet Nozzle-to-Shell Weld. Also included in the Class 2 Inspection were vessel integrally-welded attachments of Steam Generator 3B Feedwater Header Support, Core Flood Tank 3A and Core Flood Tank 3B Supports. Piping integrally-welded attachments of Main Steam, Reactor Building Spray and Steam Generator 3B Feedwater Header Supports were also examined. Circumferential butt welds in Low Pressure Injection, Reactor Building Spray, High

Pressure Injection and Auxiliary Feedwater, Main Feedwater and Main Steam Systems were examined. Longitudinal welds were also inspected in Low Pressure Injection, Reactor Building Spray and Main Steam Systems.

Visual examinations were performed on the Class 2 Pressure Boundary during system functional tests. Also, visual examinations were performed on Class 2 Component Supports of the Main Steam, Main Feedwater, Low Pressure Injection, Reactor Building Spray, Component Cooling and Spent Fuel Cooling Systems.

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 at Oconee 3 consisted of an ultrasonic and radiographic inspection of High Pressure Injection and Makeup Nozzle Safe-Ends. A detailed description of each examination is found in the final Inservice Inspection Plan in Section 3 of this report. Results are found in Section 4.

1.4 Identification Numbers

Owner: Duke Power Company, 422 S. Church St., Charlotte, NC 28242

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

Plant Unit: 3

Owner Certificate of Authorization: N/A

Commercial Service Date: 12-16-74

<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	620-0009-51-52	N/A	N-125
Steam Generator "A"	Babcock & Wilcox	620-0009-55-1	N/A	N-127
Steam Generator "B"	Babcock & Wilcox	620-0009-55	N/A	N-128
Pressurizer	Babcock & Wilcox	620-0009-59	N/A	N-126

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B06

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 3 CLASS 1 REPORTABLE ITEMS - OUTAGE 10

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	INSP LOCS.	PROC. REQ. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B06.200.006	3RCP-3A1-WASH	OM-1201-1217 OM-2201-1134-001	___ ___ ___	VT1 QCL-13	----- _____ _____	___ ___ ___	----- ----- -----	3RCP A1 SEALGLAND NUTS AND WASHERS 8 EACH PIR 3-088-0196 PIR 3-088-0196
B06.200.008	3RCP-3B2-WASH	OM-1201-1217 OM-2201-1134-001	___ ___ ___	VT1 QCL-13	----- _____ _____	___ ___ ___	----- ----- -----	3RCP B2 SEALGLAND NUTS AND WASHERS 8 EACH

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B16

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 3 CLASS 1 REPORTABLE ITEMS - OUTAGE 10

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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	3SGA-TUBES	***** *****	_____	ET	ISI-418	INCO	00.62 49065 00.040	49065	CAL. BLOCKS - 49154 , 49155 , 49156 , 49157 , 49158 , B&W-1170027B AND B&W-1170096B PIR 3-088-0206
B16.011.002	3SGB-TUBES	----- _____	_____	ET	ISI-418	INCO	00.62 49013 00.040	49013	CAL. BLOCKS - 49154 , 49155 , 49156 , 49157 , 49158 , B&W-1170027B AND B&W-1170096B PIR 3-088-0206

2.0 Status of Required Inspections

The completion status of inspections required by the 1980 ASME Code Section XI, 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	1 Weld	12.50%	Yes
B-B	Pressure Retaining Welds in Vessels Other than Reactor Vessel	14 Welds	6 Welds	42.85%	No
B-D	Full Penetration Welds of Nozzles in Vessels	31 Inspections	7 Inspections	22.58%	Partial
B-E	Pressure Retaining Partial Penetration Welds in Vessels	31 Welds	31 Welds	34% Credited	No
B-F	Pressure Retaining Dissimilar Metal Welds	36 Welds	16 Welds	44.44%	No
B-G-1	Pressure Retaining Bolting Greater than 2 Inch Diameter	553 Items	191 Items	34.53%	Yes
B-G-2	Pressure Retaining Bolting 2 Inches and Less in Diameter	*35 Connections	18 Connections	51.42%	No
B-H	Integral Attachment for Vessels	12 Attachments	4 Attachments	33.33%	No
B-J	Pressure Retaining Welds in Piping	102 Welds	35 Welds	34.31%	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-K-1	Integral Attachments for Piping, Pumps and Valves	1 Attachment	None	0%	N/A
B-L-1	Pressure Retaining Welds in Pump Casings	1 Weld	1 Weld	100% Credited	Yes
B-L-2	Pump Casings	1 Casing	1 Casing	100% Credited	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	2 Valves	100% Credited	Yes
B-N-1	Interior of Reactor Vessel	3 Items	1 Item	33.33%	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	None	0%	Yes
B-O	Pressure Retaining Welds in Control Rod Housings	3 CRD Housings	2 CRD Housings	66.66%	Yes
B-P	All Pressure Retaining Components	138 Components	57 Components	41.30%	Yes
B-Q	Steam Generator Tubing	100% Station Technical Specifications Met			N/A
F1.01	Class 1 Component Supports	85 Supports	38 Supports	44.70%	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	4 Welds	40%	No
C-B	Pressure Retaining Nozzle Welds in Vessels	5 Welds	2 Welds	40%	No
C-C	Integral Attachments for Vessels, Piping, Pumps and Valves	55 Attachments	26 Attachments	47.27%	No
C-D	Pressure Retaining Bolting Exceeding 2 Inches in Diameter	None	N/A	N/A	N/A
C-F	Pressure Retaining Welds in Piping	227 Welds	92 Welds	40.52%	No
C-G	Pressure Retaining Welds in Pumps and Valves	None	N/A	N/A	N/A
C-H	All Pressure Retaining Components	90 Components	35 Components	38.88%	No
F1.02	Class 2 Component Supports	351 Supports	166 Supports	47.29%	No

Augmented Inspections

<u>Description</u>	<u>Percentage Complete</u>
Reactor Coolant Pump Flywheels:	33.33%
(1) Volumetric inspection of bore and keyway in place	
(2) Surface inspection of flywheel when removed	
(3) Volumetric inspection of flywheel when removed	
High Pressure Injection And Makeup Nozzle Safe-ends	71.42%

3.0 Final Inservice Inspection Plan For Outage 10

The final ISI plan presented in this section lists all examinations credited for Outage 10 at Oconee Unit 3. This includes ASME Section XI Class 1 and 2 and augmented inspections required by the plant technical specifications.

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-2600-1 (Class 1), IWC-2600 (Class 2), IWD-2600-1 (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: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 3 INSERVICE INSPECTION LISTING - OUTAGE 10

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B01.011.000	REACTOR VESSEL	CIRCUMFERENTIAL***** SHELL WELDS*****	=====	***	*****	*****	-----	*****	***** *****
B01.021.000	REACTOR VESSEL	HEAD WELDS***** CIRCUMFERENTIAL*****	=====	***	*****	*****	-----	*****	***** *****
B01.030.000	REACTOR VESSEL	SHELL TO FLANGE WELD *****	=====	***	*****	*****	-----	*****	***** *****
B01.040.000	REACTOR VESSEL	HEAD TO FLANGE WELDS *****	=====	***	*****	*****	-----	*****	***** *****

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER B02

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 3 INSERVICE INSPECTION LISTING - OUTAGE 10

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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****		***	*****	*****	-. -	****	*****
B02.012.000	***** PRESSURIZER	SHELL TO HEAD WELDS* LONGTUDINAL *****		***	*****	*****	-. -	****	*****
B02.031.000	**** STEAM GENERATOR	HEAD WELDS ***** CIRCUMFERENTIAL ****		***	*****		-. -		*****
B02.040.000	***** STEAM	GENERATORS TUBESHEET TO HEAD WELDS*****		***	*****	*****	-. -	****	*****
B02.040.003	3SGB-WG58-1	ISI-OCN3-004		UT	ISI-130	CS	08.500	40305	SG-3B UP.HD.\TUBESHEET PC.8 TO PC.51,NOTIFY NRC PRIOR TO INSP
B02.060.000	**** HEAT EXCHANGER	TUBESHEET TO SHELL** OR HEAD WELDS *****		***	*****	*****	-. -	****	**** INSPECTOR TO RECORD **** ** COOLER S\N ON INSP. DATA **
B02.060.002	3-LDCA-OUT-V4	OM-201-2933		UT	ISI-120	SS	08.62 00.875	40411	LDC-A OUT.TUBE SHT\CHNL. BODY PC.3 TO 2, INSPECTOR REC. S\N
B02.060.003	3-LDCB-OUT-V4	OM-201-2933		UT	ISI-120	SS	08.62 00.875	40411	LDC-B OUT.TUBE SHT\CHNL. BODY PC.3 TO 2, INSPECTOR REC. S\N

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B03

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 3 INSERVICE INSPECTION LISTING - OUTAGE 10

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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*****	_____	***	*****	*****	_____ _____ _____	*****	***** ***** *****
B03.100.000	REACTOR VESSEL	*****NOZZLE INSIDE RADIUS SECTION*****	_____	***	*****	*****	_____ _____ _____	*****	***** ***** *****
B03.110.000	***PRESSURIZER	NOZZLE TO VESSEL**** WELDS*****	_____	***	*****	*****	_____ _____ _____	*****	***** ***** *****
B03.120.000	***PRESSURIZER	NOZZLE INSIDE RADIUS SECTION*****	_____	***	*****	*****	_____ _____ _____	*****	***** ***** *****
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 **
B03.160.000	HEAT EXCHANGER	NOZZLE INSIDE RADIUS SECTION*****	_____	***	*****	*****	_____ _____ _____	*****	**** INSPECTOR TO RECORD **** ** COOLER S/N ON INSP. DATA **

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
OCONEE 3 INSERVICE INSPECTION LISTING - OUTAGE 10

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 NOZZLES *****	_____	***	*****	*****	_____ _____ _____	*****	***** ***** *****
B04.013.000	***** PARTIAL	PENETRATION WELDS*** INSTRUMENTATION ****	_____	***	*****	*****	_____ _____ _____	*****	***** ***** *****

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER B05

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
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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 GREATER THAN OR EQUAL TO 4 INCH
B05.020.000	***PRESSURIZER	NOZZLE TO SAFE END** BUTT WELDS		***	*****	*****	--- ---	*****	NOMINAL PIPE SIZE > OR EQUAL TO 4 INCHES
B05.021.000	*****PRESSURIZER	NOZZLE-TO-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 *****
B05.050.004	3PDA2-2	ISI-OCN3-012		UT	ISI-120	CS/SS	33.50 03.000	40350	A2 DISCH. PUMP SAFE END TO ELBOW UT FROM ELBOW SIDE
B05.050.004A	3PDA2-2	ISI-OCN3-012		UT	ISI-120	CS/SS	33.50 03.000	40397	A2 DISCH. PUMP SAFE END TO ELBOW UT FROM SAFE END SIDE
B05.050.004B	3PDA2-2	ISI-OCN3-012		PT	NDE-35	CS/SS	33.50 03.000	-----	A2 DISCHARGE PUMP SE TO ELBOW PC 49 TO 53
B05.051.000	CLASS 1 PIPING	DISSIMILAR METAL**** BUTT WELDS*****		***	*****	*****	--- ---	*****	NOMINAL PIPE SIZE < 4 INCH**** *****
B05.051.003	3PIA2-10	ISI-OCN3-008		PT	NDE-35	CS/IN	03.50 00.816	-----	A2 SUCTION DRAIN NOZZLE SAFE END PC 63 TO 64
B05.051.005	3PDA2-11	ISI-OCN3-012		PT	NDE-35	CS/SS	03.50 00.750	-----	A2 DISCHARGE HPI NOZZLE TO SAFE END PC 46 TO 47

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER B05

DUKE POWER COMPANY
 QUALITY ASSURANCE DEPARTMENT
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
 OCONEE 3 INSERVICE INSPECTION LISTING - OUTAGE 10

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B05.051.008	3PDB1-11	ISI-OCN3-013		PT	NDE-35	CS/SS	03.50 00.750	-----	B1 DISCHARGE HPI NOZZLE TO SAFE END PC 45 TO 47
B05.051.012	3PHA-13	ISI-OCN3-005		PT	NDE-35	CS/IN	07.50 03.500	-----	A HOT LEG RTE NOZ. SM X-AXIS PC 12 TO 7
B05.051.013	3PHA-14	ISI-OCN3-005		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	3PHA-15	ISI-OCN3-005		PT	NDE-35	CS/IN	07.50 03.500	-----	A HOT LEG RTE NOZ. SM Z-W AXIS PC 12 TO 7

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
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KEY: ITEM NUMBER B06

DUKE POWER COMPANY
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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***** *** REFERENCE NCI-01498 *****
B06.040.000	REACTOR VESSEL	THREADS IN FLANGE*** *****		***	*****	*****		*****	***** *****
B06.050.000	REACTOR VESSEL	CLOSURE WASHERS AND* BUSHINGS*****		***	*****	*****		*****	***** *****
B06.060.000	***PRESSURIZER	BOLTS AND STUDS **** *****		***	*****	*****		*****	***** *****
B06.070.000	***PRESSURIZER	FLANGE SURFACES***** *****		***	*****	*****		*****	INSPECT WHEN CONNECTION DISASSEMBLED
B06.080.000	***PRESSURIZER	NUTS, BUSHINGS, AND WASHERS*****		***	*****	*****		*****	***** *****
B06.180.000	*CLASS 1 PUMPS	BOLTS AND STUDS***** *****		***	*****	*****		*****	GREATER THAN 2 INCH***** *****
B06.180.005	3RCP-3A1-S	OM-1201-1217 OM-2201-1134-001		UT	NDE-44	CS	02.25 11.750	40359	3A1 SEAL GLAND BOLTS 8 BOLTS TOTAL
B06.190.000	*CLASS 1 PUMPS	FLANGE SURFACE ***** *****		***	*****	*****		*****	WHEN CONNECTION DISASSEMBLED** *****

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER B06

DUKE POWER COMPANY
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 OCONEE 3 INSERVICE INSPECTION LISTING - OUTAGE 10

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B06.200.000	*CLASS 1 PUMPS	NUTS,BUSHINGS,AND WASHERS *****		***	*****	*****	---	*****	***** *****
B06.200.005	3RCP-3A2-WASH	OM-1201-1217 OM-2201-1134-001		VT1	QCL-13		---		3A2 REACTOR COOLANT PUMP SEAL GLAND NUTS & WASHERS #9 IWB-2430(A),#10 IWB-2430(B) ADDED RFO 10 PER IWB-2430(B)
B06.200.006	3RCP-3A1-WASH	OM-1201-1217 OM-2201-1134-001		VT1	QCL-13	----	---	----	3RCP A1 SEALGLAND NUTS AND WASHERS 8 EACH PIR 3-088-0196 PIR 3-088-0196
B06.200.007	3RCP-3B1-WASH	OM-1201-1217 OM-2201-1134-001		VT1	QCL-13	----	---	----	3RCP B1 SEALGLAND NUTS AND WASHERS 8 EACH PIR 3-087-0056 ADDED RFO 10 PER IWB-2430(B)
B06.200.008	3RCP-3B2-WASH	OM-1201-1217 OM-2201-1134-001		VT1	QCL-13	----	---	----	3RCP B2 SEALGLAND NUTS AND WASHERS 8 EACH OUT.10 IWB-2430(A) 3-088-0196

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER B07

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B07.020.000	***PRESSURIZER	BOLTS,STUDS,AND NUTS *****		***	*****	*****	..	*****	2 IN. AND LESS IN DIAMETER *** *****
B07.030.000	*** STEAM GENERATOR	BOLTS,STUDS AND NUTS		***	*****	*****	..	*****	***** *****
B07.030.006	3SGA-LH-BOLTS	B&W 145470E		VT1	QCL-13	CS	01.00	----	3A SG LOWER HEAD INSP COVER BOLTING
B07.070.000	CLASS 1 VALVES	BOLTS,STUDS,AND NUTS *****		***	*****	*****	..	*****	***** *****
B07.070.013	3-51A-HP126	OM-246-015		VT1	QCL-13	----	02.50	----	HIGH PRESSURE INJECTION, VLV. HP-126 BOLTING
B07.070.014	3-51A-HP127	OM-246-015		VT1	QCL-13	----	02.50	----	HIGH PRESSURE INJECTION, VLV. HP-127 BOLTING
B07.070.015	3-51A-HP152	OM-246-015		VT1	QCL-13	----	02.50	----	HIGH PRESSURE INJECTION, VLV. HP-152 BOLTING
B07.070.016	3-51A-HP153	OM-246-015		VT1	QCL-13	----	02.50	----	HIGH PRESSURE INJECTION, VLV. HP-153 BOLTING
B07.080.000	**CRD HOUSINGS	BOLTS,STUDS,AND NUTS *****		***	*****	*****	..	*****	INSPECT ONLY IF HOUSING IS*** DISASSEMBLED*****
B07.080.001	3RPV-CRD-BOLTS	B&W 149902E B&W 149919E		VT1	QCL-13	CS	..	----	CRD HOUSING TO MECHANISM BOLTS 8 BOLTS PER HOUSING CRD # 33,47,& 54

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B07

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B07.080.002	3RPV-CRD-RINGS	B&W 149902E B&W 149919E	___	VT1	QCL-13	CS	___	----	CRD NUT RINGS OD 69 PAIRS 1 PAIR PER HOUSING <u>CRD # 33, 47, & 54</u>

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B08

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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*****	=====	***	*****	*****	-----	*****	***** ***** *****
B08.030.000	STM GENERATORS	INTEGRALLY WELDED ATTACHMENTS*****	=====	***	*****	*****	-----	*****	***** ***** *****

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER B09

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B09.011.000	***** CLASS 1	CIRCUMFERENTIAL***** WELDS*****		***	*****	*****	..	*****	NOMINAL PIPE SIZE 4 IN. & OVER *****
B09.011.102	3PSL-08	ISI-OCN3-015		UT	ISI-120	SS	10.75 01.000	40399	PRESSURIZER SURGE SELECTION CRITERIA 4.2.3
B09.011.102A	3PSL-08	ISI-OCN3-015		PT	NDE-35	SS	10.75 01.000	-----	PRESSURIZER SURGE SELECTION CRITERIA 4.2.3
B09.012.000	***** CLASS 1	LONGITUDINAL***** WELDS*****		***	*****	*****	..	*****	NOMINAL PIPE SIZE 4 IN. & OVER *****
B09.012.015	3PDA2-53LI	ISI-OCN3-012		UT	ISI-182	CS	34.75 03.000	40350	SEE REQUEST FOR RELIEF ONS-003 PC 53R TO 53L
B09.012.015A	3PDA2-53LI	ISI-OCN3-012		MT	NDE-25	CS	34.75 03.000	-----	A2 DISCHARGE INSIDE LONG SEAM PC 53R TO 53L
B09.012.016	3PDA2-53LØ	ISI-OCN3-012		UT	ISI-182	CS	34.75 03.000	40350	REQUEST FOR RELIEF ONS-003 PC 53L TO 53R
B09.012.016A	3PDA2-53LØ	ISI-OCN3-012		MT	NDE-25	CS	34.75 03.000	-----	A2 DISCHARGE OUTSIDE LONG SEAM PC 53L TO 53R
B09.021.000	***** CLASS 1	CIRCUMFERENTIAL***** WELDS*****		***	*****	*****	..	*****	NOMINAL PIPE SIZE < 4 IN. **** *****
B09.021.047	3-51A-143-18	SYS 51A ISO 143		PT	NDE-35	SS	03.00 00.438	-----	LETDOWN COOLER LINE ELBOW TO REDUCER

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: O'CONNOR UNIT 3
 KEY: ITEM NUMBER B09

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B09.021.048	3-51A-141-01	SYS 51A ISØ 141		PT	NDE-35	SS	01.50 00.281	----	LETDOWN COOLER LINE PIPE TO ELBOW TERMINAL END
B09.021.049	3-51A-142-03	SYS 51A ISØ 142		PT	NDE-35	SS	01.50 00.281	----	LETDOWN COOLER LINE ELBOW TO PIPE
B09.021.050	3-51A-142-21	SYS 51A ISØ 142		PT	NDE-35	SS	01.50 00.281	----	LETDOWN COOLER LINE PIPE TO RED. TERMINAL END
B09.021.051	3-51A-140-01	SYS 51A ISØ 140		PT	NDE-35	SS	01.50 00.281	----	LETDOWN COOLER LINE PIPE TO ELBOW TERMINAL END
B09.021.052	3-51A-140-12	SYS 51A ISØ 140		PT	NDE-35	SS	01.50 00.281	----	LETDOWN COOLER LINE PIPE TO REDUCER
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: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B10

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B10.010.000	*** CLASS 1 PIPING	INTEGRALLY WELDED **	---	***	*****	*****	---	****	***** *****
		ATTACHMENTS *****	---				---		

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B12

DUKE POWER COMPANY
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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B12.040.000	CLASS 1 VALVE	BODIES EXCEEDING**** 4 INCH NPS*****	_____	***	*****	*****	____	****	INSPECT IF DISASSEMBLED***** *****
B12.040.001	3-53A-CF-11	OM-245-001	_____	VT3	QCL-14	-----	14.00	-----	A-SIDE CORE FLOOD (W-AXIS) VALVE BODY ID# VALVE CF-11

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B13

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B13.010.000	REACTOR VESSEL	VESEL INTERIOR***** *****	=====	***	*****	*****	-----	*****	***** ***** *****
B13.030.000	REACTOR VESSEL	CORE SUPPORT***** STRUCTURE*****	=====	***	*****	*****	-----	*****	***** ***** *****

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER B14

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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 IF DISASSEMBLED***** *****
B14.010.009	3RPV-CRD-54WH9	B&W 149920E		PT	NDE-35	SS/IN	04.19 00.380		PERIPHERAL CRDM -HOUSING BODY TO ADAPTER
B14.010.010	3RPV-CRD-54W60	B&W 43-53-032-12		PT	NDE-35	CS/SS	05.00 00.500		CRDM BASE TO MOTOR TUBE
B14.010.011	3RPV-CRD-54	B&W 43-53-033-09		PT	NDE-35	CS/SS	04.19 00.360		CRDM MOTOR TUBE TO EXTENSION
B14.010.012	3RPV-CRD-54W61	B&W 43-53-031-02		PT	NDE-35	SS/IN	04.19 00.380		PERIPHERAL CRDM EXTENSION TO CAP

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B15

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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	3RPV-LK-TEST	ØFD-100A-3.1 -----		VT2	QCL-15	----	..	----	RPV SYS LEAK TEST ALT EXAM ISI-350 VT MAY BE USED
B15.011.000	REACTOR VESSEL	PRESSURE RETAINING** BOUNDARY*****		***	*****	*****	..	****	***** *****
B15.020.000	***PRESSURIZER	PRESSURE RETAINING BOUNDARY*****		***	*****	*****	..	****	***** *****
B15.020.001	3PZR-LK-TEST	ØFD-100A-3.2 -----		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	3SGA-LK-TEST	ØFD-100A-3.1 -----		VIS	ISI-350	----	..	----	SGA SYS LEAK TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.030.002	3SGB-LK-TEST	ØFD-100A-3.1 -----		VIS	ISI-350	----	..	----	SGB SYS LEAK TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.031.000	*****STEAM	GENERATORS PRESSURE* RETAINING BOUNDARY**		***	*****	*****	..	****	***** *****

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: O'CONNOR UNIT 3
 KEY: ITEM NUMBER B15

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B15.040.000	HEAT EXCHANGER	PRESSURE RETAINING BOUNDARY		---	---	---	---	---	
B15.040.001	3LDC3A-LK TEST	OFD-101A-3.1		VIS	ISI-350	---	---	---	LETDOWN COOLER 3A SYS LK TEST ALT EXAM QCL15 VT2 MAY BE USED
B15.040.002	3LDC3B-LK TEST	OFD-101A-3.1		VIS	ISI-350	---	---	---	LETDOWN COOLER 3B SYS LK TEST ALT EXAM QCL15 VT2 MAY BE USED
B15.041.000	HEAT EXCHANGER	PRESSURE RETAINING BOUNDARY		---	---	---	---	---	
B15.050.000	CLASS 1 PIPING	PRESSURE RETAINING** BOUNDARY*****		***	*****	*****	---	*****	***** *****
B15.050.001	3-OFD-100A-3.1	OFD-100A-3.1		VIS	ISI-350 QCL-15	---	---	---	CLASS A SYS LEAK TEST-INCLUDES DNG. NO. 0-2422BB-1,2 & 3
B15.050.001A	3-OFD-100A-3.2	OFD-100A-3.2		VIS	ISI-350 QCL-15	---	---	---	CLASS A SYS LEAK TEST-INCLUDES DNG. NO. 0-2422BB-4
B15.050.002	3-OFD-101A-3.1	OFD-101A-3.1		VIS	ISI-350	---	---	---	CLASS A SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.003	3-OFD-101A-3.4	OFD-101A-3.4		VIS	ISI-350	---	---	---	CLASS A SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.004	3-OFD-102A-3.1	OFD-102A-3.1		VIS	ISI-350	---	---	---	CLASS A SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PRQC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B15.050.005	3-OFD-102A-3.2	OFD-102A-3.2		VIS	ISI-350	----	-.--	----	CLASS A SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.006	3-OFD-102A-3.3	OFD-102A-3.3		VIS	ISI-350	----	-.--	----	CLASS A SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.007	3-OFD-110A-3.1	OFD-110A-3.1		VIS	ISI-350	----	-.--	----	CLASS A SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.009	3-OFD-100A-3.3	OFD-100A-3.3		VIS	ISI-350	----	-.--	----	CLASS A SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.050.010	3-OFD-110A-3.4	OFD-110A-3.4		VT2	QCL-15	----	-.--	----	CL A SYSTEM LEAKAGE TEST ALT EXAM ISI-350 MAY BE USED
B15.051.000	CLASS 1 PIPING	PRESSURE RETAINING** BOUNDARY*****		***	*****	*****	-.--	*****	***** *****
B15.060.000	*CLASS 1 PUMPS	PRESSURE RETAINING** BOUNDARY*****		***	*****	*****	-.--	*****	***** *****
B15.060.001	3-RCP-3A1	OFD-100A-3.1		VIS	ISI-350	----	-.--	----	RCP 3A1 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.060.002	3-RCP-3A2	OFD-100A-3.1		VIS	ISI-350	----	-.--	----	RCP 3A2 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.060.003	3-RCP-3B1	OFD-100A-3.1		VIS	ISI-350	----	-.--	----	RCP 3B1 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B15

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
B15.060.004	3-RCP-3B2	OFD-100A-3.1		VIS	ISI-350	----	---	----	RCP 3B2 SYS LEAKAGE TEST ALT EXAM QCL-15 VT2 MAY BE USED
B15.061.000	*CLASS 1 PUMPS	PRESSURE RETAINING** BOUNDARY*****		***	*****	*****	---	*****	***** ***** *****

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER B16

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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	3SGA-TUBES	***** *****	_____	ET	ISI-418	INCO	00.62 00.040	49065	CAL. BLOCKS - 49154 , 49155 , 49156 , 49157 , 49158 , B&W-1170027B AND B&W-1170096B PIR 3-088-0206
B16.011.002	3SGB-TUBES	----- -----	_____	ET	ISI-418	INCO	00.62 00.040	49013	CAL. BLOCKS - 49154 , 49155 , 49156 , 49157 , 49158 , B&W-1170027B AND B&W-1170096B PIR 3-088-0206

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER C01

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C01.010.000	*****SHELL	CIRCUMFERENTIAL***** WELDS*****		***	*****	*****	-. -	*****	***** PRESSURE VESSEL ***** *****
C01.020.000	*****HEAD	CIRCUMFERENTIAL***** WELDS*****		***	*****	*****	-. -	*****	***** PRESSURE VESSELS ***** *****
C01.030.000	*****CLASS 2	TUBESHEET TO SHELL WELDS*****		***	*****	*****	-. -	*****	***** PRESSURE VESSELS ***** *****
C01.030.004	3SGB-WG59	ISI-OCN3-004		UT	ISI-130	CS	06.625	40338	GEN B SHELL TO BOT. TUBE SHEET PC 6 TO 50

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C02

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C02.010.000	*****NOZZLES	IN VESSELS***** *****		***	*****	*****	---	****	1/2 IN. NOMINAL THICKNESS *** AND LESS *****
C02.021.000	*****NOZZLE	TO SHELL OR HEAD*** WELDS*****		***	*****	*****	00.500	****	***** *****
C02.021.002	3SGA-WG23-2	ISI-OCN3-003		UT	ISI-130	CS	29.00 06.625	40338	GEN A STM OUTLET NOZZLE X-Y AXIS PC 14 TO 3
C02.021.002A	3SGA-WG23-2	ISI-OCN3-003		MT	NDE-25	CS	29.00 06.625	-----	GEN A STM OUTLET NOZZLE X-Y AXIS PC 14 TO 3
C02.022.000	*****NOZZLE	INSIDE RADIUS***** SECTION*****		***	*****	*****	---	****	***** *****
C02.022.002	3SGA-WG23-2	ISI-OCN3-003		UT	ISI-130	CS	29.00 06.625	40338	GEN A STM OUTLET NOZZLE X-Y AXIS PC 14 TO 3 INSIDE RADIUS

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C03

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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**		***	*****	*****	---	*****	***** *****
C03.010.013	3SGB-WG84-ZW	B&W 149824E		MT	NDE-25	CS	01.000	----	SGB FEEDWATER HDR SUPPORT ATT. Z-W QUADRANT NEAREST TO Z AXIS
C03.010.014	3SGB-WG84-WZ	B&W 149824E		MT	NDE-25	CS	01.000	----	SGB FEEDWATER HDR SUPPORT ATT. Z-W QUADRANT NEAREST TO W AXIS
C03.010.019	3-CFTA-WT18-Y	B&W 148732E		MT	NDE-25	CS	02.000	----	CORE FLD TK SUPPORT ATTACH. Y QUADRANT PC 18 TO 12
C03.010.024	3-CFTB-WT18-Z	B&W 148732E		MT	NDE-25	CS	02.000	----	CORE FLD TK SUPPORT ATTACH. Z QUADRANT PC 18 TO 12
C03.040.000	CLASS 2 PIPING	INTEGRALLY WELDED ATTACHMENTS*****		***	*****	*****	---	*****	***** *****
C03.040.002	3-01A-H13	0-2441		MT	NDE-25	CS	---	----	MAIN STEAM - RIGID 3-01A-0-2441-H13
C03.040.003	3-01A-H14	0-2441		MT	NDE-25	CS	---	----	MAIN STEAM - RIGID 3-01A-0-2441-H14
C03.040.005	3-01A-R7	0-2441		MT	NDE-25	CS	---	----	MAIN STEAM - SNUBBER 3-01A-2441-R7
C03.040.006	3-01A-R13	0-2401B		MT	NDE-25	CS	---	----	MAIN STEAM - RIGID 3-01A-0-2401B-R13

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER C03

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C03.040.015	3-01A-H18	0-2401B		MT	NDE-25	CS	36.50 01.000		MAIN STEAM - SPRING 3-01A-0-2401B-H18
C03.040.016	3-01A-H1B	0-2480A		MT	NDE-25	CS	26.12 01.500		MAIN STEAM - SPRING 01A-0-2480A-H1B
C03.040.017	3-01A-H9A	0-2481A		MT	NDE-25	CS	26.12 01.000		MAIN STEAM - SPRING 01A-0-2481A-H9A
C03.040.071	3-54B-H4A	0-2477		PT	NDE-35	SS	----- -----		REACTOR BLDG. SPRAY - SPRING 3-54B-0-2477-H4A
C03.040.097	3SGB-WG87-ZH	B&W-149823E		MT	NDE-25	CS	01.000 01.000	-----	SGB FDWTR. HDR. SUPPORT ATTCH. Z-W QUAD. NEAREST TO Z-AXIS
C03.040.098	3SGB-WG87-WZ	B&W-149823E		MT	NDE-25	CS	01.000 01.000	-----	SGB FDWTR. HDR. SUPPORT ATTCH. W-Z QUAD. NEAREST TO W-AXIS

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C05

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PRQC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.000.000	*****PRESSURE	RETAINING WELDS IN PIPING*****		***	*****	*****	---	*****	***** *****
C05.011.000	**** CLASS 2 PIPING	CIRCUMFERENTIAL WELD *****		***	*****	*****	---	*****	NOMINAL WALL THICKNESS ***** 1/2 IN, OR LESS *****
C05.011.004	3-53B-33-33	SYS 53B ISO 33		PT	NDE-35	SS	14.00 00.250	----	SELECTION CRITERIA 5.2
C05.011.005	3-53B-33-41	SYS 53B ISO 33		PT	NDE-35	SS	14.00 00.250	----	SELECTION CRITERIA 5.2
C05.011.006	3-53B-33-32	SYS 53B ISO 33		PT	NDE-35	SS	14.00 00.250	----	SELECTION CRITERIA 5.2
C05.011.007	3-53B-33-47	SYS 53B ISO 33		PT	NDE-35	SS	14.00 00.250	----	
C05.011.012	3-53B-33-09	SYS 53B ISO 33		PT	NDE-35	SS	12.00 00.250	----	
C05.011.015	3-53B-34-36A	SYS 53B ISO 34		PT	NDE-35	SS	12.00 00.250	----	TERMINAL END
C05.011.024	3-53B-34-03	SYS 53B-ISO 34		PT	NDE-35	SS	14.00 00.250	----	SELECTION CRITERIA 5.2
C05.011.035	3-53B-38-45	SYS 53B ISO 38		PT	NDE-35	SS	10.00 00.250	----	

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
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=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
C05.011.037	3-53B-38-27	SYS 53B ISO 38	_____	PT	NDE-35	SS	10.00 00.250	----	----- ----- ----- -----
C05.011.038	3-53B-38-05	SYS 53B ISO 38	_____	PT	NDE-35	SS	10.00 00.250	----	----- ----- ----- -----
C05.011.039	3-53B-38-25	SYS 53B ISO 38	_____	PT	NDE-35	SS	10.00 00.250	----	TERMINAL END ----- ----- -----
C05.011.045	3-53B-44-20	SYS 53B ISO 44	_____	PT	NDE-35	SS	12.00 00.180	----	----- ----- ----- -----
C05.011.049	3-53B-45-08	SYS 53B ISO 45	_____	PT	NDE-35	SS	10.00 00.250	----	----- ----- ----- -----
C05.011.055	3-53B-47-52A	SYS 53B ISO 47	_____	PT	NDE-35	SS	08.00 00.250	----	----- ----- ----- -----
C05.011.056	3-53B-47-51A	SYS 53B ISO 47	_____	PT	NDE-35	SS	08.00 00.250	----	----- ----- ----- -----
C05.011.057	3-53B-47-50A	SYS 53B ISO 47	_____	PT	NDE-35	SS	10.00 00.250	----	----- ----- ----- -----
C05.011.058	3-53B-47-45B	SYS 53B ISO 47	_____	PT	NDE-35	SS	10.00 00.250	----	----- ----- ----- -----
C05.011.069	3-53B-50-14A	SYS 53B ISO 50	_____	PT	NDE-35	SS	08.00 00.250	----	----- ----- ----- -----

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.011.238	3-54A-10-05	SYS 54A ISO 10		PT	NDE-35	SS	10.00 00.250		
C05.011.263	3-51A-50-61	SYS 51A ISO 50		PT	NDE-35	SS	06.00 00.280		
C05.011.268	3-51A-50-41	SYS 51A ISO 50		PT	NDE-35	SS	06.00 00.280		
C05.011.272	3-51A-50-78A	SYS 51A ISO 50		PT	NDE-35	SS	06.00 00.280		
C05.011.303	3-03A-15-08	SYS 03A ISO 15		MT	NDE-25	CS	06.00 00.432		
C05.012.000	*** CLASS 2 PIPING	LONGITUDINAL WELDS *****		***	***** *****				NOMINAL WALL THICKNESS ***** 1/2 IN. OR LESS *****
C05.012.013	3-53B-33-09L	SYS 53B ISO 33		PT	NDE-35	SS	12.00 00.250		LONGITUDINAL WELD
C05.012.014	3-53B-38-27L	SYS 53B ISO 38		PT	NDE-35	SS	10.00 00.250		LONGITUDINAL WELD
C05.012.015	3-53B-38-05L	SYS 53B ISO 38		PT	NDE-35	SS	10.00 00.250		LONGITUDINAL WELD
C05.012.016	3-54A-10-05L	SYS 54A ISO 10		PT	NDE-35	SS	10.00 00.250		LONGITUDINAL WELD

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FILE: C007133
PLANT: OCONEE UNIT 3
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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
C05.021.000	**** CLASS 2 PIPING	CIRCUMFERENTIAL WELD *****		***	*****	*****	--- ---	*****	NOMINAL WALL THICKNESS ***** > 1/2 INCH *****
C05.021.303	3-03-28-10	SYS 03 ISO 28		RT	NDE-12	CS	20.00 01.031	----	
C05.021.303A	3-03-28-10	SYS 03 ISO 28		MT	NDE-25	CS	20.00 01.031	----	
C05.021.306	3-03-28-15	SYS 03 ISO 28		RT	NDE-12	CS	14.00 00.750	----	
C05.021.306A	3-03-28-15	SYS 03 ISO 28		MT	NDE-25	CS	14.00 00.750	----	
C05.021.308	3-03-29-WG91-H	SYS 03 ISO 29		RT	NDE-12	CS	14.00 00.750	----	
C05.021.308A	3-03-29-WG91-H	SYS 03 ISO 29		MT	NDE-25	CS	14.00 00.750	----	
C05.021.313	3-03-27-20	SYS 03 ISO 27		RT	NDE-12	CS	24.00 01.218	----	
C05.021.313A	3-03-27-20	SYS 03 ISO 27		MT	NDE-25	CS	24.00 01.218	----	
C05.021.315	3-03-27-24	SYS 03 ISO 27		RT	NDE-12	CS	14.00 00.750	----	

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.021.315A	3-03-27-24	SYS 03 ISO 27		MT	NDE-25	CS	14.00 00.750		
C05.021.359	3-01A-3MS-7B-B	SYS 01A 3MS-7B		RT	NDE-12	CS	26.00 00.875		
C05.021.359A	3-01A-3MS-7B-B	SYS 01A 3MS-7B		MT	NDE-25	CS	26.00 00.875		
C05.021.362	3-01A-13-16	SYS 01A ISO 13		RT	NDE-12	CS	36.00 01.164		
C05.021.362A	3-01A-13-16	SYS 01A ISO 13		MT	NDE-25	CS	36.00 01.164		
C05.021.368	3-01A-13-19	SYS 01A ISO 13		RT	NDE-12	CS	12.00 00.562		
C05.021.368A	3-01A-13-19	SYS 01A ISO 13		MT	NDE-25	CS	12.00 00.562		
C05.021.379	3-01A3MS-16A-A	SYS 01A 3MS-16A		RT	NDE-12	CS	36.00 01.164		
C05.021.379A	3-01A-3MS16A-A	SYS 01A 3MS-16A		MT	NDE-25	CS	36.00 01.164		
C05.021.381	3-01A3MS-23A-A	SYS 01A 3MS-23A		RT	NDE-12	CS	24.00 00.969		

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.021.381A	3-01A-3MS23A-A	SYS 01A 3MS-23A		MT	NDE-25	CS	24.00 00.969		
C05.021.387	3-01A-10-19	SYS 01A ISO 10		RT	NDE-12	CS	12.00 00.562		
C05.021.387A	3-01A-10-19	SYS 01A ISO 10		MT	NDE-25	CS	12.00 00.562		
C05.022.000	**** CLASS 2 PIPING	LONGITUDINAL WELDS *****		***	*****				NOMINAL WALL THICKNESS ***** > 1/2 INCH *****
C05.022.008	3-01A-3MS7B-BL	SYS 01A 3MS-7B		RT	NDE-12	CS	26.00 00.875		MAIN STEAM LONG SEAM
C05.022.008A	3-01A-3MS7B-BL	SYS 01A 3MS-7B		MT	NDE-25	CS	26.00 00.875		MAIN STEAM LONG SEAM
C05.022.011	3-01A-13-16L	SYS 01A ISO 13		RT	NDE-12	CS	36.00 01.164		MAIN STEAM LONG SEAM
C05.022.011A	3-01A-13-16L	SYS 01A ISO 13		MT	NDE-25	CS	36.00 01.164		MAIN STEAM LONG SEAM
C05.022.016	3-01A3MS16A-AL	SYS 01A 3MS-16A		RT	NDE-12	CS	36.00 01.164		MAIN STEAM LONG SEAM
C05.022.016A	3-01A3MS16A-AL	SYS 01A 3MS-16A		MT	NDE-25	CS	36.00 01.164		MAIN STEAM LONG SEAM

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C05

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.031.000	CLASS 2 PIPING	BRANCH CONNECTION WELDS. *****	_____	***	*****	*****	_____	*****	***** ***** *****

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER C07

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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* *****
C07.010.001	3LPCA	OFD-102A-3.2		VT2	QCL-15	----	..	----	LP COOL. A SYS LEAK. TEST ALT EXAM ISI-350 VT MAY BE USED
C07.010.002	3LPCB	OFD-102A-3.2		VT2	QCL-15	----	..	----	LP COOL. B SYS LEAK. TEST ALT EXAM ISI-350 VT MAY BE USED
C07.011.000	*****PRESSURE	VESSELS***** *****		***	*****	*****	..	****	PRESSURE RETAINING COMPONENTS* *****
C07.020.000	*****PIPING	***** *****		***	*****	*****	..	****	PRESSURE RETAINING COMPONENTS* *****
C07.020.001	3-102A-3.1	OFD-102A-3.1		VT2	QCL-15	----	..	----	CL B. SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
C07.020.002	3-102A-3.2	OFD-102A-3.2		VT2	QCL-15	----	..	----	CL B. SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
C07.020.003	3-104A-3.1	OFD-104A-3.1		VT2	QCL-15	----	..	----	CL B. SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
C07.020.004	3-103A-3.1	OFD-103A-3.1		VT2	QCL-15	----	..	----	CL B. SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
C07.020.006	3-101A-3.4	OFD-101A-3.4		VT2	QCL-15	----	..	----	CL B. SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER C07

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
C07.020.007	3-101A-3.3	OFD-101A-3.3		VT2	QCL-15	----	..	----	CL B. SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
C07.020.008	3-101A-3.5	OFD-101A-3.5		VT2	QCL-15	----	..	----	CL B. SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
C07.020.009	3-104A-3.2	OFD-104A-3.2		VT2	QCL-15	----	..	----	CL B. SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
C07.021.000	*****PIPING	***** *****		***	*****	*****	..	*****	PRESSURE RETAINING COMPONENTS* *****
C07.030.000	*****PUMPS	***** *****		***	*****	*****	..	*****	PRESSURE RETAINING COMPONENTS* SYSTEM PRESSURE TEST*****
C07.030.001	3LPI PUMP-3A	OFD-102A-3.2		VT2	QCL-15	----	..	----	LPI PUMP 3A SYS LEAK TEST ALT EXAM ISI-350 VT MAY BE USED
C07.030.002	3LPI PUMP-3B	OFD-102A-3.2		VT2	QCL-15	----	..	----	LPI PUMP 3B SYS LEAK TEST ALT EXAM ISI-350 VT MAY BE USED
C07.030.003	3LPI PUMP-3C	OFD-102A-3.2		VT2	QCL-15	----	..	----	LPI PUMP 3C SYS LEAK TEST ALT EXAM ISI-350 VT MAY BE USED
C07.030.004	3HPI-PUMP 3C	OFD-101A-3.3		VT2	QCL-15	----	..	----	HPI PUMP 3C SYS LEAK TEST ALT EXAM ISI-350 VT MAY BE USED
C07.030.006	3RBS-PUMP 3A	OFD-103A-3.1		VT2	QCL-15	----	..	----	RBS PUMP 3A SYS LEAK TEST ALT EXAM ISI-350 VT MAY BE USED

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C07

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C07.030.007	3RBS-PUMP 3B	OFD-103A-3.1		VT2	QCL-15	----	-.--	----	RBS PUMP 3B SYS LEAK TEST ALT EXAM ISI-350 VT MAY BE USED
C07.030.008	3-SSF-3P-1	OFD-101A-3.5		VT2	QCL-15	----	-.--	----	SSF 3P-1 PUMP LEAK TEST ALT EXAM ISI-350 VT MAY BE USED
C07.031.000	*****PUMPS	***** *****		***	*****	*****	-.--	*****	PRESSURE RETAINING COMPONENTS* SYSTEM HYDRO TEST*****
C07.040.000	*****VALVES	***** *****		***	*****	*****	-.--	*****	PRESSURE RETAINING COMPONENTS* COVERED IN C07.020.000

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER D01

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D01.011.000	*****SYSTEM	INSERVICE TEST***** *****		***	*****	*****	-. --	*****	***** *****
D01.011.002	3-OFD-101A-3.1	OFD-101A-3.1 -----		VT2	QCL-15	----	-. --	----	CL.3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D01.011.005	3-OFD-101A-3.4	OFD-101A-3.4 -----		VT2	QCL-15	----	-. --	----	CL.3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D01.011.006	3-OFD-101A-3.5	OFD-101A-3.5 -----		VT2	QCL-15	----	-. --	----	CL.3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D01.011.008	3-OFD-109A-3.1	OFD-109A-3.1 -----		VT2	QCL-15	----	-. --	----	CL.3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED PIR 4-087-0124 1ST INSP PERIOD
D01.011.014	3-OFD-100A-3.3	OFD-100A-3.3 -----		VT2	QCL-15	----	-. --	----	CL.3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D01.011.017	3-OFD-144A-3.2	OFD-144A-3.2 -----		VT2	QCL-15	----	-. --	----	CL. 3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D01.012.000	*****SYSTEM	HYDROSTATIC TEST***** *****		***	*****	*****	-. --	*****	***** *****

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER D02

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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 *****		***	***** *****				***** *****
D02.011.003	3-OFD-121A-3.7	OFD-121A-3.7		VT2	QCL-15	----		----	CL.3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D02.011.004	3-OFD-121A-3.8	OFD-121A-3.8		VT2	QCL-15	----		----	CL.3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D02.011.006	3-OFD-121B-3.5	OFD-121B-3.5		VT2	QCL-15	----		----	CL.3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D02.011.007	3-OFD-121D-3.1	OFD-121D-3.1		VT2	QCL-15	----		----	CL.3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D02.011.016	3-OFD-133A-3.1	OFD-133A-3.1		VT2	QCL-15	----		----	CL.3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D02.011.017	3-OFD-133A-3.2	OFD-133A-3.2		VT2	QCL-15	----		----	CL. 3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D02.011.021	3-OFD-121A-1.8	OFD-121A-1.8		VT2	QCL-15				CL. 3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D02.011.022	3-OFD-124A-3.1	OFD-124A-3.1		VT2	QCL-15				CL. 3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D02.011.023	3-OFD-124A-3.3	OFD-124A-3.3		VT2	QCL-15				CL. 3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED

PROGRAM: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
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D02.011.024	3-0FD-124B-3.1	0FD-124B-3.1		VT2	QCL-15				CL. 3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED PIR 4-087-0124 INSP 080488 CLR
D02.011.025	3-0FD-124B-3.2	0FD-124B-3.2		VT2	QCL-15				CL. 3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D02.011.027	3-0FD-124A-1.1	0FD-124A-1.1		VT2	QCL-15				CL. 3 SYSTEM LEAKAGE TEST ALT EXAM ISI-350 VT MAY BE USED
D02.012.000	*****SYSTEM	HYDROSTATIC***** TEST*****		***	*****	*****		*****	***** *****
D02.020.000	*****INTEGRAL	ATTACHMENTS***** *****		***	*****	*****		*****	COMPONENT SUPPORTS AND RESTRAINTS*****
D02.020.013	3-03A-SR46	0-2401A		VT3	QCL-14	----		----	EMERGENCY FDWTR S / R 3-03A-1-0-2401A-SR46
D02.020.014	3-03A-SR5	0-2401B		VT3	QCL-14	----		----	EMERGENCY FDWTR S / R 3-03A-1-0-2401B-SR5
D02.020.056	3-03A-SR150	0-2400B		VT3	QCL-14	----		----	EMERGENCY FDWTR S/R 3-03A-1-0-2400B-SR150
D02.020.060	3-03A-SR163	0-2401B		VT3	QCL-14	----		----	EMERGENCY FDWTR S/R 3-03A-1-0-2401B-SR163
D02.020.061	3-03A-SR166	0-2401B		VT3	QCL-14	----		----	EMERGENCY FDWTR S/R 3-03A-1-0-2401B-SR166

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D02.020.076	3-03A-H7	0-2439C		VT3	QCL-14	----	..	----	EMERGENCY FDWTR S/R 3-03A-1-0-2439C-H7
D02.020.077	3-03A-H6	0-2439C		VT3	QCL-14	----	..	----	EMERGENCY FDWTR S/R 3-03A-1-0-2439C-H6
D02.020.078	3-03A-SR179	0-2439B		VT3	QCL-14	----	..	----	EMERGENCY FDWTR S/R 3-03A-1-0-2439B-SR179
D02.020.079	3-03A-SR181	0-2439C		VT3	QCL-14	----	..	----	EMERGENCY FDWTR S/R 3-03A-1-0-2439C-SR181
D02.020.080	3-03A-SR183	0-2439C		VT3	QCL-14	----	..	----	EMERGENCY FDWTR S/R 3-03A-1-0-2439C-SR183
D02.020.097	3-03-H3B	0-2479A		VT3	QCL-14	----	..	----	MAIN FEEDWATER S/R 03-0-2479A-H3B
D02.020.111	3-07A-SR18	0-2402A		VT3	QCL-14	----	..	----	CONDENSATE SYSTEM S/R 3-07A-4-0-2402A-SR18
D02.020.112	3-07A-SR7	0-2400A		VT3	QCL-14	----	..	----	CONDENSATE SYSTEM S/R 3-07A-4-0-2400A-SR7
D02.020.130	3-01A-R5	0-2403D		VT3	QCL-14	----	..	----	MAIN STEAM S/R 3-01A-4-0-2403D-R5
D02.020.131	3-01A-R13A	0-2403D		VT3	QCL-14	----	..	----	MAIN STEAM S/R 3-01A-4-2-0-2403D-R13A

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
D02.020.132	3-01A-2300	0-2403D		VT3	QCL-14				MAIN STEAM S/R 3-01A-0-2403D-HTT-2300
D02.020.162	3-14B-7001	0-2437A		VT3	QCL-14				AUX SERVICE WATER S/R 3-14B-2437A-WM-7001
D02.030.000	*****INTEGRAL	ATTACHMENTS***** *****		***	*****	*****		*****	MECHANICAL AND HYDRAULIC***** SNUBBERS*****
D02.040.000	*****INTEGRAL	ATTACHMENTS***** *****		***	*****	*****		*****	SPRING TYPE SUPPORTS***** *****
D02.040.027	3-03A-H157	0-2401B		VT3	QCL-14				EMERGENCY FDWTR - SPRING 3-03A-1-0-2401B-H157
D02.040.028	3-03A-H165	0-2401B		VT3	QCL-14				EMERGENCY FDWTR - SPRING 3-03A-1-0-2401B-H165
D02.040.051	3-07A-H44	0-2402A		VT3	QCL-14				CONDENSATE SYSTEM - SPRING 3-07A-4-0-2402A-H44
D02.040.052	3-07A-H4	0-2400A		VT3	QCL-14				CONDENSATE SYSTEM - SPRING 3-07A-0-2400A-H4

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER D03

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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***** *****	_____	***	*****	*****	____	*****	***** ***** *****
D03.012.000	*****SYSTEM	HYDROSTATIC TEST**** *****	_____	***	*****	*****	____	*****	***** ***** *****

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER E01

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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 *****		***	***** *****				***** *****

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER E03

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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: NISIRUNB-QAISI02
 FILE: C007133
 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER E04

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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 ***** *****		***	***** *****				***** *****
E04.001.001	3PDA1-47	ISI-OCN3-011		UT	ISI-120	SS	03.50 00.750	40343	A1 DISCHARGE MAKE UP NOZZLE SAFE END PC 47
E04.001.001A	3PDA1-47	ISI-OCN3-011		RT	NDE-12	SS	03.50 00.750		A1 DISCHARGE MAKE UP NOZZLE SAFE END PC 47
E04.001.003	3PDB1-47	ISI-OCN3-013		RT	NDE-12	SS	03.50 00.750		B1 DISCHARGE HPI NOZZLE SAFE END PC 47
E04.001.004	3PDB2-47	ISI-OCN3-014		RT	NDE-12	SS	03.50 00.750		B2 DISCHARGE HPI NOZZLE SAFE END PC 47

PROGRAM: NISIRUNB-QAISI02
FILE: C007133
PLANT: O'CONNOR UNIT 3
KEY: ITEM NUMBER F1.

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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 ***** *****		***	***** *****				***** *****
F1.01.021	3-50-H1A	0-2479A		VT	QCL-14	----	10.00	----	PRESSURIZER SURGE- H.S.S. SUPP 3-50-0-2479A-H1A
F1.01.022	3-50-H2A	0-2479A		VT	QCL-14	----	10.00	----	PRESSURIZER SURGE- H.S.S. SUPP 3-50-0-2479A-H2A
F1.01.025	3-57-H1701	0-2481A		VT	QCL-14	----	03.00	----	PRESS. RELIEF VLV - SPRING 57-0-2481A-EWD-H1701
F1.01.026	3-50-H6	0-2481A		VT	QCL-14	----	02.50	----	PRESS. SPRAY - SPRING 3-50-0-2481A-H6
F1.01.051	3-51-H1A	0-2479A		VT	QCL-14	----	02.50	----	HPI - SPRING 3-51A-0-2479A-H1A
F1.01.052	3-51-H2A	0-2479A		VT	QCL-14	----	02.50	----	HPI - SNUBBER 3-51A-0-2479A-H2A
F1.01.053	3-51-H3A	0-2479A		VT	QCL-14	----	02.50	----	HPI - RIGID 3-51A-0-2479A-H3A
F1.01.084	3-51A-H1C	0-2478A		VT	QCL-14	----	02.50	----	HPI - RIGID 3-51A-0-2478A-H1C
F1.01.085	3-51A-H2C	0-2478A		VT	QCL-14	----	02.50	----	HPI - SPRING 3-51A-0-2478A-H2C

PROGRAM: NISIRUNB-QAISI02
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 PLANT: OCONEE UNIT 3
 KEY: ITEM NUMBER F1.

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F1.01.134	3-53A-H6B	0-2478A		VT	QCL-14	-----	10.00	-----	LPI - SPRING 3-53A-0-2478A-H6B
F1.01.135	3-53A-H7B	0-2478A		VT	QCL-14	-----	10.00	-----	LPI - X RIGID 3-53A-0-2478A-H7B
F1.01.137	3-53A-H29C	0-2481A		VT	QCL-14	-----	01.50	-----	LOW PRESSURE INJECTION-RIGID 53A-0-2481A-H29C
F1.01.138	3-59-H28	0-2478A		VT	QCL-14	-----	01.50	-----	RB COMPONET DRAIN -RIGID 59-0-2478A-H28
F1.01.139	3-57-H13A	0-2481A		VT	QCL-14	-----	03.00	-----	PRESSURIZER RELIEF -H.S.S. 57-0-2481A-H13A
F1.02.000	***** CLASS 2	SUPPORTS ***** *****		***	***** *****				***** *****
F1.02.002	3-01A-H2	0-2441		VT	QCL-14	-----	36.50	-----	MAIN STEAM - RIGID 3-01A-0-2441-H2
F1.02.013	3-01A-H13	0-2441		VT	QCL-14	-----	36.50	-----	MAIN STEAM - RIGID 3-01A-0-2441-H13
F1.02.014	3-01A-H14	0-2441		VT	QCL-14	-----	36.50	-----	MAIN STEAM - RIGID 3-01A-0-2441-H14
F1.02.015	3-01A-H15	0-2441		VT	QCL-14	-----	36.50	-----	MAIN STEAM - RIGID 3-01A-0-2441-H15

PROGRAM: NISIRUNB-QAISI02
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 PLANT: OCONEE UNIT 3
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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.02.016	3-01A-H16	0-2441		VT	QCL-14	-----	36.50	-----	MAIN STEAM - RIGID 3-01A-0-2441-H16
F1.02.017	3-01A-H17	0-2441		VT	QCL-14	-----	36.50	-----	MAIN STEAM - RIGID 3-01A-0-2441-H17
F1.02.018	3-01A-H18	0-2401B		VT	QCL-14	-----	36.50	-----	MAIN STEAM - SPRING 3-01A-0-2401B-H18
F1.02.019	3-01A-H19	0-2401B		VT	QCL-14	-----	36.50	-----	MAIN STEAM - RIGID 3-01A-0-2401B-H19
F1.02.030	3-01A-R7	0-2441		VT	QCL-14	-----	36.50	-----	MAIN STEAM - SNUBBER 3-01A-2441-R7
F1.02.031	3-01A-R8	0-2441		VT	QCL-14	-----	36.50	-----	MAIN STEAM - SNUBBER 3-01A-0-2441-R8
F1.02.032	3-01A-R9	0-2441		VT	QCL-14	-----	36.50	-----	MAIN STEAM - 4 SNUBBERS 3-01A-0-2441-R9
F1.02.033	3-01A-R10	0-2401B		VT	QCL-14	-----	36.50	-----	MAIN STEAM - SNUBBER 3-01A-0-2401B-R10
F1.02.044	3-01A-H44	0-2401B		VT	QCL-14	-----	12.00	-----	MAIN STEAM - SPRING 3-01A-1-1-0-2401B-H44
F1.02.045	3-01A-H46	0-2401B		VT	QCL-14	-----	12.00	-----	MAIN STEAM - RIGID 3-01A-1-1-0-2401B-H46

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F1.02.051	3-01A-H1B	0-2480A		VT	QCL-14	-----	26.12	-----	MAIN STEAM - SPRING 3-01A-0-2480A-H1B
F1.02.052	3-01A-H2B	0-2481B		VT	QCL-14	-----	26.12	-----	MAIN STEAM - SNUBBER 3-01A-0-2481B-H2B
F1.02.053	3-01A-H3B	0-2481A		VT	QCL-14	-----	26.12	-----	MAIN STEAM - SPRING 3-01A-0-2481A-H3B
F1.02.054	3-01A-H4B	0-2481A		VT	QCL-14	-----	26.12	-----	MAIN STEAM - X RIGID 3-01A-0-2481A-H4B
F1.02.056	3-01A-H6B	0-2481A		VT	QCL-14	-----	26.12	-----	MAIN STEAM - SPRING 3-01A-0-2481A-H6B
F1.02.070	3-01A-H9A	0-2481A		VT	QCL-14	-----	26.12	-----	MAIN STEAM - SPRING 3-01A-0-2481A-H9A
F1.02.071	3-01A-H10A	0-2481A		VT	QCL-14	-----	26.12	-----	MAIN STEAM - X RIGID 3-01A-0-2481A-H10A
F1.02.151	3-03-H5041	0-2439B		VT	QCL-14	-----	24.00	-----	MAIN FDWTR - SPRING 3-03-2439B-H5041
F1.02.164	3-03-H4A	0-2479A		VT	QCL-14	-----	14.00	-----	MAIN FDWTR - SPRING 3-03-0-2479A-H4A
F1.02.166	3-03-H6A	0-2480A		VT	QCL-14	-----	24.00	-----	MAIN FDWTR - RIGID 3-03-0-2480A-H6A

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F1.02.167	3-03-H7A	0-2480A		VT	QCL-14	----	24.00	----	MAIN FDWTR - SNUBBER 3-03-0-2480A-H7A ADDED OUT. 9 PER INC-2430(A)
F1.02.171	3-03-H11A	0-2481A		VT	QCL-14	----	24.00	----	MAIN FDWTR - Z RIGID 03-0-2481A-H11A
F1.02.172	3-03-H12A	0-2481A		VT	QCL-14	----	24.00	----	MAIN FDWTR - SPRING 03-0-2481A-H12A
F1.02.173	3-03-H13A	0-2481A		VT	QCL-14	----	24.00	----	MAIN FDWTR - Y RIGID 03-0-2481A-H13A
F1.02.174	3-03-H14A	0-2481A		VT	QCL-14	----	24.00	----	MAIN FDWTR - Y RIGID 03-0-2481A-H14A
F1.02.293	3-53B-H15	0-2435B		VT	QCL-14	----	10.00	----	LPI - RIGID 3-53B-5-0-2435B-H15
F1.02.294	3-53B-H16	0-2435B		VT	QCL-14	----	10.00	----	LPI - RIGID 3-53B-5-0-2435B-H16
F1.02.295	3-53B-H17	0-2435B		VT	QCL-14	----	10.00	----	LPI - RIGID 3-53B-5-0-2435B-H17
F1.02.298	3-53B-H43	0-2436D		VT	QCL-14	----	10.00	----	LPI - SPRING 3-53B-5-0-2436D-H43
F1.02.300	3-53B-SR39	0-2435B		VT	QCL-14	----	10.00	----	LPI - SNUBBER 3-53B-5-0-2435B-SR39

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 PLANT: OCONEE UNIT 3
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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
F1.02.302	3-53B-H31	0-2435B		VT	QCL-14	-----	14.00	-----	LPI - SPRING 3-53B-4-0-2435B-H31
F1.02.303	3-53B-DE012	0-2435B		VT	QCL-14	-----	14.00	-----	LPI - RIGID 3-53B-2435B-DE012
F1.02.310	3-53B-H22	0-2435B		VT	QCL-14	-----	14.00	-----	LPI - RIGID 3-53B-2-0-2435B-H22
F1.02.322	3-53B-H118	0-2435B		VT	QCL-14	-----	12.00	-----	LPI - RIGID 3-53B-5-0-2435B-H118
F1.02.323	3-53B-H121	0-2435B		VT	QCL-14	-----	14.00	-----	LPI - RIGID 3-53B-5-0-2435B-H121
F1.02.325	3-53B-SR23	0-2435B		VT	QCL-14	-----	14.00	-----	LPI - RIGID 3-53B-2-0-2435B-SR23
F1.02.326	3-53B-SR25	0-2435B		VT	QCL-14	-----	14.00	-----	LPI - RIGID 3-53B-2-0-2435B-SR25
F1.02.328	3-53B-SR27	0-2435B		VT	QCL-14	-----	12.00	-----	LPI - RIGID 3-53B-2-0-2435B-SR27
F1.02.343	3-53B-DE053	0-2439A		VT	QCL-14	-----	10.00	-----	LPI - RIGID 3-53B-0-2439A-DE053
F1.02.344	3-53B-H91	0-2436D		VT	QCL-14	-----	10.00	-----	LPI - SPRING 3-53B-5-0-2436D-H91

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ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
F1.02.345	3-53B-H93	0-2436D		VT	QCL-14	-----	10.00	-----	LPI - RIGID 3-53B-5-0-2436D-H93
F1.02.347	3-53B-H95	0-2444		VT	QCL-14	-----	10.00	-----	LPI - SPRING 3-53B-5-0-2444-H95
F1.02.348	3-53B-H96	0-2438A		VT	QCL-14	-----	10.00	-----	LPI - SPRING 3-53B-5-0-2438A-H96
F1.02.408	3-54B-H4A	0-2477		VT	QCL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - SPRING 3-54B-0-2477-H4A
F1.02.468	3-54A-SR15	0-2439A		VT	QCL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - RIGID 3-54A-3-0-2439A-SR15
F1.02.469	3-54A-H27	0-2439A		VT	QCL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - RIGID 3-54A-3-0-2439A-H27
F1.02.480	3-54A-SR20	0-2439B		VT	QCL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - RIGID 3-54A-3-0-2439B-SR20
F1.02.481	3-54A-H20	0-2439A		VT	QCL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - RIGID 3-54A-3-0-2439A-H20
F1.02.482	3-54A-H18	0-2439B		VT	QCL-14	-----	08.00	-----	REACTOR BLDG. SPRAY - RIGID 3-54A-3-2439B-H18
F1.02.526	3-55-SR1	0-2439C		VT	QCL-14	-----	08.00	-----	COMPONENT COOLING - RIGID 3-55-1-0-2439C-SR1

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F1.02.527	3-55-H33	0-2439A		VT	QCL-14	-----	06.00	-----	COMPONENT COOLING - SPRING 3-55-1-0-2439A-H33
F1.02.528	3-55-DE002	0-2439A		VT	QCL-14	-----	06.00	-----	COMPONENT COOLING - RIGID 3-55-0-2439A-DE002
F1.02.551	3-56-H8	0-2478A		VT	QCL-14	-----	10.00	-----	SPENT FUEL COOL. - SPRING 3-56-0-2478A-H8
F1.02.552	3-56-H9	0-2478A		VT	QCL-14	-----	10.00	-----	SPENT FUEL COOL. - SNUBBER 3-56-0-2478A-H9
F1.02.553	3-56-H10	0-2478A		VT	QCL-14	-----	08.00	-----	SPENT FUEL COOL. - SNUBBER 3-56-0-2478A-H10
F1.02.557	3-56-H13	0-2478A		VT	QCL-14	-----	08.00	-----	SPENT FUEL COOL. - Y RIGID 3-56-0-2478A-H13
F1.02.559	3-56-H15	0-2478A		VT	QCL-14	-----	08.00	-----	SPENT FUEL COOL. - X RIGID 3-56-0-2478A-H15
F1.03.000	***** CLASS 3	SUPPORTS ***** *****		***	***** *****	-----	-----	-----	***** *****
F1.03.016	3-01A-R5	0-2403D		VT	QCL-14	-----	06.00	-----	MAIN STEAM - RIGID 3-01A-4-0-2403D-R5
F1.03.017	3-01A-R13A	0-2403D		VT	QCL-14	-----	06.00	-----	MAIN STEAM - RIGID 3-01A-4-2-0-2403D-R13A

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F1.03.021	3-01A-DE021	0-2403D		VT	QCL-14	-----	06.00	-----	MAIN STEAM - RIGID 3-01A-2403D-DE021
F1.03.022	3-01A-R4	0-2403D		VT	QCL-14	-----	06.00	-----	MAIN STEAM - SNUBBER 3-01A-4-2-0-2403D-R4
F1.03.023	3-01A-2300	0-2403D		VT	QCL-14	-----	06.00	-----	MAIN STEAM - RIGID 3-01A-0-2403D-HTT-2300
F1.03.031	3-01A-R8	0-2403D		VT	QCL-14	-----	06.00	-----	MAIN STEAM - SNUBBER 3-01A-4-0-2403D-R8
F1.03.032	3-01A-1604	0-2403D		VT	QCL-14	-----	06.00	-----	MAIN STEAM - RIGID 3-01A-2403D-LC-1604
F1.03.050	3-03-H6032	0-2479F		VT	QCL-14	-----	06.00	-----	FEEDWATER - RIGID 3-03-2479F-H6032
F1.03.054	3-03-SR11	0-2401A		VT	QCL-14	-----	24.00	-----	MAIN FEEDWATER - SNUBBER 3-03-0-2401A-SR11
F1.03.071	3-03-H6036	0-2480A		VT	QCL-14	-----	06.00	-----	MAIN FEEDWATER - SNUBBER 3-03-2480A-H6036
F1.03.072	3-03A-H2B	0-2480A		VT	QCL-14	-----	06.00	-----	MAIN FEEDWATER - SPRING 3-03A-0-2480A-H2B
F1.03.073	3-03-H6035	0-2480A		VT	QCL-14	-----	06.00	-----	MAIN FEEDWATER - RIGID 3-03-2480A-H6035

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F1.03.074	3-03-H3B	0-2479A		VT	QCL-14		06.00		MAIN FEEDWATER - RIGID 03-0-2479A-H3B
F1.03.079	3-03A-H6A	0-2480A		VT	QCL-14		06.00		MAIN FEEDWATER - RIGID 3-03A-0-2480A-H6A
F1.03.084	3-03-H6033	0-2479F		VT	QCL-14		06.00		MAIN FEEDWATER - RIGID 3-03-2479F-H6033
F1.03.086	3-03-H6187	0-2480A		VT	QCL-14		06.00		MAIN FEEDWATER - SNUBBER 3-03-2480A-H6187
F1.03.087	3-03-H6185	0-2480A		VT	QCL-14		06.00		MAIN FEEDWATER - RIGID 3-03-2480A-H6185
F1.03.088	3-03-H6031	0-2480A		VT	QCL-14		06.00		MAIN FEEDWATER - SPRING 3-03-2480A-H6031
F1.03.090	3-03-H18	0-2478E		VT	QCL-14		03.00		MAIN FEEDWATER - RIGID NPS-03-0-2478-H18
F1.03.091	3-03-H20	0-2478A		VT	QCL-14		03.00		MAIN FEEDWATER - RIGID NPS-03-0-2478-H20
F1.03.092	3-03-H22	0-2478F		VT	QCL-14		03.00		MAIN FEEDWATER - RIGID NPS-03-0-2478-H22
F1.03.094	3-03-H28	0-2478A		VT	QCL-14		03.00		MAIN FEEDWATER - SNUBBER NPS-03-0-2478-H28

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F1.03.095	3-14-H6026	0-2478F		VT	QCL-14	----	06.00	----	MAIN FEEDWATER - RIGID 3-14-2478F-H6026
F1.03.097	3-14-H6028	0-2478F		VT	QCL-14	----	06.00	----	MAIN FEEDWATER - RIGID 3-14-2478F-H6028
F1.03.098	3-14-H6030	0-2478F		VT	QCL-14	----	06.00	----	MAIN FEEDWATER - RIGID 3-14-2478F-H6030
F1.03.108	3-03A-DE029	0-2401B		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-2401B-DE029
F1.03.109	3-03A-DE030	0-2401B		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-2401B-DE030
F1.03.113	3-03A-3102	0-2401B		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-2401B-DL-3102
F1.03.114	3-03A-SR10	0-2401B		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2401B-SR10
F1.03.122	3-03A-SR46	0-2401A		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2401A-SR46
F1.03.134	3-03A-SR5	0-2401B		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2401B-SR5
F1.03.135	3-03A-SR6	0-2401B		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2401B-SR6

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F1.03.137	3-03A-SR7	0-2401B		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2401B-SR7
F1.03.138	3-03A-DE036	0-2401B		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-2401B-DE036
F1.03.139	3-03A-DE035	0-2401B		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-2401B-DE035
F1.03.149	3-03A-DE015	0-2401A		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-2401A-DE015
F1.03.150	3-03A-3002	0-2401A		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-2401A-WDB-3002
F1.03.156	3-03A-0600	0-2401A		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-0-2401A-LFM-0600
F1.03.164	3-03A-H5170	0-2439F		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR -RIGID 3-03A-2439F-H5170
F1.03.168	3-03A-SR44	0-2439A		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2439A-SR44
F1.03.181	3-03A-DE055	0-2401A		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-2401A-DE055
F1.03.199	3-03A-H178	0-2439B		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2439B-H178

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F1.03.200	3-03A-SR179	0-2439B		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2439B-SR179
F1.03.226	3-03A-SR103P0	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - SNUBBER 3-03A-1-0-2400A-SR103P0
F1.03.227	3-03A-H132	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H132
F1.03.230	3-03A-1SR104P0	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - SNUBBER 3-03A-1-0-2400A-SR104P0
F1.03.231	3-03A-H123	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H123
F1.03.250	3-03A-SR150	0-2400B		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400B-SR150
F1.03.254	3-03A-H157	0-2401B		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - SPRING 3-03A-1-0-2401B-H157
F1.03.260	3-03A-SR163	0-2401B		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2401B-SR163
F1.03.262	3-03A-H165	0-2401B		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - SPRING 3-03A-1-0-2401B-H165
F1.03.263	3-03A-SR166	0-2401B		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2401B-SR166

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F1.03.270	3-03A-H224	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H224
F1.03.271	3-03A-H223	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H223
F1.03.272	3-03A-H222	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H222
F1.03.273	3-03A-H221	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H221
F1.03.274	3-03A-H220	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H220
F1.03.275	3-03A-H219	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H219
F1.03.276	3-03A-H234	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H234
F1.03.277	3-03A-H251	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - SPRING 3-03A-1-0-2400A-H251
F1.03.278	3-03A-H235	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H235
F1.03.279	3-03A-H236	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H236

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F1.03.280	3-03A-H225	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H225
F1.03.281	3-03A-H226	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - SPRING 3-03A-1-0-2400A-H226
F1.03.282	3-03A-H227	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H227
F1.03.283	3-03A-H239	0-2400A		VT	QCL-14	-----	02.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H239
F1.03.284	3-03A-H240	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H240
F1.03.285	3-03A-H243	0-2400A		VT	QCL-14	-----	02.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H243
F1.03.317	3-03A-H201	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H201
F1.03.318	3-03A-SR15	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-SR15
F1.03.319	3-03A-H4192	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - RIGID 3-03A-2400A-H4192
F1.03.320	3-03A-H35	0-2400A		VT	QCL-14	-----	06.00	-----	EMERGENCY FDWTR - SPRING 3-03A-1-0-2400A-H35

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F1.03.322	3-03A-H253	0-2400A		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2400A-H253
F1.03.327	3-03A-H7	0-2439C		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2439C-H7
F1.03.332	3-03A-SR181	0-2439C		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2439C-SR181
F1.03.334	3-03A-SR183	0-2439C		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2439C-SR183
F1.03.337	3-03A-H6	0-2439C		VT	QCL-14	----	06.00	----	EMERGENCY FDWTR - RIGID 3-03A-1-0-2439C-H6
F1.03.364	3-07A-H44	0-2402A		VT	QCL-14	----	24.00	----	CONDENSATE - SPRING 3-07A-4-0-2402A-H44
F1.03.370	3-07A-H4	0-2400A		VT	QCL-14	----	24.00	----	CONDENSATE - SPRING 3-07A-0-2400A-H4
F1.03.384	3-07A-H75	0-2400A		VT	QCL-14	----	20.00	----	CONDENSATE - RIGID 3-07A-6-0-2400A-H75
F1.03.385	3-07A-H70	0-2400A		VT	QCL-14	----	20.00	----	CONDENSATE - SNUBBER 3-07A-6-0-2400A-H70
F1.03.386	3-07A-H21	0-2400A		VT	QCL-14	----	20.00	----	CONDENSATE - SPRING 3-07A-0-2400A-H21

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F1.03.427	3-07A-SR18	0-2402A		VT	QCL-14		30.00		CONDENSATE - RIGID 3-07A-4-0-2402A-SR18
F1.03.429	3-07A-SR7	0-2400A		VT	QCL-14		24.00		CONDENSATE - RIGID 3-07A-4-0-2400A-SR7
F1.03.504	3-14B-7001	0-2437A		VT	QCL-14		06.00		AUX SERVICE WATER -RIGID 3-14B-2437A-WM-7001

4.0 Results Of Inspections Performed During Outage 10

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) 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: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B02

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B02.040.003	3SGB-WG58-1	08/28/88	REC	L	N	_____
B02.060.002	3-LDCA-OUT-V4	09/09/88	CLR	L	N	_____
B02.060.003	3-LDCB-OUT-V4	09/09/88	REC	L	Y	_____

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
B05.050.004	3PDA2-2	09/07/88	CLR	L	N	
B05.050.004A	3PDA2-2	09/08/88	CLR	L	N	
B05.050.004B	3PDA2-2	08/19/88	CLR	-	N	
B05.051.003	3PIA2-10	08/23/88	CLR	-	N	
B05.051.005	3PDA2-11	08/19/88	CLR	-	N	
B05.051.008	3PDB1-11	08/24/88	CLR	-	N	
B05.051.012	3PHA-13	08/24/88	CLR	-	N	
B05.051.013	3PHA-14	08/24/88	CLR	-	N	
B05.051.014	3PHA-15	08/24/88	CLR	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B06

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B06.180.005	3RCP-3A1-S	09/07/88	CLR	-	N	
B06.200.005	3RCP-3A2-WASH	08/31/88	CLR	-	N	ADDED RFO 10 PER IWB-2430(B)
B06.200.006	3RCP-3A1-WASH	08/25/88	REP	-	N	PIR 3-088-0196
B06.200.007	3RCP-3B1-WASH	08/31/88	CLR	-	N	ADDED RFO 10 PER IWB-2430(B)
B06.200.008	3RCP-3B2-WASH	08/26/88	REP	-	N	OUT.10 IWB-2430(A) 3-088-0196

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B07

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
B07.030.006	3SGA-LH-BOLTS	09/03/88	CLR	-	N	
B07.070.013	3-51A-HP126	08/28/88	CLR	-	N	
B07.070.014	3-51A-HP127	08/28/88	CLR	-	N	
B07.070.015	3-51A-HP152	08/27/88	CLR	-	N	
B07.070.016	3-51A-HP153	08/27/88	CLR	-	N	
B07.080.001	3RPV-CRD-BOLTS	08/31/88	CLR	-	N	CRD # 33,47,& 54
B07.080.002	3RPV-CRD-RINGS	08/31/88	REC	-	N	CRD # 33, 47, & 54

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B09

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B09.011.102	3PSL-08	09/09/88	CLR	-	Y	
B09.011.102A	3PSL-08	09/09/88	CLR	-	N	
B09.012.015	3PDA2-53LI	09/07/88	CLR	L	N	
B09.012.015A	3PDA2-53LI	08/19/88	CLR	-	N	
B09.012.016	3PDA2-53LO	09/07/88	CLR	L	N	
B09.012.016A	3PDA2-53LO	08/19/88	CLR	-	N	
B09.021.047	3-51A-143-18	09/02/88	CLR	-	N	
B09.021.048	3-51A-141-01	09/02/88	CLR	-	N	
B09.021.049	3-51A-142-03	09/02/88	CLR	-	N	
B09.021.050	3-51A-142-21	09/02/88	CLR	-	N	
B09.021.051	3-51A-140-01	09/02/88	CLR	-	N	
B09.021.052	3-51A-140-12	09/02/88	CLR	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B12

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B12.040.001	3-53A-CF-11	09/02/88	CLR	-	N	_____

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B14

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
B14.010.009	3RPV-CRD-54WH9	08/29/88	CLR	-	N	_____
B14.010.010	3RPV-CRD-54W60	08/29/88	CLR	-	N	_____
B14.010.011	3RPV-CRD-54	08/29/88	CLR	-	N	_____
B14.010.012	3RPV-CRD-54W61	08/29/88	CLR	-	N	_____

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B15

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B15.010.001	3RPV-LK-TEST	09/21/88	CLR	-	N	
B15.020.001	3PZR-LK-TEST	09/21/88	CLR	-	N	
B15.030.001	3SGA-LK-TEST	09/21/88	CLR	-	N	
B15.030.002	3SGB-LK-TEST	09/21/88	CLR	-	N	
B15.040.001	3LDC3A-LK TEST	09/21/88	CLR	-	N	
B15.040.002	3LDC3B-LK TEST	09/21/88	CLR	-	N	
B15.050.001	3-OFD-100A-3.1	09/21/88	CLR	-	N	
B15.050.001A	3-OFD-100A-3.2	09/21/88	CLR	-	N	
B15.050.002	3-OFD-101A-3.1	09/21/88	CLR	-	N	
B15.050.003	3-OFD-101A-3.4	09/21/88	CLR	-	N	
B15.050.004	3-OFD-102A-3.1	09/21/88	CLR	-	N	
B15.050.005	3-OFD-102A-3.2	09/21/88	CLR	-	N	
B15.050.006	3-OFD-102A-3.3	09/21/88	CLR	-	N	
B15.050.007	3-OFD-110A-3.1	09/21/88	CLR	-	N	
B15.050.009	3-OFD-100A-3.3	09/21/88	CLR	-	N	
B15.050.010	3-OFD-110A-3.4	09/21/88	CLR	-	N	
B15.060.001	3-RCP-3A1	09/21/88	CLR	-	N	
B15.060.002	3-RCP-3A2	09/21/88	CLR	-	N	
B15.060.003	3-RCP-3B1	09/21/88	CLR	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B15

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B15.060.004	3-RCP-3B2	09/21/88	CLR	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER B16

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
B16.011.001	3SGA-TUBES	09/03/88	REP	-	N	PIR 3-088-0206
B16.011.002	3SGB-TUBES	09/05/88	REP	-	N	PIR 3-088-0206

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
C01.030.004	3SGB-WG59	08/30/88	CLR	L	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C02

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
C02.021.002	3SGA-WG23-2	09/01/88	CLR	L	Y	_____
C02.021.002A	3SGA-WG23-2	08/24/88	CLR	-	N	_____
C02.022.002	3SGA-WG23-2	09/01/88	CLR	-	N	_____

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C03

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
C03.010.013	3SGB-WG84-ZW	09/02/88	CLR	-	N	
C03.010.014	3SGB-WG84-WZ	09/02/88	CLR	-	N	
C03.010.019	3-CFTA-WT18-Y	09/02/88	CLR	-	N	
C03.010.024	3-CFTB-WT18-Z	09/02/88	CLR	-	N	
C03.040.002	3-01A-H13	07/05/88	CLR	-	N	
C03.040.003	3-01A-H14	07/05/88	CLR	-	N	
C03.040.005	3-01A-R7	07/06/88	CLR	L	N	
C03.040.006	3-01A-R13	09/13/88	CLR	L	N	
C03.040.015	3-01A-H18	09/07/88	CLR	L	N	
C03.040.016	3-01A-H1B	09/09/88	CLR	-	N	
C03.040.017	3-01A-H9A	09/06/88	CLR	-	N	
C03.040.071	3-54B-H4A	09/02/88	CLR	-	N	
C03.040.097	3SGB-WG87-ZW	09/02/88	CLR	-	N	
C03.040.098	3SGB-WG87-WZ	09/02/88	CLR	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
C05.011.004	3-53B-33-33	06/24/88	CLR	L	N	
C05.011.005	3-53B-33-41	06/24/88	CLR	L	N	
C05.011.006	3-53B-33-32	06/24/88	CLR	L	N	
C05.011.007	3-53B-33-47	06/24/88	CLR	-	N	
C05.011.012	3-53B-33-09	06/24/88	CLR	-	N	
C05.011.015	3-53B-34-36A	06/16/88	CLR	-	N	
C05.011.024	3-53B-34-03	06/24/88	CLR	-	N	
C05.011.035	3-53B-38-45	06/30/88	CLR	-	N	
C05.011.037	3-53B-38-27	06/24/88	CLR	-	N	
C05.011.038	3-53B-38-05	06/24/88	CLR	-	N	
C05.011.039	3-53B-38-25	06/24/88	CLR	-	N	
C05.011.045	3-53B-44-20	09/12/88	CLR	-	N	
C05.011.049	3-53B-45-08	08/17/88	CLR	-	N	
C05.011.055	3-53B-47-52A	06/16/88	CLR	-	N	
C05.011.056	3-53B-47-51A	06/16/88	CLR	-	N	
C05.011.057	3-53B-47-50A	06/16/88	CLR	-	N	
C05.011.058	3-53B-47-45B	06/16/88	CLR	-	N	
C05.011.069	3-53B-50-14A	06/16/88	CLR	-	N	
C05.011.238	3-54A-10-05	06/24/88	CLR	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C05

DUKE POWER COMPANY
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
C05.011.263	3-51A-50-61	06/30/88	CLR	-	N	
C05.011.268	3-51A-50-41	06/30/88	CLR	-	N	
C05.011.272	3-51A-50-78A	06/16/88	CLR	-	N	
C05.011.303	3-03A-15-08	09/07/88	CLR	-	N	
C05.012.013	3-53B-33-09L	06/24/88	CLR	-	N	
C05.012.014	3-53B-38-27L	06/24/88	CLR	-	N	
C05.012.015	3-53B-38-05L	06/24/88	CLR	-	N	
C05.012.016	3-54A-10-05L	06/24/88	CLR	-	N	
C05.021.303	3-03-28-10	08/24/88	CLR	-	N	
C05.021.303A	3-03-28-10	08/20/88	CLR	-	N	
C05.021.306	3-03-28-15	08/21/88	CLR	-	N	
C05.021.306A	3-03-28-15	08/20/88	CLR	-	N	
C05.021.308	3-03-29-WG91-H	08/21/88	CLR	-	N	
C05.021.308A	3-03-29-WG91-H	08/20/88	CLR	-	N	
C05.021.313	3-03-27-20	09/02/88	CLR	-	N	
C05.021.313A	3-03-27-20	09/01/88	CLR	-	N	
C05.021.315	3-03-27-24	09/05/88	CLR	-	N	
C05.021.315A	3-03-27-24	09/01/88	CLR	-	N	
C05.021.359	3-01A-3MS-7B-B	08/21/88	CLR	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C05

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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
C05.021.359A	3-01A-3MS-7B-B	08/17/88	CLR	-	N	
C05.021.362	3-01A-13-16	08/31/88	CLR	-	N	
C05.021.362A	3-01A-13-16	08/29/88	CLR	-	N	
C05.021.368	3-01A-13-19	08/30/88	CLR	-	N	
C05.021.368A	3-01A-13-19	08/26/88	CLR	-	N	
C05.021.379	3-01A3MS-16A-A	08/30/88	CLR	-	N	
C05.021.379A	3-01A-3MS16A-A	08/26/88	CLR	-	N	
C05.021.381	3-01A3MS-23A-A	08/31/88	CLR	-	N	
C05.021.381A	3-01A-3MS23A-A	08/31/88	CLR	-	N	
C05.021.387	3-01A-10-19	08/31/88	CLR	-	N	
C05.021.387A	3-01A-10-19	08/29/88	CLR	-	N	
C05.022.008	3-01A-3MS7B-BL	08/21/88	CLR	-	N	
C05.022.008A	3-01A-3MS7B-BL	08/17/88	CLR	-	N	
C05.022.011	3-01A-13-16L	08/31/88	CLR	-	N	
C05.022.011A	3-01A-13-16L	08/29/88	CLR	-	N	
C05.022.016	3-01A3MS16A-AL	08/30/88	CLR	-	N	
C05.022.016A	3-01A3MS16A-AL	08/29/88	CLR	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER C07

DUKE POWER COMPANY
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
C07.010.001	3LPCA	08/18/88	CLR	-	N	
C07.010.002	3LPCB	08/18/88	CLR	-	N	
C07.020.001	3-102A-3.1	08/18/88	CLR	-	N	
C07.020.002	3-102A-3.2	09/12/88	CLR	-	N	
C07.020.003	3-104A-3.1	09/21/88	CLR	-	N	
C07.020.004	3-103A-3.1	09/20/88	CLR	-	N	
C07.020.006	3-101A-3.4	09/18/88	CLR	-	N	
C07.020.007	3-101A-3.3	09/18/88	CLR	-	N	
C07.020.008	3-101A-3.5	09/21/88	CLR	-	N	
C07.020.009	3-104A-3.2	08/18/88	CLR	-	N	
C07.030.001	3LPI PUMP-3A	09/12/88	CLR	-	N	
C07.030.002	3LPI PUMP-3B	08/24/88	CLR	-	N	
C07.030.003	3LPI PUMP-3C	08/18/88	CLR	-	N	
C07.030.004	3HPI-PUMP 3C	09/18/88	CLR	-	N	
C07.030.006	3RBS-PUMP 3A	09/20/88	CLR	-	N	
C07.030.007	3RBS-PUMP 3B	09/20/88	CLR	-	N	
C07.030.008	3-SSF-3P-1	09/21/88	CLR	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER D01

DUKE POWER COMPANY
QUALITY ASSURANCE DEPARTMENT
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
D01.011.002	3-OFD-101A-3.1	09/21/88	CLR	-	N	
D01.011.005	3-OFD-101A-3.4	09/21/88	CLR	-	N	
D01.011.006	3-OFD-101A-3.5	09/21/88	CLR	-	N	
D01.011.008	3-OFD-109A-3.1	05/04/87	CLR	-	N	PIR 4-087-0124 1ST INSP PERIOD
D01.011.014	3-OFD-100A-3.3	09/21/88	CLR	-	N	
D01.011.017	3-OFD-144A-3.2	09/18/88	CLR	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: O'CONNOR UNIT 3
KEY: ITEM NUMBER D02

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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
D02.011.003	3-0FD-121A-3.7	07/27/88	CLR	-	N	
D02.011.004	3-0FD-121A-3.8	07/27/88	CLR	-	N	
D02.011.006	3-0FD-121B-3.5	09/20/88	CLR	-	N	
D02.011.007	3-0FD-121D-3.1	09/21/88	CLR	-	N	
D02.011.016	3-0FD-133A-3.1	08/04/88	CLR	-	N	
D02.011.017	3-0FD-133A-3.2	08/04/88	CLR	-	N	
D02.011.021	3-0FD-121A-1.8	07/27/88	CLR	-	N	
D02.011.022	3-0FD-124A-3.1	08/04/88	CLR	-	N	
D02.011.023	3-0FD-124A-3.3	08/04/88	CLR	-	N	
D02.011.024	3-0FD-124B-3.1	04/22/87	CLR	-	N	PIR 4-087-0124 INSP 080488 CLR
D02.011.025	3-0FD-124B-3.2	08/04/88	CLR	-	N	
D02.011.027	3-0FD-124A-1.1	08/04/88	CLR	-	N	
D02.020.013	3-03A-SR46	07/27/88	CLR	-	N	
D02.020.014	3-03A-SR5	07/27/88	CLR	-	N	
D02.020.056	3-03A-SR150	07/28/88	REC	-	N	
D02.020.060	3-03A-SR163	07/27/88	CLR	-	N	
D02.020.061	3-03A-SR166	07/27/88	CLR	-	N	
D02.020.076	3-03A-H7	08/29/88	CLR	-	N	
D02.020.077	3-03A-H6	08/23/88	REC	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
D02.020.078	3-03A-SR179	08/23/88	CLR	-	N	
D02.020.079	3-03A-SR181	08/23/88	CLR	-	N	
D02.020.080	3-03A-SR183	08/23/88	CLR	-	N	
D02.020.097	3-03-H3B	09/07/88	CLR	-	N	
D02.020.111	3-07A-SR18	06/23/88	CLR	-	N	
D02.020.112	3-07A-SR7	08/24/88	CLR	-	N	
D02.020.130	3-01A-R5	08/25/88	CLR	-	N	
D02.020.131	3-01A-R13A	08/31/88	CLR	-	N	
D02.020.132	3-01A-2300	09/04/88	CLR	-	N	
D02.020.162	3-14B-7001	06/23/88	CLR	-	N	
D02.040.027	3-03A-H157	08/25/88	REC	-	N	
D02.040.028	3-03A-H165	07/27/88	CLR	-	N	
D02.040.051	3-07A-H44	06/23/88	CLR	-	N	
D02.040.052	3-07A-H4	06/23/88	CLR	-	N	

PROGRAM: NISIRUND-QAISI04
FILE: C007133
PLANT: OCONEE UNIT 3
KEY: ITEM NUMBER E04

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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
E04.001.001	3PDA1-47	09/09/88	CLR	L	N	_____
E04.001.001A	3PDA1-47	08/24/88	CLR	-	N	_____
E04.001.003	3PDB1-47	09/05/88	CLR	-	N	_____
E04.001.004	3PDB2-47	09/05/88	CLR	-	N	_____

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FILE: C007133
PLANT: OCONEE UNIT 3
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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEØ. REF. =====	COMMENTS =====
F1.01.021	3-50-H1A	08/16/88	REC	-	N	
F1.01.022	3-50-H2A	08/16/88	REC	-	N	
F1.01.025	3-57-H1701	08/17/88	REC	-	N	
F1.01.026	3-50-H6	09/07/88	REC	-	N	
F1.01.051	3-51-H1A	08/17/88	CLR	-	N	
F1.01.052	3-51-H2A	08/17/88	CLR	-	N	
F1.01.053	3-51-H3A	08/16/88	REC	-	N	
F1.01.084	3-51A-H1C	09/05/88	CLR	-	N	
F1.01.085	3-51A-H2C	09/03/88	CLR	-	N	
F1.01.134	3-53A-H6B	09/03/88	REC	-	N	
F1.01.135	3-53A-H7B	09/08/88	REC	-	N	
F1.01.137	3-53A-H29C	09/03/88	CLR	-	N	
F1.01.138	3-59-H28	08/19/88	REC	-	N	
F1.01.139	3-57-H13A	08/17/88	REC	-	N	
F1.02.002	3-01A-H2	09/02/88	CLR	-	N	
F1.02.013	3-01A-H13	07/08/88	CLR	-	N	
F1.02.014	3-01A-H14	07/08/88	REC	-	N	
F1.02.015	3-01A-H15	08/31/88	CLR	-	N	
F1.02.016	3-01A-H16	08/31/88	CLR	-	N	

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F1.02.017	3-01A-H17	08/31/88	CLR	-	N	
F1.02.018	3-01A-H18	08/24/88	REC	-	N	
F1.02.019	3-01A-H19	09/07/88	REC	-	N	
F1.02.030	3-01A-R7	07/08/88	REC	-	N	
F1.02.031	3-01A-R8	08/31/88	CLR	-	N	
F1.02.032	3-01A-R9	08/31/88	CLR	-	N	
F1.02.033	3-01A-R10	06/29/88	CLR	-	N	
F1.02.044	3-01A-H44	06/29/88	CLR	-	N	
F1.02.045	3-01A-H46	06/29/88	CLR	-	N	
F1.02.051	3-01A-H1B	08/16/88	REC	-	N	
F1.02.052	3-01A-H2B	08/15/88	CLR	-	N	
F1.02.053	3-01A-H3B	08/16/88	REC	-	N	
F1.02.054	3-01A-H4B	08/15/88	REC	-	N	
F1.02.056	3-01A-H6B	08/16/88	CLR	-	N	
F1.02.070	3-01A-H9A	08/16/88	REC	-	N	
F1.02.071	3-01A-H10A	08/15/88	REC	-	N	
F1.02.151	3-03-H5041	08/23/88	CLR	-	N	
F1.02.164	3-03-H4A	08/16/88	CLR	-	N	
F1.02.166	3-03-H6A	09/07/88	REC	-	N	

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F1.02.167	3-03-H7A	08/16/88	CLR	-	N	
F1.02.171	3-03-H11A	08/24/88	REC	-	N	
F1.02.172	3-03-H12A	08/24/88	REC	-	N	
F1.02.173	3-03-H13A	08/16/88	CLR	-	N	
F1.02.174	3-03-H14A	08/16/88	REC	-	N	
F1.02.293	3-53B-H15	07/21/88	CLR	-	N	
F1.02.294	3-53B-H16	07/21/88	CLR	-	N	
F1.02.295	3-53B-H17	07/21/88	CLR	-	N	
F1.02.298	3-53B-H43	06/23/88	REC	-	N	
F1.02.300	3-53B-SR39	07/21/88	CLR	-	N	
F1.02.302	3-53B-H31	07/21/88	REC	-	N	
F1.02.303	3-53B-DE012	07/21/88	REC	-	N	
F1.02.310	3-53B-H22	07/21/88	CLR	-	N	
F1.02.322	3-53B-H118	07/21/88	CLR	-	N	
F1.02.323	3-53B-H121	07/21/88	CLR	-	N	
F1.02.325	3-53B-SR23	07/21/88	REC	-	N	
F1.02.326	3-53B-SR25	07/21/88	REC	-	N	
F1.02.328	3-53B-SR27	07/21/88	CLR	-	N	
F1.02.343	3-53B-DE053	09/01/88	CLR	-	N	

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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEQ. REF. =====	COMMENTS =====
F1.02.344	3-53B-H91	06/23/88	REC	-	N	
F1.02.345	3-53B-H93	06/23/88	REC	-	N	
F1.02.347	3-53B-H95	09/04/88	CLR	-	N	
F1.02.348	3-53B-H96	08/23/88	REC	-	N	
F1.02.408	3-54B-H4A	09/02/88	REC	-	N	
F1.02.468	3-54A-SR15	08/30/88	REC	-	N	
F1.02.469	3-54A-H27	08/23/88	REC	-	N	
F1.02.480	3-54A-SR20	08/29/88	REC	-	N	
F1.02.481	3-54A-H20	08/23/88	CLR	-	N	
F1.02.482	3-54A-H18	08/23/88	REC	-	N	
F1.02.526	3-55-SR1	08/23/88	CLR	-	N	
F1.02.527	3-55-H33	08/23/88	REC	-	N	
F1.02.528	3-55-DE002	08/23/88	CLR	-	N	
F1.02.551	3-56-H8	09/03/88	REC	-	N	
F1.02.552	3-56-H9	08/15/88	CLR	-	N	
F1.02.553	3-56-H10	09/05/88	REC	-	N	
F1.02.557	3-56-H13	08/19/88	CLR	-	N	
F1.02.559	3-56-H15	08/19/88	REC	-	N	
F1.03.016	3-01A-R5	08/25/88	REC	-	N	

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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
F1.03.017	3-01A-R13A	08/31/88	REC	-	N	
F1.03.021	3-01A-DE021	06/23/88	CLR	-	N	
F1.03.022	3-01A-R4	08/11/88	REC	-	N	
F1.03.023	3-01A-2300	09/04/88	CLR	-	N	
F1.03.031	3-01A-R8	09/04/88	CLR	-	N	
F1.03.032	3-01A-1604	06/23/88	CLR	-	N	
F1.03.050	3-03-H6032	08/16/88	CLR	-	N	
F1.03.054	3-03-SR11	09/13/88	CLR	-	N	
F1.03.071	3-03-H6036	08/17/88	CLR	-	N	
F1.03.072	3-03A-H2B	08/17/88	CLR	-	N	
F1.03.073	3-03-H6035	08/17/88	CLR	-	N	
F1.03.074	3-03-H3B	08/17/88	CLR	-	N	
F1.03.079	3-03A-H6A	08/24/88	CLR	-	N	
F1.03.084	3-03-H6033	08/16/88	CLR	-	N	
F1.03.086	3-03-H6187	08/16/88	REC	-	N	
F1.03.087	3-03-H6185	08/16/88	CLR	-	N	
F1.03.088	3-03-H6031	08/16/88	REC	-	N	
F1.03.090	3-03-H18	08/19/88	CLR	-	N	
F1.03.091	3-03-H20	08/19/88	CLR	-	N	

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ITEM NUMBER =====	ID NUMBER =====	INSPECTION DATE =====	INSPECTION STATUS =====	INSPECTION LIMITED =====	GEO. REF. =====	COMMENTS =====
F1.03.092	3-03-H22	08/19/88	CLR	-	N	
F1.03.094	3-03-H28	08/19/88	CLR	-	N	
F1.03.095	3-14-H6026	09/05/88	REC	-	N	
F1.03.097	3-14-H6028	09/05/88	REC	-	N	
F1.03.098	3-14-H6030	08/19/88	CLR	-	N	
F1.03.108	3-03A-DE029	08/16/88	REC	-	N	
F1.03.109	3-03A-DE030	06/29/88	CLR	-	N	
F1.03.113	3-03A-3102	08/30/88	CLR	-	N	
F1.03.114	3-03A-SR10	07/27/88	CLR	-	N	
F1.03.122	3-03A-SR46	07/27/88	CLR	-	N	
F1.03.134	3-03A-SR5	07/27/88	REC	-	N	
F1.03.135	3-03A-SR6	07/27/88	REC	-	N	
F1.03.137	3-03A-SR7	07/28/88	REC	-	N	
F1.03.138	3-03A-DE036	07/27/88	REC	-	N	
F1.03.139	3-03A-DE035	07/28/88	CLR	-	N	
F1.03.149	3-03A-DE015	06/23/88	CLR	-	N	
F1.03.150	3-03A-3002	09/07/88	CLR	-	N	
F1.03.156	3-03A-0600	07/27/88	CLR	-	N	
F1.03.164	3-03A-H5170	08/23/88	CLR	-	N	

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F1.03.168	3-03A-SR44	08/23/88	CLR	-	N	
F1.03.181	3-03A-DE055	07/26/88	CLR	-	N	
F1.03.199	3-03A-H178	08/23/88	CLR	-	N	
F1.03.200	3-03A-SR179	08/23/88	CLR	-	N	
F1.03.226	3-03A-SR103PØ	07/28/88	CLR	-	N	
F1.03.227	3-03A-H132	06/23/88	CLR	-	N	
F1.03.230	3-03A-1SR104PØ	07/28/88	CLR	-	N	
F1.03.231	3-03A-H123	06/23/88	CLR	-	N	
F1.03.250	3-03A-SR150	07/28/88	CLR	-	N	
F1.03.254	3-03A-H157	08/25/88	REC	-	N	
F1.03.260	3-03A-SR163	07/27/88	CLR	-	N	
F1.03.262	3-03A-H165	07/27/88	CLR	-	N	
F1.03.263	3-03A-SR166	07/27/88	CLR	-	N	
F1.03.270	3-03A-H224	06/23/88	CLR	-	N	
F1.03.271	3-03A-H223	06/23/88	CLR	-	N	
F1.03.272	3-03A-H222	06/23/88	REC	-	N	
F1.03.273	3-03A-H221	07/28/88	REC	-	N	
F1.03.274	3-03A-H220	07/28/88	CLR	-	N	
F1.03.275	3-03A-H219	07/28/88	CLR	-	N	

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F1.03.276	3-03A-H234	06/23/88	CLR	-	N	
F1.03.277	3-03A-H251	06/29/88	CLR	-	N	
F1.03.278	3-03A-H235	06/29/88	CLR	-	N	
F1.03.279	3-03A-H236	06/29/88	CLR	-	N	
F1.03.280	3-03A-H225	07/28/88	CLR	-	N	
F1.03.281	3-03A-H226	07/28/88	REC	-	N	
F1.03.282	3-03A-H227	06/23/88	CLR	-	N	
F1.03.283	3-03A-H239	09/04/88	CLR	-	N	
F1.03.284	3-03A-H240	08/24/88	REC	-	N	
F1.03.285	3-03A-H243	06/23/88	REC	-	N	
F1.03.317	3-03A-H201	08/24/88	CLR	-	N	
F1.03.318	3-03A-SR15	08/24/88	REC	-	N	
F1.03.319	3-03A-H4192	07/26/88	CLR	-	N	
F1.03.320	3-03A-H35	06/23/88	CLR	-	N	
F1.03.322	3-03A-H253	09/12/88	REC	-	N	
F1.03.327	3-03A-H7	08/29/88	CLR	-	N	
F1.03.332	3-03A-SR181	08/23/88	CLR	-	N	
F1.03.334	3-03A-SR183	08/23/88	CLR	-	N	
F1.03.337	3-03A-H6	08/23/88	CLR	-	N	

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F1.03.364	3-07A-H44	06/23/88	CLR	-	N	
F1.03.370	3-07A-H4	06/23/88	REC	-	N	
F1.03.384	3-07A-H75	06/23/88	CLR	-	N	
F1.03.385	3-07A-H70	06/23/88	REC	-	N	
F1.03.386	3-07A-H21	06/23/88	CLR	-	N	
F1.03.427	3-07A-SR18	06/23/88	CLR	-	N	
F1.03.429	3-07A-SR7	08/24/88	REC	-	N	
F1.03.504	3-14B-7001	06/23/88	CLR	-	N	

5.0 Class 1 Inspection Results

Examinations were performed during Outage 10 on Steam Generators 3A and 3B, Letdown Coolers A and B, Reactor Coolant Pumps 3A1, 3A2, 3B1 and 3B2, valves and valve bolting, Reactor Vessel CRDM Housings and CRDM bolting, Primary Coolant, Pressurizer Surge and High Pressure Injection Piping.

5.1 Reactor Vessel

One (1) peripheral CRDM assembly received surface examinations. No reportable indications were found.

Control Rod Drive Housing Numbers 33, 47 and 54, Bolts and Nut Rings received a visual examination. No reportable conditions were found.

5.2 Steam Generators

Reportable indications in Steam Generator 3B Upper Head-to-Tubesheet Weld 3SGB-WG58-1 (Item Number B02.040.003) detected during Outage 6 were re-examined by ultrasonics during Outage 10 per ASME Section XI, Paragraph IWB-2420(b). The indications were determined to be acceptable per Babcock & Wilcox's Volumetric Examination Evaluation Report Number 883-001. A copy of Evaluation Report Number 883-001 is included in Section 10 of this report. A copy of the inspection data sheets is included in this section of the report.

Steam Generator 3A Lower Head Inspection Cover Bolting received a visual examination. No reportable conditions were found.

5.3 Letdown Coolers

Letdown Coolers 3A and 3B Outlet Tubesheet-to-Channel Body Welds Pc. 3 to Pc. 2 received ultrasonic examinations. No reportable indications were found.

5.4 Piping

Similar Metal Butt Welds:

One (1) circumferential butt weld, nominal pipe size four inches and greater, received a volumetric and surface examination. Two (2) longitudinal welds received a volumetric and surface examination. Six (6) circumferential welds, nominal pipe size less than four inches, received a dye penetrant examination. No reportable indications were found.

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.

Piping Supports:

Fourteen (14) supports were examined by visual methods. No reportable conditions were found.

5.5 Pumps

Reactor Coolant Pump 3A1 Seal Gland Bolts received an ultrasonic examination. No reportable indications were found.

Reactor Coolant Pump 3A1 Seal Gland Nuts and Washers received a visual examination. Reportable conditions were found on the nuts (Item Number B06.200.006). The scope of the examination was extended per ASME Section XI, Paragraph IWB-2430(a) to include Reactor Coolant Pump 3B2 Nuts. Reportable conditions were found (Item Number B06.200.008). The scope of the examination was further extended per ASME Section XI, Paragraph IWB-2430(b) to include Reactor Coolant Pumps 3A2 and 3B1 Nuts (Item Numbers B06.200.005 and B06.200.007, respectively). No reportable conditions were found. All seal gland nuts on Reactor Coolant Pumps 3A1, 3A2, 3B1 and 3B2 were replaced with new seal gland nuts. Refer to Problem Investigation Report 3-088-0196 included in Section 9 of this report. The inspection data sheets for Reactor Coolant Pumps 3A1 and 3B2 (Item Numbers B06.200.006 and B06.200.008) are included in this section of the report.

5.6 Valves

Bolting on four (4) valves received a visual examination. No reportable conditions were found.

The internal surfaces of one (1) valve received a visual examination. No reportable conditions were found.

5.7 Steam Generator Tubing

The tubing in Steam Generator 3A and 3B was inspected by eddy current using multifrequency bobbin coil techniques and B&W Eddy-360 rotating pancake coil probe. The inspection results on all tubes showing equal to or greater than 20% through-wall are shown in this section of the report.

Steam Generator 3A:

8,378 tubes were examined using the standard bobbin coil technique. Eight-two (82) of these tubes were also examined using B&W Eddy-360 rotating pancake coil probe. A summary of the results for Steam Generator 3A follows:

- Twelve (12) were found to have wall-loss indications 40% and greater. Four (4) of these tubes were sized less than 40% through-wall with B&W Eddy-360 probe.
- Twenty-two (22) tubes were found to have wall-loss indications 20% to 39%.

- One hundred twenty-two (122) tubes were found to have wall-loss indication with a signal-to-noise ratio too low to assign an accurate through-wall dimension.
- Eighteen (18) tubes were removed from service due to 40% and greater through-wall dimension and from good engineering practice.

Steam Generator 3B:

8,283 tubes were examined using the standards bobbin coil technique. One hundred sixty-one (161) of these tubes were also examined using B&W Eddy-360 rotating pancake coil probe. A summary of the result for Steam Generator 3B follows:

- Four (4) tubes were found to have wall-loss indication 40% and greater.
- Nineteen (19) tube were found to have wall-loss indication 20% to 39%.
- One hundred sixteen (116) tubes were found to have wall-loss indication with a signal-to-noise ratio too low to assign an accurate through-wall dimension.
- Four (4) tubes were removed from service due to 40% or greater through-wall dimension and from good engineering practice.

5.8 Inservice Leakage Tests

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

5.9 Class 1 Repairs and Replacements

Repairs and replacements for work performed from March 29, 1987 to September 21, 1988 are itemized in Section 11 of this report.



Isabcock & Wilcox
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VOLUMETRIC TEST DATA

CUSTOMER: DUKE POWER CO., OCONEE UNIT 3 CONTRACT NO: 702-2034 COMPONENT: STEAM GENERATOR

DESCRIPTION: UPPER HEAD TO TUBESHEET THERMOMETER: 0CUGA 32597

I.D. NO: 3 SGB-WG58-1 PROCEDURE: ISI-130, REV. 24 MATERIAL: CS THICKNESS: 8.0 in. TEST SURF.: O.D.

NO. POSITIONS: 36 DISTANCE: 12.0 in. NO. 1 REFERENCE: 20 CAL. SHEET: 883-001 CAL. SHEET: CAL. SHEET: CAL. SHEET:

BEAM DIRECTION: ☐ LONG ☒ SHEAR LIMITED EXAM: ☐ NO ☒ YES ? ANGLE: 45° ANGLE: N ANGLE: N ANGLE: N

EXAMINER: *Robert J. Koppelman* ID. NO: 57635 LEVEL: II TIME START: 0635 HR. TIME START: A HR. TIME START: A HR. TIME START: A HR.

EXAMINER: *John L. Koppelman* ID. NO: W9276 LEVEL: II TIME STOP: 1538 HR. TIME STOP: HR. TIME STOP: HR. TIME STOP: HR.

EXAMINER: *John L. Koppelman* ID. NO: R9615 LEVEL: II PART TEMP: 94 °F PART TEMP: °F PART TEMP: °F PART TEMP: °F

NOTES: *See Zero Deg. Data, 19 May 1982* M8250 DATE: AUG. 26, 88 DATE: DATE: DATE: 55643 I

SEE ZERO DEG. DATA, 19 MAY 1982 WELD INFORMATION 8 0° THICKNESS

DWG. NO: ISI-OCN3-004 SURFACE NO. 2 HTH: SURFACE NO. 1

FCA(S): N/A TUBE SHEET WD: UPPER HEAD

1ST SCAN *John L. Koppelman* 60° REQUIRED ☒ BM: MIN: SEE NOTES BM:

2ND SCAN 60° NOT REQUIRED HAZ: MAX: HAZ:

INDICATION NO.	POSITION		ANGLE (DEGREE)	SURFACE	BEAM DIRECTION	STATUS	MAX. AMP. % DAC	DEPTH (INS)	20%	50% / HMA	100%	CRYSTAL DISTANCE				MINIMUM				MAXIMUM				DAMP	REMARKS
	OR											DEPTH	POSITION (INCHES)		DEPTH	POSITION (INCHES)									
	PART ITEM												I 2			I 2									
	A	B											A	B		A	B								
200	7T09		45°	1	2	SEP.	50	3.3		2.1		10.9			5.1	3.2		4.7	3.5		5.3	NO	50% T.W.D.		
							50	3.4				10.4			5.1								50% E.P.		
							50	3.3				12.5			5.0								50% E.P.		
							50	3.3				11.8			5.0	3.1		4.6	3.5		5.4	NO	50% T.W.D.		
201	8T09		45°	1	2	SEP.	159	3.3		2.1		3.5			5.1	3.2		4.7	3.5		5.4	NO	HMA T.W.D.		
							50	3.3				2.3			5.0								50% E.P.		
							50	3.3				4.4			5.0								50% E.P.		
202	8T09		45°	1	2	SEP.	159	3.3		1.3		10.3			4.8	3.2		4.5	3.5		5.3	NO	HMA T.W.D.		
							50	3.3				9.7			5.0								50% E.P.		
							50	3.3				11.0			5.0								50% E.P.		
203	9T010		45°	1	2	SEP.	159	3.3		1.1		1.7			4.75	3.1		4.4	3.5		5.2	NO	HMA T.W.D.		
							50	3.3				1.4			4.9								50% E.P.		

REVIEWED BY: *M. L. Koppelman* LEVEL: III DATE: 9-11-88 FIGURE NO: B03.01.004

ANGLE 0 DEG. 45 DEG. 60 DEG. OTHER E.R. REQUIRED: ☒ YES ☐ NO E.R. NUMBER: 883-001 B02.040.003

IND. NOS. 1 TO 199 200 TO 399 400 TO 599 600 TO 799 PAGE 1 OF 17

BABCOCK & WILCOX

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034					COMPONENT: STEAM GENERATOR									
EXAMINER: <i>Howard H. Hoffmann</i> <i>John H. Hoffmann</i> <i>55/11/88</i>					ID# <i>57635 W9276</i> <i>R9615</i>					LEVEL <i>II II</i>					DATE(S): <i>AUG. 26, 1988</i>									
EXAMINER: <i>Adrian J. W. Setzer</i>					ID# <i>89449 M8250</i> <i>55643</i>					LEVEL <i>II II</i>					UPPER HEAD TO TUBESHEET (3 SGB-WG58-1)									
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNTH	WDTH	20%	50% OR HMA	100%	(INCHES)				THROUGH WALL DIMENSION				DAMPS	REMARKS		
						MAX AMP % DAC	DEPTH (IN.)						CRYSTAL	DISTANCE	FROM	MINIMUM		MAXIMUM						
																DEPTH	POSITION IN.		DEPTH	POSITION IN.				
																	I	2		I			2	
						LENGTH				A	B	I	2	A	B	A	B							
203	9TO10	45°	1	2	SEP.	50	3.3						2.5			4.8							50% E.P.	
204	36TO1	45°	1	2	SEP.	70	4.2		1.3				1.9			6.0	3.9		5.9	4.35		6.1	NO	50% T.W.D.
						50	4.2						.7			6.0							50% E.P.	
						50	4.2						2.0			6.0							50% E.P.	
205	36TO2	45°	1	2	SEP.	125	4.1		1.3				6.8			6.3	3.9		5.8	4.4		6.8	NO	HMA T.W.D.
						50	4.1						5.6			6.3							50% E.P.	
						50	4.1						6.9			6.2							50% E.P.	
206	1TO2	45°	1	2	SEP.	159	4.1		1.65				3.5			6.2	4.0		5.1	4.4		6.6	NO	HMA T.W.D.
						50	4.1						2.75			6.2							50% E.P.	
						50	4.2						4.4			6.0							50% E.P.	
207	1TO2	45°	1	2	SEP.	80	4.35		1.85				6.1			6.2	4.2		5.9	4.5		6.5	NO	50% T.W.D.
						50	4.4						5.75			6.2							50% E.P.	
						50	4.35						7.6			6.2							50% E.P.	
						80	4.35						7.0			6.2	4.25		5.9	4.55		6.4	NO	50% T.W.D.
208	1TO2	45°	1	2	SEP.	159	4.15		1.1				7.7			5.8	4.1		5.8	4.35		6.35	NO	HMA T.W.D.
						50	4.15						7.2			5.85							50% E.P.	
						50	4.2						8.3			5.9							50% E.P.	
209	1TO2	45°	1	2	SEP.	100	4.1		1.05				9.6			6.1	4.0		5.9	4.3		6.4	NO	50% T.W.D.

REVIEWED BY: *M. E. Hecker*

LEVEL: *III*

DATE REVIEWED: *9-11-88*

FIGURE NO.: *B03.01.004*

REF/ANS B02.040.003
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BABCOCK & WILCOX

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034					COMPONENT: STEAM GENERATOR						
EXAMINER: <i>Howard J. Fogelmann</i>						ID# 57635, W9276 R9615				LEVEL II II II		DATE(S): AUG. 26, 1988									
EXAMINER: <i>W. J. Moss</i>						ID# B9449, M8250 S5643				LEVEL II I II		UPPER HEAD TO TUBE SHEET (3 SGB-WG58-1)									
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNGTH	WDTH	CRYSTAL DISTANCE FROM	THROUGH WALL DIMENSION				DAMPS	REMARKS					
						MAX AMP % DAC	DEPTH (IN.)				20%	50% OR HMA	100%	MINIMUM			MAXIMUM				
														DEPTH			POSITION IN.		DEPTH	POSITION IN.	
																	1	2		1	2
						LENGTH				A	B	I	2	A	B	A	B				
209	1 TO 2	45°	1	2	SEP.	50	4.1				8.75			5.95					50% E.P.		
						50	4.1				9.8			6.05					50% E.P.		
210	2 TO 3	45°	1	2	SEP.	300	4.2		3.3		1.9			6.1	4.0		5.8	4.2	6.4	NO	HMA T.W.D.
211						50	4.0				0.2			6.2						50% E.P.	
						50	4.3				3.5			6.3						50% E.P.	
						50	4.2				1.0			6.0							
						200	4.3				2.8			6.3	4.0		5.8	4.2	6.4	NO	HMA T.W.D.
212	2 TO 3	45°	1	2	SEP.	159	4.15		1.2		4.1			6.0	4.0		5.8	4.35	6.5	NO	HMA T.W.D.
						50	4.15				3.7			6.0						50% E.P.	
						50	4.15				4.9			6.0						50% E.P.	
213	2 TO 3	45°	1	2	SEP.	63	3.6		.6		7.2			5.6	3.4		5.2	3.5	5.6	NO	50% T.W.D.
						50	3.6				7.0			5.6						50% E.P.	
						50	3.6				7.6			5.6						50% E.P.	
214	2 TO 3	45°	1	2	SEP.	80	3.45		.8		10.6			5.3	3.3		5.2	3.6	5.75	NO	50% T.W.D.
						50	3.45				10.2			5.3						50% E.P.	
						50	3.5				11.0			5.3						50% E.P.	
215	2 TO 3	45°	1	2	SEP.	125	4.3		1.3		10.3			6.3	4.05		5.8	4.4	6.4	NO	HMA T.W.D.
						50	4.3				9.9			6.3						50% E.P.	
REVIEWED BY: <i>M. A. Hoehen</i>						LEVEL: <i>9 III</i>				DATE REVIEWED: <i>9-11-88</i>				FIGURE NO.: <i>B03-01-004</i>							
														B02-040-003							
														PAGE 3 OF 17							

BABCOCK & WILCOX

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034				COMPONENT: STEAM GENERATOR							
EXAMINER: <i>Harold J. Thompson</i>						ID# 57635 W9276				LEVEL II II		DATE(S): AUG. 26, 1988									
EXAMINER: <i>Bob Moss</i>						ID# B9449, M8250				LEVEL II II		UPPER HEAD TO TUBESHEET (3 SGB-WG58-1)									
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNGTH	WDTH	CRYSTAL DISTANCE FROM	THROUGH WALL DIMENSION				DAMPS	REMARKS					
						MAX AMP % DAC	DEPTH (IN.)				20%	50% OR HMA	100%	MINIMUM			MAXIMUM				
														DEPTH			POSITION IN.	DEPTH	POSITION IN.		
																				I	2
						A	B	I	2	A	B	A	B								
215	2T03	45°	1	2	SEP.	50	4.1			11.2			6.3					50% E.P.			
216	2T04	45°	1	2	SEP.	251	3.5		.7	.4			5.6	3.3	5.2	3.6		5.9	NO	HMA T.W.D.	
						50	3.6			.3			5.6							50% E.P.	
						50	3.5			1.0			5.6								50% E.P.
217	4T05	45°	1	2	SEP.	125	4.2		1.1	4.5			5.9	4.2	5.6	4.3		6.0	NO	HMA T.W.D.	
						50	4.4			4.1			5.8								50% E.P.
						50	4.2			5.2			5.8								50% E.P.
218	5T06	45°	1	2	SEP.	63	4.2		1.3	3.3			5.75	3.8	5.5	4.5		6.1	NO	50% T.W.D.	
						50	4.4			2.8			6.0								50% E.P.
						50	4.4			4.1			6.1								50% E.P.
218A	5T06	45°	1	2	SEP.	125	3.6		1.2	2.4			5.1	3.5	4.9	3.65		5.5	NO	HMA T.W.D.	
						50	3.5			2.1			5.1								50% E.P.
						50	3.6			3.3			5.0								50% E.P.
						125	3.6			3.0			5.1	3.4	4.9	3.65		5.4	NO	HMA T.W.D.	
219	5T06	45°	1	2	SEP.	160	3.6		1.8	6.6			5.2	3.3	4.7	3.6		5.5	NO	HMA T.W.D.	
						50	3.5			4.9			5.3								50% E.P.
						50	3.6			6.7			5.4								50% E.P.
						112	3.6			5.8			5.2	3.4	4.9	3.7		5.6	NO	HMA T.W.D.	

REVIEWED BY: *M. L. Hooper*LEVEL: *III*DATE REVIEWED: *9-11-88*FIGURE NO.: *B03.01.004**B02.040.003*PAGE *4* OF *17*

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034				COMPONENT: STEAM GENERATOR								
EXAMINER: <i>H. J. Pappas</i> <i>DL-100-1000</i>					ID# 51635, W3276 R9615				LEVEL II II II				DATE(S): AUG. 26, 1988									
EXAMINER: <i>W. B. Bibb</i> <i>JS Moore</i> <i>JW Setzer</i>					ID# 89443, M8250 95643				LEVEL II I II				UPPER HEAD TO TUBESHEET (3 SGB-WG58-1)									
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNGTH	WDTH	CRYSTAL DISTANCE FROM	THROUGH WALL DIMENSION				DAMPS	REMARKS						
						MAX AMP % DAC	DEPTH (IN.)				20%	50% OR HMA	100%	MINIMUM			MAXIMUM					
														POSITION IN.			POSITION IN.					
														DEPTH			1	2	DEPTH	1	2	
						LENGTH		A	B	I	2	DEPTH	A	B	DEPTH	A	B					
220	5 TO 6	45°	1	2	SEP.	159	4.2		1.7		10.6			6.0	4.0		5.6	4.3		6.1	NO	HMA T.W.D.
						50	4.2				9.4			6.1								50% E.P.
						50	4.2				11.1			5.7								50% E.P.
221	6 TO 7	45°	1	2	SEP.	100	4.3		1.1		.8			5.8	4.2		5.5	4.5		6.1	NO	50% T.W.D.
						50	4.3				.3			5.8								50% E.P.
						50	4.2				1.4			5.8								50% E.P.
222	6 TO 7	45°	1	2	SEP.	125	4.6		.6		.7			6.0	4.3		5.8	4.8		6.5	NO	HMA T.W.D.
							4.5				.3			5.8								50% E.P.
							4.7				.9			6.4								50% E.P.
223	6 TO 7	45°	1	2	SEP.	125	4.2		3.9		4.4			5.7	4.05		5.4	4.4		6.2	NO	HMA T.W.D.
						50	4.2				2.0			5.2								50% E.P.
						50	4.3				5.9			5.2								50% E.P.
						80	4.0				2.4			5.6	4.0		5.3	4.6		6.0	NO	HMA T.W.D.
						100	4.4				3.3			6.1	4.05		5.4	4.5		6.3	NO	HMA T.W.D.
						100	4.2				5.5			5.3	4.05		5.2	4.4		6.2	NO	HMA T.W.D.
						80	4.2				5.1			5.9	4.05		5.2	4.6		6.4	NO	HMA T.W.D.
224	6 TO 7	45°	1	2	SEP.	159	4.2		2.4		9.7			5.6	4.0		5.2	4.3		5.8	NO	HMA T.W.D.
						50	4.1				9.4			5.5								50% E.P.

REVIEWED BY: *M. A. Hecker*LEVEL: *III*DATE REVIEWED: *9-11-88*FIGURE NO.: *B03.01.004**B02.040.003*

APPROVED

PAGE *5* OF *17*

VOLUMETRIC TEST DATA FORM 101

BNWP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3														CONTRACT NO: 702-2034				COMPONENT: STEAM GENERATOR				
EXAMINER: <i>Howard J. [Signature]</i>						ID# 57635, W9276 R3615				LEVEL II II II				DATE(S): AUG. 26, 1988								
EXAMINER: <i>Bill [Signature]</i>						ID# 89449, M8250 55643				LEVEL II I II				UPPER HEAD TO TUBESHEET (3SGB-WG58-1)								
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNGTH	WDTH		(INCHES)				THROUGH WALL DIMENSION				DAMPS	REMARKS		
						MAX AMP % DAC	DEPTH (IN.)		20%	50% OR HMA	100%	CRYSTAL DISTANCE FROM				MINIMUM		MAXIMUM				
								A				B	I	2	DEPTH	POSITION IN.		DEPTH			POSITION IN.	
																I	2				I	2
								LENGTH		A	B	I	2	DEPTH	A	B	DEPTH	A	B			
224	GT07	45°	1	2	SEP.	50	4.2				11.8			5.5						50% E.P.		
						159	4.2				10.4			5.8	4.0		5.7	4.2	5.9	NO HMA T.W.D.		
						159	4.2				11.3			5.7	4.1		5.5	4.3	5.8	NO HMA T.W.D.		
225	7T08	45°	1	2	SEP.	63	3.9		.9		1.7			5.5	3.8		5.45	4.3	6.0	NO 50% T.W.D.		
						50	3.9				1.0			5.5						50% E.P.		
						50	3.9				1.9			5.5						50% E.P.		
226	7T08	45°	1	2	SEP.	80	4.2		1.4		4.5			5.8	4.1		5.6	4.3	5.9	NO 50% T.W.D.		
						50	4.3				4.3			5.8						50% E.P.		
						50	4.2				5.7			5.8						50% E.P.		
						50	4.2				5.2			5.5	4.1		5.4	4.3	5.7	NO 50% T.W.D.		
227	GT07	45°	1	2	SEP.	80	3.6		.6		11.7			4.9	3.4		4.8	3.75	5.5	NO 50% T.W.D.		
						50	3.5				11.3			4.9						50% E.P.		
						50	3.4				11.9			4.9						50% E.P.		
228	7T08	45°	1	2	SEP.	100	3.5		1.0		1.2			5.4	3.4		4.7	3.7	5.4	NO 50% T.W.D.		
						50	3.6				.5			5.4						50% E.P.		
						50	3.6				1.5			5.4						50% E.P.		
229	7T08	45°	1	2	SEP.	224	4.1		3.6		4.0			8.0	4.0		7.0	4.3	8.5	NO HMA T.W.D.		
						50	3.8				2.5			8.1						50% E.P.		

REVIEWED BY: *M. J. Hoehen*LEVEL: *III*DATE REVIEWED: *9-11-88*FIGURE NO.: *803.01.004**802.040.003*PAGE *6* OF *17*

BABCOCK & WILCOX

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034					COMPONENT: STEAM GENERATOR							
EXAMINER: <i>Harold J. Engelmann</i> <i>John P. Ball</i> <i>De B. W. S. J.</i>					ID: 57635, W9276 R9615			LEVEL II II II		DATE(S): AUG. 26, 1988												
EXAMINER: <i>John P. Ball</i> <i>De B. W. S. J.</i>					ID: 89449, M8250 55643			LEVEL II I II		UPPER HEAD TO TUBESHEET (35GB-WG58-1)												
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNGTH	WDTH	CRYSTAL	(INCHES)				THROUGH WALL DIMENSION				DAMPS	REMARKS		
						MAX AMP % DAC	DEPTH (IN.)				20%	50% OR HMA	100%	DISTANCE	FROM	MINIMUM		MAXIMUM				
								DEPTH	POSITION IN.							DEPTH	POSITION IN.					
									1								2	1			2	
						LENGTH				A	B	I	2	A		B	A		B			
229	7T08	45°	1	2	SEP.	50	3.8				6.1			8.1								50% E.P.
						160	3.6				3.4			7.7	3.3		7.2	3.6		8.0	NO	HMA T.W.D.
						80	4.1				4.3			8.1	3.6		7.9	4.2		8.9	NO	50% T.W.D.
						50	3.9				5.2			8.6								
229A	7T08	45°	1	2	SEP.	160	3.5		1.6		3.3			5.0	3.4		4.7	3.6		5.3	NO	HMA T.W.D.
						50	3.5				2.3			5.0								50% E.P.
						50	3.6				3.9			5.0								50% E.P.
						125	3.5				3.2			5.4	3.4		5.2	3.6		5.7	NO	HMA T.W.D.
230	7T08	45°	1	2	SEP.	125	4.1		1.3		5.5			8.4	3.6		7.9	4.3		8.6	NO	HMA T.W.D.
						50	4.2				4.9			8.5								50% E.P.
						50	4.1				6.2			8.4								50% E.P.
231	3T04	45°	1	2	SEP.	159	3.6		1.8		1.9			5.5	3.5		5.2	3.7		5.9	NO	HMA T.W.D.
						50	3.7				1.2			5.4								50% E.P.
						50	3.6				3.0			5.8								50% E.P.
232	3T04	45°	1	2	SEP.	251	4.1		1.5		5.0			6.0	3.9		5.5	4.4		6.5	NO	HMA T.W.D.
						50	4.1				4.5			6.0								50% E.P.
						50	4.1				6.0			6.0								50% E.P.
233	3T04	45°	1	2	SEP.	125	4.1		1.0		7.9			5.8	4.0		5.5	4.4		6.2	NO	HMA T.W.D.
REVIEWED BY: <i>M. A. Hocker</i>						LEVEL: <i>III</i>		DATE REVIEWED: <i>9-11-88</i>						FIGURE NO.: <i>B03.01.004</i>								
														<i>B02.040.003</i>								

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

[illegible]



Babcock & Wilcox
a McDermott company

VOLUMETRIC TEST DATA

CUSTOMER: DUKE POWER CO., OCONEE UNIT 3 CONTRACT NO: 702-2034 COMPONENT: STEAM GENERATOR
DESCRIPTION: UPPER HEAD TO TUBESHEET THERMOMETER: OCUA 32597
I.D. NO: 3 SGB-WG58-1 PROCEDURE: ISI-130, REV. 24 MATERIAL: CS THICKNESS: 8.0 in. TEST SURF.: O.D.

NO. POSITIONS: 36 DISTANCE: 120 in. NO. 1 REFERENCE: 20 CAL. SHEET: 883-002 CAL. SHEET: 883-003 CAL. SHEET: 883-004 CAL. SHEET:
BEAM DIRECTION: ☐ LONG ☒ SHEAR LIMITED EXAM: ☐ NO ☒ YES ? ANGLE: 60° ANGLE: 60° ANGLE: 0° ANGLE: N
EXAMINER: *David H. Hester* ID. NO: 57635 W9276 LEVEL: II II TIME START: 1718 HR. TIME START: 0610 HR. TIME START: 1404 HR. TIME START: A HR.
EXAMINER: *David H. Hester* ID. NO: R9615 B9449 LEVEL: II II TIME STOP: 1905 HR. TIME STOP: 1301 HR. TIME STOP: 1437 HR. TIME STOP: HR.
NOTES: *See Zero Deg. Data, 19 May 1982* M8250 55643 II I DATE: AUG. 26, 88 DATE: AUG. 27, 88 DATE: AUG. 27, 88 DATE: HR.

SEE ZERO DEG. DATA, 19 MAY 1982
CAL. BLK.: 40305 WELD INFORMATION 8 0° THICKNESS
DWG. NO: ISI-OCN3-004 SURFACE NO2 HTH: SURFACE NO. 1
FCA(S): TUBE SHEET WD: UPPER HEAD
N/A BM: SEE NOTES BM:
HAZ: MAX: HAZ:

INDICATION NO(S)	POSITION OR PART ITEM		ANGLE (DEGREES)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LGTH	WDTH	CRYSTAL DISTANCE FROM (INCHES)	THROUGH WALL DIMENSION				DAMPS	REMARKS							
							MAX. AMP. %DAC	DEPTH (INS)	20%	50% / HMA		100%	MINIMUM		MAXIMUM									
	DEPTH	POSITION (INCHES)											DEPTH	POSITION (INCHES)										
		1												2	1			2						
		A												B	A			B	A	B	A	B		
400	34T036	60°	1	2	SEP.	159	4.0		3.6		14.3			9.0	3.8		8.5	4.2		9.2	NO	HMA T.W.D.		
						50	4.0				12.0			9.0									50% E.P.	
						50	4.2				15.6			9.1										50% E.P.
						159	4.0				12.9			8.9	3.8		8.6	4.1		9.1	NO	HMA T.W.D.		
						159	4.0				13.8			8.7	4.0		8.4	4.3		9.0	NO	HMA T.W.D.		
						159	4.0				14.7			8.9	3.9		8.2	4.2		9.0	NO	HMA T.W.D.		
401	35T036	60°	1	2	SEP.	50	4.0		.3		8.5			9.0	4.0		8.8	4.1		9.0	NO	50% T.W.D.		
						50	4.1				8.4			9.0										50% E.P.
						50	4.1				8.7			9.0										50% E.P.
401A	36T01	60°	1	2	SEP.	100	4.1		.9		14.0			9.1	4.0		8.7	4.3		9.2	NO	50% T.W.D.		
						50	4.1				13.8			9.1										50% E.P.
						50	4.1				14.7			9.1										50% E.P.

REVIEWED BY: *M. H. Hester* LEVEL: III DATE: 9-11-88 FIGURE NO: B03.01.004
ANGLE: 0 DEG. 45 DEG. 60 DEG. OTHER E.R. REQUIRED: ☒ YES ☐ NO E.R. NUMBER: 883-001 B02.040.003
IND. NOS. 1 TO 199 200 TO 399 400 TO 599 600 TO 799
PAGE 9 OF 17

Handwritten notes:
Hester
9-27-88

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034				COMPONENT: STEAM GENERATOR									
EXAMINER: <i>Harold J. Hoyer, Jr.</i>					ID# 57635, W9276 R3615			LEVEL II II		DATE(S): AUG. 27, 1988													
EXAMINER: <i>W. J. Moore</i>					ID# 89449, M8250 S5643			LEVEL II II I		UPPER HEAD TO TUBESHEET (35GB-WG58-1)													
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNGTH	WDTH	100%	(INCHES)				THROUGH WALL DIMENSION				DAMPS	REMARKS			
						MAX AMP % DAC	DEPTH (IN.)				20%	50% OR HMA	CRYSTAL	DISTANCE	FROM	MINIMUM		MAXIMUM					
																DEPTH	POSITION IN.				DEPTH	POSITION IN.	
																	I	2				I	2
						LENGTH				A	B	I	2	A	B	A	B						
401B	36T02	60°	1	2	SEP.	251	4.2		6.5		10.5			8.9	4.0		8.6	4.2		9.2	NO	H.M.A.T.W.D.	
						50	4.1				8.8			8.9							50% E.P.		
						50	4.2				15.3			8.9							50% E.P.		
						100	4.1				9.7			9.1									
						80	4.1				11.4			8.9									
						100	4.1				12.3			8.8									
						159	4.1				13.2			8.75	4.0		8.6	4.3		9.35	NO	H.M.A.T.W.D.	
						80	4.2				14.1			9.1									
						63	4.2				15.0			8.75									
401BA	36T02	60°	1	2	SEP.	100	4.0		1.4		18.8			8.8	3.9		8.6	4.2		9.1	NO	50% T.W.D.	
						50	4.0				18.5			8.7							50% E.P.		
						50	4.0				19.9			8.6							50% E.P.		
401BB	36T02	60°	1	2	SEP.	100	4.2		1.6		20.4			9.2	4.0		8.5	4.3		9.3	NO	50% T.W.D.	
						50	4.1				20.1			9.1							50% E.P.		
						50	4.2				21.7			9.2							50% E.P.		
401BC	36T03	60°	1	2	SEP.	100	3.8		3.3		24.7			8.7	3.6		8.6	3.9		8.9	NO	50% T.W.D.	
						50	3.8				24.2			8.7							50% E.P.		
						50	4.1				27.5			9.0							50% E.P.		
REVIEWED BY: <i>M. H. Hoyer</i>						LEVEL: <i>III</i>				DATE REVIEWED: <i>9-11-88</i>				FIGURE NO.: <i>B03.01.004</i>									

BABCOCK & WILCOX

VOLUMETRIC TEST DATA FORM 101

BWN-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034					COMPONENT: STEAM GENERATOR								
EXAMINER: <i>Howard J. Johnson</i>						ID# 57635 W9276 R9615				LEVEL II II II		DATE(S): AUG. 27, 1988											
EXAMINER: <i>Bill J. Moore</i>						ID# B9449 M8250 55643				LEVEL II II II		UPPER HEAD TO TUBESHEET (3 SGB-WG58-1)											
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNTH	WDTH	CRYSTAL	(INCHES)				THROUGH WALL DIMENSION				DAMPS	REMARKS			
						MAX AMP % DAC	DEPTH (IN.)				20%	50% OR HMA	100%	DISTANCE	FROM	MINIMUM		MAXIMUM					
																DEPTH	POSITION IN.				DEPTH	POSITION IN.	
																	I	2				I	2
						LENGTH				A	B	I	2	A	B	A	B						
401BC	36T03	60°	1	2	SEP.	63	3.9				25.6			8.7	3.6		8.3	4.1		9.0	NO	50% T.W.D.	
						80	4.0				26.5			8.7	3.6		8.1	4.2		9.1	NO	50% T.W.D.	
						50	3.6				27.4			8.7	3.6		8.6	3.6		8.7	NO	50% T.W.D.	
401BD	36T03	60°	1	2	SEP.	63	4.1		1.4		29.6			8.6	4.0		8.3	4.2		8.9	NO	50% T.W.D.	
						50	4.2				29.5			8.6								50% E.P.	
						50	4.2				30.9			8.6								50% E.P.	
						50	4.2				30.4			8.6	4.0		8.4	4.3		8.7	NO	50% T.W.D.	
401BE	36T04	60°	1	2	SEP.	200	3.8		3.8		32.8			8.5	3.6		8.1	4.0		9.1	NO	HMA T.W.D.	
						50	3.6				32.0			8.45								50% E.P.	
						50	3.8				35.8			8.5								50% E.P.	
						125	3.6				32.9			8.4	3.5		7.8	3.9		8.8	NO	HMA T.W.D.	
						100	3.8				33.8			8.4	3.7		8.3	3.9		8.6	NO	HMA T.W.D.	
						159	3.9				34.7			7.8	3.6		7.6	4.0		9.0	NO	HMA T.W.D.	
						125	3.9				35.6			8.5	3.7		8.2	4.0		8.7	NO	HMA T.W.D.	
402	35T03G	60°	1	2	SEP.	50	4.2		1.8		8.7			9.1	4.0		8.7	4.4		9.3	NO	50% T.W.D.	
						50	4.2				7.7			9.1								50% E.P.	
						50	4.2				9.5			9.0								50% E.P.	
403	2T04	60°	1	2	SEP.	316	3.8		9.3		14.6			8.5	3.6		8.3	4.0		8.8	NO	HMA T.W.D.	

REVIEWED BY: *M. H. Harker*LEVEL: *III*DATE REVIEWED: *9-11-88*FIGURE NO.: *B03.01.004**B02.040.003*PAGE *11* OF *17*

BABCOCK & WILCOX

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034				COMPONENT: STEAM GENERATOR								
EXAMINER: <i>Thomas J. G. Johnson</i>					ID# 57635.W9276 R9615			LEVEL II II II		DATE(S): AUG. 27, 1988												
EXAMINER: <i>John J. Moss</i>					ID# B9449.M8250 SSC43			LEVEL II I II		UPPER HEAD TO TUBESHEET (3 SGB-WG58-1)												
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNGTH	WDTH	20% 50% OR HMA 100%	(INCHES)				THROUGH WALL DIMENSION				DAMPS	REMARKS		
						MAX AMP % DAC	DEPTH (IN.)				CRYSTAL	DISTANCE	FROM	MINIMUM		MAXIMUM						
														DEPTH	POSITION IN.		DEPTH	POSITION IN.				
															I A	2 B		I A			2 B	
403	2T04	60°	1	2	SEP.	50	3.8				A	B	I	2	DEPTH	A	B	DEPTH	A	B		
						50	3.8				7.0			8.2								50% E.P.
						50	3.8				16.3			8.2								60% E.P.
						80	3.8				7.9			8.3								
						80	4.0				8.8			8.5								
						63	4.0				9.7			8.8								
						63	4.0				10.6			8.7								
						63	4.0				11.5			8.7								
						50	3.6				12.4			8.3								
						80	3.6				13.3			8.3								
						159	3.8				14.2			8.5	3.6	8.0	4.0		8.9	NO	HMA T.W.D.	
						125	3.8				15.1			8.5								
						159	3.8				16.0			8.3	3.6	7.8	4.0		8.9	NO	HMA T.W.D.	
404	3T04	60°	-DELETED-																			
405	3T04	60°	1	2	SEP.	50	4.2		.9		11.2			9.0	4.0	8.8	4.4		9.4	NO	50% T.W.D.	
						50	4.2				10.9			9.0							50% E.P.	
						50	4.2				11.8			9.0							50% E.P.	
406	4T05	60°	1	2	SEP.	125	4.2		3.0		3.5			8.8	4.0	8.4	4.4		9.3	NO	HMA T.W.D.	
						50	4.4				2.3			9.1							50% E.P.	
REVIEWED BY: <i>M. J. Hochen</i>										LEVEL: <i>III</i>		DATE REVIEWED: <i>9-11-88</i>				FIGURE NO.: <i>B03-01-004</i>						

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 01/16/1988
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VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034				COMPONENT: STEAM GENERATOR									
EXAMINER: <i>Harold Hoppaugh Jr. & J. S. Taylor</i>						ID# 57635, W927G R9G15		LEVEL II II II		DATE(S): AUG. 27, 1988													
EXAMINER: <i>ASB/lt</i>						ID# B9449, M8250 S5643		LEVEL II I II		UPPER HEAD TO TUBESHEET (3 SGB-WG58-1)													
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNGTH	WIDTH		(INCHES)				THROUGH WALL DIMENSION				DAMPS	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						
406	4 TO 5	60°	1	2	SEP.	50	4.4				5.3			9.0						50% E.P.			
						125	4.2				4.4			8.7	4.0	8.4	4.4		9.1	NO HMA T.W.D.			
407	5 TO 8	60°	1	2	SEP.	50	3.8		28.8		5.3			8.3	3.6	7.7	4.0		9.0	NO HMA T.W.D.			
						50	3.6				1.1			8.1						50% E.P.			
						50	4.0				29.9			8.1						50% E.P.			
						63	3.6				2.1			8.1									
						200	3.8				3.0			8.2									
						100	3.8				3.9			8.0									
						316	3.8				4.8			8.1	3.6	7.8	4.0		8.2	NO HMA T.W.D.			
						251	3.8				5.7			8.1	3.6	7.8	4.0		8.5	NO HMA T.W.D.			
						100	3.8				6.6			8.1									
						125	3.8				7.5			8.5									
						159	3.8				8.4			8.15									
						159	3.8				9.3			7.9									
						100	4.2				10.2			8.2									
						80	4.2				11.1			8.2									
						80	4.2				12.0			8.8									
						316	4.2				12.9			8.8	4.0	8.5	4.4		9.0	NO HMA T.W.D.			
REVIEWED BY: <i>M. J. Harker</i>						LEVEL: <i>III</i>		DATE REVIEWED: <i>9-11-88</i>				FIGURE NO.: <i>B03-01-004</i>											

B02.040.003

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BABCOCK & WILCOX

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034				COMPONENT: STEAM GENERATOR					
EXAMINER: <i>David Joseph John D. White</i>						ID# 87635, W9276 R9615		LEVEL II II II		DATE(S): AUG. 27, 1988									
EXAMINER: <i>deBibb</i> <i>JS Moss</i> <i>James</i>						ID# 89449, M8250 55643		LEVEL II I II		UPPER HEAD TO TUBESHEET (3 SGB-WG58-1)									
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNGTH	WDTH	CRYSTAL DISTANCE FROM	THROUGH WALL DIMENSION				DAMPS	REMARKS			
						MAX AMP % DAC	DEPTH (IN.)				MINIMUM		MAXIMUM						
								20%	50% OR HMA		100%	DEPTH	POSITION IN.				DEPTH	POSITION IN.	
													I	2				I	2
						LENGTH				A	B	I	2						
407	5T08	60°	1	2	SEP.	200	4.2			13.8			8.7						
						251	4.2			14.7			8.8	4.1	8.6	4.4	9.3	NO HMA T.W.D.	
						400	4.4			15.6			9.0	4.0	8.5	4.6	9.3	NO HMA T.W.D.	
						100	4.2			16.5			8.8						
						125	4.2			17.4			8.8						
						200	4.2			18.3			8.8						
						NO READING SURFACE				19.2		DUE TO CONDITION							
						50	4.2			21.0			8.8						
						125	4.2			21.9			8.9						
						316	4.2			22.8			8.8	3.8	8.5	4.4	9.2	NO HMA T.W.D.	
						200	4.2			23.7			9.0						
						159	4.0			24.6			8.7						
						251	4.2			25.5			8.9	3.8	8.5	4.4	9.3	NO HMA T.W.D.	
						200	4.2			26.4			8.8						
						200	4.2			27.3			8.8						
						125	4.2			28.2			8.9						
						159	4.2			29.1			8.9						

REVIEWED BY:

M. L. Hoeker

LEVEL:

III

DATE REVIEWED:

9-11-88

FIGURE NO.:

B03-01-004

PER HMA/HWT

B02-040.003

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VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034				COMPONENT: STEAM GENERATOR								
EXAMINER: <i>Handwritten signature</i>					ID# 57635, W3276 R9615			LEVEL II II II		DATE(S): AUG. 27, 1988												
EXAMINER: <i>Handwritten signature</i>					ID# B9449, M8250 S5643			LEVEL II I II		UPPER HEAD TO TUBESHEET (3 SGB-WG58-1)												
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNGTH	WDTH	20% 50% OR HMA 100%	(INCHES)				THROUGH WALL DIMENSION				DAMPS	REMARKS		
						MAX AMP % DAC	DEPTH (IN.)				CRYSTAL	DISTANCE	FROM	MINIMUM		MAXIMUM						
														DEPTH	POSITION IN.		DEPTH	POSITION IN.				
															1 A	2 B		1 A			2 B	
408	28 TO 29	60°			DELETED																	
409	30 TO 31	60°			DELETED																	
410	5 TO 6	60°	1	2	SEP.	200	3.8		1.3		3.3			8.4	3.6		8.1	4.0		8.9	NO	HMA T.W.D.
						50	3.8				2.7			8.4							50% E.P.	
						50	3.8				4.0			8.1							50% E.P.	
411	6 TO 8	60°	1	2	SEP.	200	3.6		12.0		18.2			8.0	3.5		7.4	4.0		8.9	NO	HMA T.W.D.
						50	3.2				11.5			7.5							50% E.P.	
						50	3.0				23.5			7.7							50% E.P.	
						125	3.8				12.4			8.4	3.6		8.1	4.0		8.6	NO	HMA T.W.D.
						159	4.0				13.3			8.5	3.8		8.3	4.2		8.9	NO	HMA T.W.D.
						125	3.5				14.2			7.8	3.4		7.5	3.8		8.3	NO	HMA T.W.D.
						200	3.6				15.1			7.8	3.4		7.6	3.8		8.6	NO	HMA T.W.D.
						125	3.8				16.0			8.0	3.6		7.9	4.0		8.8	NO	HMA T.W.D.
						100	4.0				16.9			8.0	3.9		7.9	4.1		8.1	NO	HMA T.W.D.
						159	3.8				17.8			8.4	3.6		7.8	4.0		8.7	NO	HMA T.W.D.
						159	3.6				18.7			8.3	3.5		8.0	3.8		8.5	NO	HMA T.W.D.
						90	3.6				19.6			8.0								
						100	3.6				20.5			8.2	3.5		8.0	3.7		8.3	NO	HMA T.W.D.

REVIEWED BY:

M. J. Hooper

LEVEL:

III

DATE REVIEWED:

9-11-88

FIGURE NO.:

B03.01.004

REF: *Handwritten*

B02.040.003

PAGE 14 OF 17

BABCOCK & WILCOX

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

CUSTOMER: DUKE POWER CO., OCONEE UNIT NO. 3										CONTRACT NO: 702-2034					COMPONENT: STEAM GENERATOR									
EXAMINER: <i>Howard J. Hoffmann</i>										ID: <i>57635 W9276 R9615</i>					LEVEL: <i>II II II</i>					DATE(S): <i>AUG. 27, 1988</i>				
EXAMINER: <i>Bill J. W. Setzer</i>										ID: <i>B9449 M8250 S5643</i>					LEVEL: <i>II I II</i>					UPPER HEAD TO TUBESHEET (3SGB-WG58-1)				
IND. NO.	POSITION OR PART ITEM	ANGLE (DEG)	SURFACE	BEAM DIRECTION	STATUS	LAM.		LNGTH	WDTH		(INCHES)				THROUGH WALL DIMENSION				DAMPS	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							
411	GTOB	60°	1	2	SEP.	159	3.6				21.4			8.0	3.4		7.5	3.8		8.5	NO	HMA T.W.D.		
						125	3.6				22.3			8.0	3.4		7.8	3.7		8.3	NO	HMA T.W.D.		
411A	8TO9	60°	1	2	SEP.	200	3.2		1.4		3.4			7.5	3.1		7.3	3.6		8.3	NO	HMA T.W.D.		
						50	3.3				2.6			7.9								50% E.P.		
						50	3.3				4.0			7.8								50% E.P.		
411B	8TO9	60°	1	2	SEP.	50	3.3		1.4		6.8			8.0	3.2		7.8	3.8		8.7	NO	50% T.W.D.		
						50	3.2				6.2			7.6								50% E.P.		
						50	3.5				7.6			8.1								50% E.P.		
411C	8TO9	60°	1	2	SEP.	50	3.6		1.1		10.3			7.9	3.2		7.3	3.8		8.3	NO	50% E.P.		
						50	3.5				9.7			7.8								50% E.P.		
						50	3.6				10.8			7.9								50% E.P.		
412	GTOB	60°	1	2	SEP.	251	4.0		5.5		10.5			8.9	3.9		8.8	4.2		9.3	NO	HMA T.W.D.		
						50	4.0				10.0			9.0								50% E.P.		
						50	3.6				15.5			8.4								50% E.P.		
						159	4.0				10.9			8.8	3.9		8.8	4.0		8.9	NO	HMA T.W.D.		
						251	3.8				11.8			8.8	3.6		8.7	4.0		8.8	NO	HMA T.W.D.		
						125	4.0				12.7			8.8	4.0		8.8	4.0		9.0	NO	HMA T.W.D.		
						200	3.6				13.6			8.2	3.4		7.6	4.0		9.0	NO	HMA T.W.D.		
REVIEWED BY: <i>M. J. Hocker</i>						LEVEL: <i>TTL</i>					DATE REVIEWED: <i>9-11-88</i>					FIGURE NO.: <i>B03.01.004</i>								

B02.040.003
PAGE 11 OF 17

VOLUMETRIC TEST DATA FORM 101

BWNP-20531-3 (10-84)

[illegible]

DUKE POWER COMPANY
STATION Croft UNIT III

ISI VISUAL EXAMINATION, VT-1

W. R. #

57047A 54430GPage 1 of 1

INSPECTOR

LEVEL

DATE:

8-25-88PROCEDURE: QCL13REV: 5

THICKNESS:

VISUAL METHOD:

☒ DIRECT☐ REMOTEMATERIAL TYPE: C.S.

VISUAL AIDS/M & TE SN:

SURFACE:

☒ ID☒ ODDrop light

ID NUMBER:

3 RCP-3A1-Wash.ITEM NO. 306.200.006☐ PSI☒ ISI

ITEMS INSPECTED:

3A1 Seal Gland Washers & Nuts.

IND. NO.	INDICATION TYPE	LENGTH	WIDTH	REMARKS
<u>1</u>	<u>No I.D.</u>			<u>No identifying marks, numbers or characteristics on (1) one washer.</u>
<u>2</u>	<u>Cracks.</u>			<u>(1) one Nut is cracked in several places. This particular nut did not have any I.D. or ^{C.S.} identifying characteristics.</u>

RESULTS: ☐ ACCEPTABLE ☒ UNACCEPTABLE, REQUIRES NDE/EVALUATION OR REPAIR

COMMENTS/DISPOSITION:

PIR 3-088-0196 initiated on 9-2-88. THESE NUTS WERE DISCARDED AND NEW NUTS WERE REPLACED ON THE 3A1 R.C. PUMP. QA TECH. SUPPORT VERIFIED THE REPLACEMENT NUTS HAD PSI PERFORMED ON THEM.

H.R. Hunt 9-21-88

ANII REVIEW

R.F. Elgin ANI/ANI

DATE

8-25-88

QA REVIEW

T.J. Coleman

DATE

8-25-88

DUKE POWER COMPANY
STATION Crane UNIT III

ISI VISUAL EXAMINATION, VT-1

W. R. # N/APage 1 of 1

INSPECTOR	LEVEL	DATE:	PROCEDURE:	REV:
<u>P. F. Lopez Jr.</u>	<u>II</u>	<u>8-26-88</u>	<u>QCL13</u>	<u>5</u>
		THICKNESS:	VISUAL METHOD:	
		MATERIAL TYPE:	<input checked="" type="checkbox"/> DIRECT	<input type="checkbox"/> REMOTE
		SURFACE:	VISUAL AIDS/M & TE SN:	
		ID <input checked="" type="checkbox"/> OD <input checked="" type="checkbox"/>	<u>Flashlight</u>	

ID NUMBER: 3RCP-3B2-Wash.~~3RCP 3B2 Seal Gland Nuts. P.P.R. 9-1-88~~ITEM NO. B06.200.008☐ PSI ☒ ISI

ITEMS INSPECTED:

(8) Seal Gland Nuts

IND. NO.	INDICATION TYPE	LENGTH	WIDTH	REMARKS
<u>1</u>	<u>Cracks</u>			<u>(4) Four Nuts are cracked. One nut is questionable but appears to be cracked</u>

RESULTS: ☐ ACCEPTABLE ☒ UNACCEPTABLE; REQUIRES NDE/EVALUATION OR REPAIRCOMMENTS/DISPOSITION: This inspection was for the (8) eight nuts only. P.P.R. 9-1-88

PIR 3-088-0196 initiated on 9-2-88. THESE NUTS WERE DISCARDED AND NEW NUTS WERE REPLACED ON THE 3B2 R.C. PUMP. QA TECH. SUPPORT VERIFIED THE REPLACEMENT NUTS HAD PSI PERFORMED ON THEM.

J. R. HuntANII REVIEW RP Elgin ANI/ANIIDATE 9-21-88QA REVIEW JR HuntDATE 9-21-88

Plant: OCONEE UNIT 3
Outage: 08/88 RFO

Steam Generator: A

QUERY: STEAM GENERATOR "A" BOBBIN 20% THRU 39% TWD

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
4	5	08/88 RFO	OD Wear/Thin	29 % TW	0.76	14	- 0.30
4	6	08/88 RFO	OD Wear/Thin	38 % TW	1.21	11	
10	25	08/88 RFO	OD (general)	32 % TW	1.63	15	+ 0.50
16	79	08/88 RFO	OD (general)	21 % TW	1.50	14	- 0.20
		08/88 RFO	OD (general)	21 % TW	0.72	LTS-SF	+ 0.70
17	6	08/88 RFO	OD (general)	23 % TW	1.13	12	
26	1	08/88 RFO	OD (general)	39 % TW	0.82	14	+ 1.40
29	1	08/88 RFO	OD (general)	34 % TW	1.24	15	+ 0.50
31	3	08/88 RFO	OD (general)	35 % TW	1.25	10	
32	3	08/88 RFO	OD (general)	37 % TW	0.89	10	
33	20	08/88 RFO	OD (general)	39 % TW	0.81	14	
34	3	08/88 RFO	OD (general)	31 % TW	0.67	10	- 0.90
34	20	08/88 RFO	OD (general)	33 % TW	1.28	15	
39	12	08/88 RFO	OD (general)	37 % TW	6.03	LTS-SF	+29.30
		08/88 RFO	OD (general)	22 % TW	1.29	2	+ 0.20
		08/88 RFO	OD (general)	24 % TW	2.17	2	- 1.10
45	5	08/88 RFO	OD (general)	31 % TW	1.34	14	
74	2	08/88 RFO	OD (general)	36 % TW	0.89	4	
79	105	08/88 RFO	OD (general)	28 % TW	1.14	14	
80	5	08/88 RFO	OD (general)	22 % TW	1.14	12	- 1.50
82	129	08/88 RFO	OD (general)	36 % TW	1.37	11	+ 0.20
109	115	08/88 RFO	OD (general)	38 % TW	1.53	13	
124	73	08/88 RFO	OD Long. Crack	27 % TW	2.03	LTS-SF	+22.60
147	16	08/88 RFO	OD (general)	37 % TW	0.69	14	+ 0.80
149	10	08/88 RFO	OD (general)	38 % TW	0.79	14	+ 0.40

QUERY: STEAM GENERATOR "A" BOBBIN 40% AND GREATER TWD

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
4	5	08/88 RFO	OD Wear/Thin	53 % TW	1.30	11	
4	6	08/88 RFO	OD Wear/Thin	44 % TW	1.49	12	
10	26	08/88 RFO	OD (general)	40 % TW	1.29	15	
15	78	08/88 RFO	OD (general)	45 % TW	1.55	LTS-SF	+ 0.30
16	80	08/88 RFO	OD (general)	41 % TW	2.10	LTS-SF	+ 0.70
17	3	08/88 RFO	OD (general)	49 % TW	0.84	9	
39	12	08/88 RFO	OD (general)	48 % TW	4.53	LTS-SF	+30.70
42	69	08/88 RFO	OD (general)	60 % TW	0.54	LTS-SF	+21.80
53	10	08/88 RFO	OD (general)	45 % TW	1.09	14	+12.50
71	5	08/88 RFO	OD (general)	40 % TW	UTPF+	72.3	
107	119	08/88 RFO	OD (general)	42 % TW	1.03	13	
111	13	08/88 RFO	OD (general)	51 % TW	1.09	3	+38.00

Plant: OCONEE UNIT 3
Outage: 08/88 RFO

Steam Generator: A

QUERY: STEAM GENERATOR "A" EDDY-360 20% THRU 39% TWD

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
4	5	08/88 RFO	8 x 1	23 % TW	6.11	11	
4	6	08/88 RFO	8 x 1	28 % TW	7.69	12	
6	1	08/88 RFO	8 x 1	22 % TW	5.62	15	+17.70
16	80	08/88 RFO	8 x 1	24 % TW	4.99	LTS-SF	+ 0.70
32	3	08/88 RFO	8 x 1	26 % TW	1.07	10	
33	20	08/88 RFO	8 x 1	34 % TW	1.79	14	+ 0.10
39	12	08/88 RFO	8 x 1	31 % TW	6.80	LTS-SF	+23.00
68	3	08/88 RFO	8 x 1	38 % TW	2.11	15	
107	119	08/88 RFO	8 x 1	23 % TW	5.97	13	
147	16	08/88 RFO	8 x 1	21 % TW	3.90	14	+ 0.70

QUERY: STEAM GENERATOR "A" EDDY-360 40% AND GREATER

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
31	3	08/88 RFO	8 x 1	51 % TW	3.60	10	
89	1	08/88 RFO	8 x 1	53 % TW	3.85	15	- 1.00

TUBES REMOVED FROM SERVICE, OTSG "A"

TUBE	LOCATION	BOBBIN	E-360	COMMENTS
		3TW	3TW	
10-26	15th TSP + 0.0	40		
15-78	LTSF + 0.3	45	19	
16-80	LTSF + 0.7	41	24	
17-3	9th TSP + 0.0	49	15	
31-3	10th TSP + 0.0	35	51	
39-12	LTSF + 30.7	48		
42-69	LTSF + 21.8	60	14	
53-10	14th TSP + 12.5	45		
67-3	UTSF + 0.0	OBS		Obstructed
68-3	15th TSP + 0.0	S/N	39	
71-5	UTPF - 72.3	40		U/L Roll in sleeve
74-2	4th TSP + 0.0	36		
75-2	4th TSP + 0.0	S/N		
82-129	11th TSP 0.2	36	17	
85-3	15th TSP + 0.0	DNG	NDD	
89-1	15th TSP - 1.0	DNG	53	
107-119	13th TSP + 0.0	42	23	
111-13	3rd TSP + 38.0	51		

Plant: OCONEE UNIT 3
Outage: 08/88 RFO

Steam Generator: B

QUERY: STEAM GENERATOR "B" BOBBIN 20% TO 39% TWD

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
8	16	08/88 RFO	OD (general)	32 % TW	1.13	10	- 1.60
9	3	08/88 RFO	OD (general)	20 % TW	1.60	LTS-SF	
28	88	08/88 RFO	OD (general)	34 % TW	0.72	13	
33	88	08/88 RFO	OD (general)	20 % TW	1.14	15	
40	1	08/88 RFO	OD (general)	26 % TW	0.98	14	+ 0.60
46	4	08/88 RFO	OD (general)	29 % TW	1.00	10	
54	47	08/88 RFO	OD (general)	38 % TW	0.96	13	+16.80
62	115	08/88 RFO	OD (general)	32 % TW	0.80	14	+ 0.60
65	115	08/88 RFO	OD (general)	35 % TW	0.86	14	
75	13	08/88 RFO	OD Wear/Thin	37 % TW	1.38	15	
76	118	08/88 RFO	OD (general)	22 % TW	0.77	11	+25.10
77	28	08/88 RFO	OD (general)	26 % TW	1.24	15	
78	24	08/88 RFO	OD (general)	31 % TW	0.87	15	
80	123	08/88 RFO	OD (general)	27 % TW	0.49	14	+ 0.90
83	132	08/88 RFO	OD (general)	24 % TW	0.96	14	
116	97	08/88 RFO	OD (general)	21 % TW	1.36	14	
118	88	08/88 RFO	OD (general)	27 % TW	2.80	14	
126	10	08/88 RFO	OD (general)	35 % TW	0.92	14	+ 0.20
142	6	08/88 RFO	OD (general)	34 % TW	1.42	9	

QUERY: STEAM GENERATOR "B" BOBBIN 40% AND GREATER TWD

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
52	45	08/88 RFO	OD (general)	51 % TW	1.10	13	- 0.40
63	120	08/88 RFO	OD (general)	41 % TW	1.08	14	
* 75	21	08/88 RFO	OD Wear/Thin	48 % TW	1.22	15	
118	89	08/88 RFO	OD (general)	48 % TW	3.04	14	

* TUBE 75-21 WAS SLEEVED

Plant: OCONEE UNIT 3
Outage: 08/88 RFO

Steam Generator: B

QUERY: STEAM GENERATOR "B" EDDY 360 20% TO 39% TWD

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
8	16	08/88 RFO	OD (general)	32 % TW	1.13	10	- 1.60
9	3	08/88 RFO	OD (general)	20 % TW	1.60	LTS-SF	
28	88	08/88 RFO	OD (general)	34 % TW	0.72	13	
33	88	08/88 RFO	OD (general)	20 % TW	1.14	15	
40	1	08/88 RFO	OD (general)	26 % TW	0.98	14	+ 0.60
46	4	08/88 RFO	OD (general)	29 % TW	1.00	10	
54	47	08/88 RFO	OD (general)	38 % TW	0.96	13	+16.80
62	115	08/88 RFO	OD (general)	32 % TW	0.80	14	+ 0.60
65	115	08/88 RFO	OD (general)	35 % TW	0.86	14	
75	13	08/88 RFO	OD Wear/Thin	37 % TW	1.38	15	
76	118	08/88 RFO	OD (general)	22 % TW	0.77	11	+25.10
77	28	08/88 RFO	OD (general)	26 % TW	1.24	15	
78	24	08/88 RFO	OD (general)	31 % TW	0.87	15	
80	123	08/88 RFO	OD (general)	27 % TW	0.49	14	+ 0.90
83	132	08/88 RFO	OD (general)	24 % TW	0.96	14	
104	93	08/88 RFO	8 x 1	20 % TW	5.01	LTS-SF	+19.00
116	97	08/88 RFO	OD (general)	21 % TW	1.36	14	
118	88	08/88 RFO	OD (general)	27 % TW	2.80	14	
		08/88 RFO	8 x 1	22 % TW	6.39	14	
118	89	08/88 RFO	8 x 1	32 % TW	10.68	14	
126	10	08/88 RFO	OD (general)	35 % TW	0.92	14	+ 0.20
142	6	08/88 RFO	OD (general)	34 % TW	1.42	9	
		08/88 RFO	8 x 1	24 % TW	7.13	9	

QUERY: STEAM GENERATOR "B" EDDY 360 40% AND GREATER TWD

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
52	45	08/88 RFO	OD (general)	51 % TW	1.10	13	- 0.40
63	120	08/88 RFO	OD (general)	41 % TW	1.08	14	
* 75	21	08/88 RFO	OD Wear/Thin	48 % TW	1.22	15	
118	89	08/88 RFO	OD (general)	48 % TW	3.04	14	

* TUBE 75-21 WAS SLEEVED

TUBES REMOVED FROM SERVICE OTSG "B"

TUBE	LOCATION	BOBBIN	E-360 % TW	% TW
52-45	13th TSP - 0.40	51		14
63-120	14th TSP + 0.0	41		14
68-3	15th TSP	DNG		
118-89	14th TSP + 0.0	48		32

6.0 Class 2 Inspection Results

Inspections were performed on the Class 2 portion of Steam Generators 3A and 3B, Core Flood Tanks 3A and 3B, Main Steam, Reactor Building Spray, Low Pressure Injection, High Pressure Injection, Auxiliary Feedwater and Main Feedwater System Piping.

6.1 Steam Generators and Core Flood Tanks

Steam Generator 3B Shell-to-Bottom Tubesheet Weld received an ultrasonic examination and Steam Generator 3B Feedwater Header Support integrally-welded attachment welds located in "Z-W" quadrant received a magnetic particle examination. No reportable indications were found.

Steam Generator 3A Steam Outlet Nozzle-to-Shell Weld located between "X-Y" axis received an ultrasonic and a magnetic particle examination and the inside radius section received an ultrasonic examination.

Core Flood Tank 3A Support integrally-welded attachment located at "Y" quadrant and Core Flood Tank 3B Support integrally-welded attachment located at "Z" quadrant received a magnetic particle examination. No reportable indications were found.

6.2 Piping

Twenty-two (22) circumferential welds one-half inch and less nominal wall thickness received a dye penetrant examination. One (1) circumferential weld one-half inch and less nominal wall thickness received a magnetic particle examination.

Four (4) longitudinal seam welds one-half inch and less nominal wall thickness received a dye penetrant examination. No reportable indications were found.

Eleven (11) circumferential welds greater than one-half inch nominal wall thickness received a radiographic and magnetic particle examination.

Three (3) longitudinal seam welds greater than one-half inch nominal wall thickness received a radiographic and a magnetic particle examination. No reportable indications were found.

Seven (7) integrally-welded attachments on the Main Steam System and two (2) integrally-welded attachments on Steam Generator 3B Feedwater Header Support received a magnetic particle examination. No reportable indications were found. One (1) integrally-welded attachment on the Reactor Building Spray System received a dye penetrant examination. No reportable indications were found.

6.3 Class 2 Component Supports

Sixty-one (61) Class 2 Component Supports received a visual examination as required by ASME Section XI, Article IWF-2000. No reportable conditions were found.

6.4 System or Component Functional Test

A Class 2 Functional Test was performed as required by ASME Section XI, Article IWC-5000. No reportable conditions were found.

6.5 Class 2 Repairs and Replacements

Repairs and replacements for work performed from March 29, 1987 to September 21, 1988 are itemized in Section 11 of this report.

7.0 Augmented Inspection Results

Augmented inspections were performed on High Pressure Injection and Makeup Nozzle Safe-Ends.

7.1 High Pressure Injection and Makeup Nozzle Safe-Ends

An ultrasonic and radiographic examination was performed on 3A1 Discharge Makeup Nozzle Safe-End. No reportable indications were found.

A radiographic examination was performed on 3B1 and 3B2 Discharge High Pressure Injection Nozzle Safe-Ends. Duke Power Company's Quality Assurance Department Procedure NDE-12 was used as a guideline, however specific examination requirements are determined by NRC commitments. No reportable indications were found.

8.0 Personnel, Equipment and Material Certifications

All personnel who performed or evaluated the results of inservice inspections during Outage 10 at Oconee 3 were certified in accordance with the requirements of the 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. The certification records for the Babcock & Wilcox inspectors are on file at the Babcock & Wilcox offices in Lynchburg, Virginia.

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 inspection equipment are on file at Oconee Nuclear Station or in the Corporate Offices in Charlotte, North Carolina.

9.0 Problem Investigation Reports

A copy of each Problem Investigation Report resulting in reportable items, originated against scheduled inservice inspections performed during Outage 10, is included in this section. All were resolved and found acceptable by Duke Power's Quality Assurance Department before returning Unit 3 to service. The following Problem Investigation Reports were issued:

<u>P.I.R. NO.</u>	<u>DESCRIPTION</u>	<u>DATE ISSUED</u>
3-088-0196	Reactor Coolant Pumps 3A1 and 3B2 Seal Gland Nuts	09-02-88
3-088-0206	Steam Generator 3A and 3B Tubes	09-15-88

**INFORMATION
ONLY**

Form 35372 (R10-87)

COMPLETE FORM BY PRINTING WITH BLACK BALL POINT PEN OR TYPE

**DUKE POWER COMPANY
NUCLEAR STATION**

Problem Investigation Report Serial No. 3-038-C196
Station ONS
Investigation Report No. _____

I. Problem Occurred-Time/Date: 9-25-88 **Discovered-Time/Date:** 9-25-88
Units(s): 3 **Unit Status At Time Problem Occurred/Discovered:** SAUT-DAWN
Description of Problem: During ISI Inspection of the RCP 3A1 and RCP 3B2 Seal Glands NUTS it was noted that one nut from 3A1 was cracked in several places and four nuts from 3B2 were cracked.
RCP-3A1 (ISI ITEM NO. B06.200.006), RCP-3B2 (ISI ITEM NO. B06.200.008)
Location of Problem: Rx Bldg 3A1 RCP & 3B2 RCP
Method Used to Identify Problem: This Report
Immediate Corrective Actions Taken/To Be Taken: NPD ENGINEERING EVALUATION

Work Stoppage Notification (Form QCK-2A) Written ☐ Yes ☒ No; **Serial No.** N/A
Information Sources/References (Work Requests, Document Violated, etc.): PROCEDURE QCL-13 REV 5

Originated By: T.J. COLEMAN / JHR/hunt **Date:** 9-2-88 **Dept./Group/Section** QA TECH. SUPPORT

II. Compliance Evaluation-Item/System Operable ☐ Yes ☐ No N/A
Item Reportable ☐ Yes ☒ No **Reportable Pursuant To:** ☐ 50.73 Section
☐ 50.72 Section ☐ T.S. Section ☐ Lic. Cond. Section ☐ Part 21
☐ Other _____ **Evaluated By/Date:** SgBewersole 9-2-88
Comments: Replace or justify prior to start-up

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 Report 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: Mech Maint
Comments: _____

598 Compliance Review SgBewersole **Date** 10-25-88 **QA Review** JR Hunt **Date** 10-19-88

Distribution

Initial	Originator	QA-G.O.					
9-6-88	W.R. Hunt	T.L. Tucker	Supt. (4)	P. Skinner	B. Millsaps	M. Jackson	S. Berisole
Final	Originator	J. Z. Tucker	Supt. (4)	P. Skinner	B. Millsaps	R. Henderson	N. Rutherford
10-25-88	W.R. Hunt	J. Z. Tucker	Supt. (4)	P. Skinner	B. Millsaps	M. Jackson	N. Rutherford

PROBLEM INVESTIGATION REPORT

Page 2

PIR No. 3-088-C196

- VI. Proposed Resolution of Problem THE SEAL GLAND NUTS ON RCP 3A1, RCP 3A2, RCP 3B1 AND RCP 3B2 WERE REPLACED DURING THE UNIT III EOC 10 RFO ON W.L.R. 54430 G, W.L.R. 54433 G, W.L.R. 54431 G AND W.L.R. 54432 G. THE SEAL GLAND NUTS ON THE UNIT II RCP'S WILL BE REPLACED DURING THE EOC 10 RFO ON W.L.R. 054448 G, W.L.R. 054447 G, W.L.R. 054446 G AND W.L.R. 054445 G FOR RCP 2A1, RCP 2A2, RCP 2B1 AND RCP 2B2 RESPECTIVELY. THE SPECIFICATION FOR THE NEW NUTS IS ATTACHED. THE TESTING AND ROOT CAUSE ANALYSIS ON THE OLD NUTS WAS ADDRESSED UNDER PIR No. 3-087-0056. THIS ANALYSIS REVEALED THAT THE MATERIAL SHOULD BE CHANGED FROM ASME SA 194 GRADE 6 TYPE 410 TO ASME SA 564 TYPE 630 AGE HARDENED AT 1100°F.

Other Approved _____

Date _____

Approved _____

Date _____

Other Approved _____

Date _____

Approved _____

Date _____

Significant Corrective Action Evaluation Assigned To: _____

Serial No. _____

N/A, Analyst has already identified all the Unit #2 & Unit #3 pumps with this problem.

- VII. QA Verification Requirements REVIEW W.R.A STATED IN PROPOSAL TO ASSURE ALL SEAL GLAND NUTS WERE REPLACED ON ALL 4 UNIT #3 R.C.P.s. ALSO ASSURE PSI PERFORMED ON ALL NEW NUTS REPLACED.

Assigned To QA TECH SUPPORT

9-20-88

Date

- VIII. Corrective Action Completed ALL CORRECTIVE ACTION ITEMS IDENTIFIED ON THIS PIR AND PIR 3-087-0056 HAVE BEEN COMPLETED. THE ROOT CAUSE ANALYSIS AND CHANGES TO ~~THE~~ ^{REF 4.2.6} IN MATERIAL IS COMPLETE. THE NUTS HAVE BEEN REPLACED ON UNIT III AND W.L.R. HAVE BEEN ISSUED TO REPLACE THEM ON UNIT II.

Approved _____

Date _____

- IX. QA Verification Results Reviewed W.R.A stated in proposal and assured all seal gland nuts were replaced on all 4 Unit #3 RCPs and that a PSI was performed on all the new nuts.

Completed By T. J. Coleman

9-21-88

QA Approval _____

9-21-88

Date

Remarks Attached are copies of the Work Requests that were written to replace the seal gland nuts and washer on the Unit #2 RCPs during upcoming RFO #10.Final QA Review J. R. Hunt

10-19-88

Date

DUSE POWER COMPANY
STATION Crane UNIT III

ISI VISUAL EXAMINATION, VT-1

W. R. =

57047A^W 54430GPage 1 of 1

INSPECTOR

LEVEL

DATE:

8-25-88

PROCEDURE: QCL13REV: 5

THICKNESS:

VISUAL METHOD:

DIRECT ☒REMOTE ☐

MATERIAL TYPE:

P.S.

VISUAL AIDS/M & TE SN:

SURFACE:

ID ☒OD ☒

Droplight

ID NUMBER:

3 RCP-3A1-Wash.

ITEM NO. B06.200.006☐ PSI☒ ISI

ITEMS INSPECTED:

3A1 Seal Gland Washers & Nuts.

IND. NO.	INDICATION TYPE	LENGTH	WIDTH	REMARKS
1	No I.D.			No identifying marks numbers or characteristics on (1) one washer.
2	Cracks.			(1) one Nut is cracked in several places. This particular nut did not have any I.D. or ^{C.F.R.} identifying characteristics.

RESULTS: ☐ ACCEPTABLE ☒ UNACCEPTABLE, REQUIRES NDE/EVALUATION OR REPAIR

COMMENTS/DISPOSITION:

PIR 3-088-0196 initiated on 9-2-88. THESE NUTS WERE DISCARDED AND NEW NUTS WERE REPLACED ON THE 3A1 R.C. PUMP. QA TECH. SUPPORT VERIFIED THE REPLACEMENT NUTS HAD PSI PERFORMED ON THEM.

H.R. Hunt 9-21-88

ANII REVIEW

R.P. Elgin ANI/ANI

DATE

8-25-88

QA REVIEW

T.F. Coleman

DATE

8-25-88

RFE 9-21-88

DUKE POWER COMPANY
STATION Croace UNIT III

ISI VISUAL EXAMINATION, VT-1

W. R. = H/APage 1 of 1

INSPECTOR	LEVEL	DATE:	PROCEDURE:	REV:
<u>RF Rogers Jr.</u>	<u>II</u>	<u>8-26-88</u>	<u>QCL13</u>	<u>5</u>
		THICKNESS:	VISUAL METHOD:	
			<input checked="" type="checkbox"/> DIRECT <input type="checkbox"/> REMOTE	
		MATERIAL TYPE:	VISUAL AIDS/M & TE SN:	
		<u>CS</u>		
		SURFACE: ID <input checked="" type="checkbox"/> OD <input checked="" type="checkbox"/>	<u>Flashlight</u>	
ID NUMBER: <u>3 RCP-3B2-Wash.</u>			<input type="checkbox"/> PSI	<input checked="" type="checkbox"/> ISI
<u>3 RCP 3B2 Seal Gland Nuts P.P.R. 9-1-88</u>			ITEM NO. <u>B06.200.008</u>	

ITEMS INSPECTED:

(8) Seal Gland Nuts

IND. NO.	INDICATION TYPE	LENGTH	WIDTH	REMARKS
<u>1</u>	<u>Cracks</u>			<u>(4) Four Nuts are cracked. One nut is questionable but appears to be cracked.</u>

RESULTS: ☐ ACCEPTABLE ☒ UNACCEPTABLE, REQUIRES NDE/EVALUATION OR REPAIR.COMMENTS/DISPOSITION: This inspection was for the (8) eight nuts only. P.P.R. 9-1-88

PIR 3-088-0196 initiated on 9-2-88. THESE NUTS WERE DISCARDED AND NEW NUTS WERE REPLACED ON THE 3B2 R.C. PUMP. QA TECH. SUPPORT VERIFIED THE REPLACEMENT NUTS HAD PSI PERFORMED ON THEM.

J.R. HuntANII REVIEW RF Elgin ANI/ANIIDATE 9-21-88QA REVIEW JR HuntDATE 9-21-88

ATTACHMENT #3 PIR 3-088-0196

**BINGHAM
INTERNATIONAL****BINGHAM-INTERNATIONAL SPECIFICATION
SPECIFICATION FOR REACTOR
COOLANT PUMP BOLTING**

SPECIFICATION NO.

E32.109

REV.	DATE	No. of Pages
2	3/15/88	5

ADDENDUM NO.

REV.	DATE	No. of Pages

CUSTOMER Duke PowerPROJECT Oconee II & IIICUSTOMER P.O. NO. Various**CUSTOMER APPROVAL NUMBER**SPACE FOR CUSTOMER APPROVAL STAMP
(when applicable/available)**CUSTOMER APPROVAL REQUIREMENT**☐ YES ☐ NO ☐ Information Only**CERTIFIED AS A VALID BINGHAM-INTERNATIONAL SPECIFICATION**☒ For Outside Vendor☐ Risk Release
NCCR # _____☐ For Manufacture at
Bingham-International☐ Other (specify) _____**APPROVALS**

Engineering

Quality Assurance

Manufacturing

Date

3/15/88

CERTIFICATION (when applicable)

This Specification is certified to be in compliance with Paragraph NA-3250 of the ASME Boiler and Pressure Vessel Code, Section III, for the applicable Code Component Classification.

Professional Engineer

State

Registration No.

Originating Dept. Headquarters EngineeringBy D. H. C.Title Sr. Design EngineerDate 3/15/88APPLICABLE SALES ORDER NO.'S. OR
PROPOSAL NO.Various

SPECIFICATION NO.

E32.109

**BINGHAM
INTERNATIONAL**E32.109
REV. 2, 3/15/88
PAGE 1SIGNED: **SPECIFICATION FOR PROCUREMENT OF REACTOR COOLANT PUMP BOLTING****I. SCOPE**

This specification defines all requirements necessary for the manufacture of studs and nuts for Reactor Coolant Pumps operating in a Babcock and Wilcox pressurized water reactor. These studs and nuts are pressure boundary parts which retain the mechanical shaft seal and shall fully comply with the requirements of the ASME Boiler & Pressure Vessel Code, Section III, Class 1, 1986 Edition, with Summer 1986 Addenda. They are located inside the seal leakage cover where they are exposed to borated water at a normal temperature between 120 Deg. F. and 160 Deg. F. The minimum service temperature is 60 Deg. F. The bolts will be preloaded by tensioning to 30,000 psi.

II. VENDOR REQUIREMENTS

The vendor utilized to manufacture the bolting covered by this specification shall be on the Bingham approved vendors list for ASME Boiler & Pressure Vessel Code Section III. The work covered by this specification shall be performed under a Quality Assurance Program in compliance with NCA-4000.

III. DIMENSIONAL REQUIREMENTS

A. The final dimensional requirements for this bolting shall conform to the requirements of the following Bingham drawings (applicable revision to be transmitted by purchase order).

Stud-Gland Dwg. A-36835

Nut-Gland Dwg. A-36836

REVISION PAGE 1 2 3 4 5

STATUS: REV. 2 2 2 1 2

ISSUED TO: E32 MANUAL

BINGHAM INTERNATIONAL

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REV 1, 3/15/88
PAGE 2

- B. External threads shall be 2-1/4"-8UNR series and internal threads 2-1/4" 8UN series. The nut and nut end of the stud shall be a Class 2 fit and the tap end of the stud shall be a Class 3 fit. Thread forms shall comply with ANSI B1.1, 1982 Edition.

IV. MATERIAL REQUIREMENTS

- A. The bolting provided per this specification shall be uniform, sound and free from seams, cracks, tears, laminations, laps, or other injurious imperfections which would make parts unsuitable for the intended service.
- B. The material specification for the studs and nuts shall be ASME SA 564, Type 630, age hardened at 1100°F.
- C. Cold working or straightening of the material is prohibited.

V. HEAT TREATING REQUIREMENTS

- A. The heat treatment shall be in accordance with the material specification. The age hardening temperature is 1100°F ± 25°F. Actual furnace charts shall be provided.

VI. TESTING REQUIREMENTS

All testing requirements of the ASME Boiler & Pressure Vessel Code and the material specification shall be met. In addition the following requirements apply:

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PAGE 3

- A. All test specimens for each heat of material shall be heat treated in the same furnace load as the parts they represent.
- B. Impact testing shall be performed per the requirements of NB-2333 at a temperature not greater than 40 Deg. F. The acceptance criteria is 45 FT-LBS absorbed energy and 25 mils lateral expansion.

VII. NONDESTRUCTIVE EXAMINATION

- A. Personnel performing nondestructive examination shall be qualified per SNT-TC-1A. Procedures for examination shall be submitted for approval prior to use.
- B. Visual examination of the final articles is required per paragraph NB-2582.
- C. Ultrasonic examination is required per paragraph NB-2585. The material shall be machined within .50 inch of its finished section thickness prior to the examination.
- D. Liquid penetrant examination per paragraph NB-2584 is required on the final surfaces.

VIII. DIMENSIONAL INSPECTION

All parts shall receive a complete dimensional inspection. The results of the examination shall be recorded on check sheets.

IX. MARKING AND IDENTIFICATION

Each part shall be marked with its 7 digit item number and serial number by vibroetching in the location shown on the Bingham drawing. The maximum vibroetch depth shall not exceed .005 inch. The Bingham purchase order will specify serial numbers.

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PAGE 4

X. CLEANLINESS, CLEANING AND PACKAGING REQUIREMENTS

A. Detrimental Materials

Vendors shall control the quality of supplies such as oils and component part identification materials, the quality of the environment such as furnace atmosphere, cleanliness of skids, furnace hearth, etc. to the degree necessary that neither the supplies nor the environment affects or combines with the material in such a way to be detrimental to its intended use. The final surfaces of material shall not come in contact with elements such as mercury, halide ions, aluminum and low melting point metals, phosphorous and their compounds which might have a detrimental effect on the material used.

Particular caution shall be exercised to prevent detrimental materials from contacting surfaces prior to metal working or heat treating.

B. Acid cleaning or grit blasting is not permitted for this material while in process or in its final condition.

C. Final cleaning shall be in accordance with ANSI N45.2.1, 1980, "Cleaning of Fluid Systems and Associated Components During Construction Phase of Nuclear Power Plants." Vendor shall submit a procedure for approval prior to use.

D. Packaging shall be in accordance with ANSI N452.2, 1972 "Packaging, Shipping, Receiving, Storage, and Handling of Items for Nuclear Power Plants." Vendor shall submit a procedure for approval prior to use.

**BINGHAM
INTERNATIONAL**E32.109
REV. 2, 3/15/88
PAGE 5**XI. NOTIFICATION AND HOLD POINTS**

The following items are notification and hold points as indicated.

Notification points require 72 hour notice. An operation indicated as a hold point cannot be bypassed without Bingham witness or waiver.

- A. Ultrasonic Examination (notification)
- B. Liquid penetrant Examination (notification)
- C. Dimensional Inspection (notification)
- D. Final Data Package Prior to Shipment (hold)

XII. PROCEDURE SUBMITTALS

The following procedures shall be submitted for approval prior to use.

- A. Manufacturing Sequence
- B. Forging Sketches
- C. Heat Treatment
- D. Ultrasonic Examination
- E. Liquid Penetrant
- F. Cleaning and Packaging

XIII. DOCUMENT PACKAGE REQUIREMENTS

The following documentation shall be included in the data package.

- A. Actual Chemical and Mechanical Test Reports
- B. Actual Furnace Charts
- C. Ultrasonic Examination Reports
- D. Liquid Penetrant Examination Reports
- E. Dimensional Inspection Check Sheets
- F. Hardness Check Results (Nuts)
- G. Charpy V-notch Test Results

DUKE POWER

NUCLEAR STATION WORK REQUEST

PRIORITY

WORK REQUEST NO.

054445 G

ORIGINATOR	DATE	HR MIN	APPROVED	COMPLETE BY (DATE)	DATE AND TIME AVAILABLE OR HOURS NOTICE
T. Thomas	09/13/88	1300	SCOTT BARTON		UNIT II R.F.O.
ON 2 RC	PUY004		REACTOR BLDG.	835"	2B2 R.C.P.
TA	UNIT	SYS	EQPT TYPE	LOOP OF COMP	AUX COMP #
			BLDG	ROOM/DEG	ELEV
					COLOR/AD
DESCRIPTION OF WORK REQUESTED					I.D. TAG PLACED
PLEASE DETENSION AND REMOVE THE SEAL GLAND NUTS AND WASHERS FROM 2B2 R.C.P. SEAL GLAND, AND REPLACE THEM WITH NEW SEAL GLAND NUTS AND WASHERS.					YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

FAILURE DESCRIPTION

DUKE CLASS A

ISI CLASS A

DETERMINED BY

PROCEDURE NUMBER(S)

QA COND.	1	Tensley E. Thomas	MP/2:3/4/1310/06
RETEST	9	Tensley E. Thomas	MP/0/1/1800/1
FUNCT. VERIF.	MAINT	Tensley E. Thomas	
RWP	Yes	Tensley E. Thomas	
RED TAGS	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Tensley E. Thomas	
QC	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CHARLIE HENSON 9-23-88	
ANI	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CHARLIE HENSON 9-23-88	
CLEAN ZONE	IF	Tensley E. Thomas	
CLEARANCE	0.p.s	SIGN	
SPECIAL INSTRUCTIONS (INCLUDE SAFETY REMINDER)	Verify THAT THE R.L. SYSTEM HAS BEEN ISOLATED, RED TAGGED, AND CLEARED TO BEGIN WORK.		
* Notify JAMES SCOTT FOR VT-2 INSPECTION.			
CORRECT COMPONENT IDENTIFIED BY		DATE	
CORRECT COMPONENT VERIFIED BY		DATE	

JOB. SEQ.	JOB SEQUENCE DESCRIPTION	SKILL	MEN X HOURS	EST. M/H
1.	REMOVE	M	1X.5	.5
2.	PRE AND POST JOB MEETING AND ALARM CONSIDERATION	M	2X1	2
3.	DETENSION AND REMOVE THE OLD SEAL GLAND NUTS FROM (2B2) R.C.P. SEAL GLAND AND REPLACE THEM WITH NEW NUTS. ALSO VISUAL INSPECT THE OLD SEAL GLAND WASHERS AND REPLACE ONLY IF THEY ARE BAD.	M	2X4	8
PLANNER	Tensley E. Thomas	CODE	PG	DATE
			09/23/88	TOTAL EST. MAN HOURS
				10.5

MATERIAL DESCRIPTION	SEQ./I.D. NO.	EST. QTY.	STATUS	LOCATION	ACT. QTY.	QA TAG NUMBER
SEAL GLAND NUTS	20110263N		AVAIL (30)	3-A-1-3		
SEAL GLAND WASHERS	20110280N		AVAIL (17)	3-A-2-12		

ATTACHMENT #4 PIR 3-088-0196

MATERIALS TO BE PRESTAGED

YES

NO

PRESTAGE LOCATION

DUKE POWER				NUCLEAR STATION WORK REQUEST				PRIORITY 50		WORK REQUEST NO. 054446 G	
T. Thomas		09/13/88		11:30		SCOTT BATTSON		UNIT II R.F.O			
ORIGINATOR		DATE		HR. MIN.		APPROVED		COMPLETE BY (DATE)		DATE AND TIME AVAILABLE OR HOURS NOTICE	
ON 2 RC P U00003				Removal Bldg.		835' 28' RLP				I.D. TAG PLACED <input checked="" type="checkbox"/>	
STA	UNIT	SYS.	EQPT. TYPE	LOOP OR COMP.	AUX. COMP.	SLDG.	ROOM/DEG.	ELEV.		COL/RAD	
DESCRIPTION OF WORK REQUESTED: PLEASE DETENSION AND REMOVE THE SEAL GLAND NUTS AND WASHERS FROM 28' RLP SEAL GLAND, AND REPLACE THEM WITH NEW SEAL GLAND NUTS AND WASHERS.											
FAILURE DESCRIPTION						CLASS A ISI CLASS A					
DETERMINED BY						PROCEDURE NUMBER(S)					
QA COND.	1		Tensley E. Thomas				mp/2:3/A/1310/06				
RETEST	0		Tensley E. Thomas				mp/0/A/1800/1				
FUNCT. VERIF.	MAINT		Tensley E. Thomas								
RWP	Yes		Tensley E. Thomas				DUKE CLASS	A		SIZE	N/A
RED TAGS	YES	NO	Tensley E. Thomas				NO.			THRU	
QC	YES	NO	Charlie Henson				PRIOR TO JOB START	Yes		AFTER JOB	Yes
ANI	YES	NO	Charlie Henson				FIS I.D.	7310 RC28		CCOA	
CLEAN ZONE	II		Tensley E. Thomas								
BARANCE	ops		SIGN				DATE			CONTROL ACCEPTED	DATE
SPECIAL INSTRUCTIONS (INCLUDE SAFETY REMINDER) VERIFY THAT THE R-L SYSTEM HAS BEEN ISOLATED AND RED TAGGED, READY TO BEGIN WORK.											
* NOTIFY JAMES SCOTT FOR VT-2 INSPECTION											
CORRECT COMPONENT IDENTIFIED BY						DATE					
CORRECT COMPONENT VERIFIED BY						DATE					
JOB SEQ.	JOB SEQUENCE DESCRIPTION						SKILL	MEN X HOURS		EST. M/H	
1.	COMPLETE/VERIFY ATTACHED PDS FORM						M	1X.5		.5	
2.	PRE AND POST JOB MEETING - ALARA CONSIDERATION						M	2X1		2	
3.	DETENSION AND REMOVE THE OLD SEAL GLAND NUTS, FROM (28') RLP SEAL GLAND AND REPLACE THEM WITH NEW NUTS. ALSO VISUAL INSPECT THE OLD SEAL GLAND WASHERS AND REPLACE ONLY IF THEY ARE NEEDED.						M	2X4		8	
PLANNER	Tensley E. Thomas		CODE	R4		DATE	09/23/88		TOTAL EST. MAN HOURS		10.5
MATERIAL DESCRIPTION		SEQ./I.D. NO.		EST. QTY.	STATUS		LOCATION		ACT. QTY.	QA TAG NUMBER	
SEAL GLAND NUTS		20110263N			AVAIL (30)		3-A-1-3				
SEAL GLAND WASHER		20110280N			AVAIL (17)		3-A-2-1C				
ATTACHMENT #5 PIR 3-088-0196											
MATERIALS TO BE PRESTAGED		YES	NO	PRESTAGE LOCATION							

DUKE POWER		NUCLEAR STATION WORK REQUEST				PRIORITY	WORK REQUEST NO. 054447 G	
T. Thomas		09/13/88		1235		SCOTT BARON		UNIT II R.F.O.
ORIGINATOR		DATE		HR MIN		APPROVED		COMPLETE BY (DATE)
ON 2 RC PU 0002		REACTOR BLDG. 835		2A2 R.L.P.		I.D. TAG PLACED		YES <input checked="" type="checkbox"/>
STA		UNIT		SYS		EQPT TYPE		LOOP OR COMP
DESCRIPTION OF WORK REQUESTED		PLEASE DETENSION AND REMOVE THE SEAL GLAND NUTS AND WASHERS FROM 2A2 R.L.P. SEAL GLAND, AND REPLACE THEM WITH NEW SEAL GLAND NUTS AND WASHERS.						
FAILURE DESCRIPTION		DUKE CLASS A ISI CLASS A						
DETERMINED BY		PROCEDURE NUMBER(S)						
QA COND.	1	Tensley E. Thomas		MP/2:3/A/1310/06				
RETEST	0	Tensley E. Thomas		MP/0/A/1800/1				
FUNCT. VERIF.	MAINT	Tensley E. Thomas						
RWP	Yes	Tensley E. Thomas		DUKE CLASS	A	SIZE	N/A	ISI CLASS
RED TAGS	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Tensley E. Thomas		NO.	THRU		CLEARED	TYPE OF WORK
QC	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CHARLIE HENSON		P.T. PRIOR TO JOB START	YES	AFTER JOB	YES	EQ RELATED
ANI	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CHARLIE HENSON		P.T. 9-23-88	FIS I.D.	7310 RC28		CCOA
CLEAN ZONE	II	Tensley E. Thomas		DATE		CONTROL ACCEPTED		DATE
CLEARANCE	OPS	SIGN.		DATE		CONTROL ACCEPTED		DATE
SPECIAL INSTRUCTIONS (INCLUDE SAFETY REMINDER)		Verify that R.L. System has been isolated - Red Tagged and cleared for work.						
X NOTIFY JAMES SCOTT FOR VT-2 INSPECTION OF SEAL GLAND								
CORRECT COMPONENT IDENTIFIED BY		DATE						
CORRECT COMPONENT VERIFIED BY		DATE						
JOB SEQ.	JOB SEQUENCE DESCRIPTION					SKILL	MEN X HOURS	EST. M/H
1.	COMPLETE/VERIFY ATTACHED EODS FORM					M	1X.5	.5
2.	PRE AND POST JOB MEETING: ALARA CONSIDERATION					M	2X1	2
3.	DETENSION AND REMOVE THE OLD SEAL GLAND NUTS FROM (2A2) R.L.P. SEAL GLAND AND REPLACE THEM WITH NEW NUTS. ALSO VISUAL INSPECT THE OLD SEAL GLAND WASHERS AND REPLACE ONLY IF THEY ARE BAD.					M	2X4	8
PLANNER	Tensley E. Thomas		CODE	RG	DATE	09/23/88		TOTAL EST. MAN HOURS
MATERIAL DESCRIPTION		SEQ./I.D. NO.		EST. QTY.	STATUS		LOCATION	ACT. QTY.
SEAL GLAND NUTS		20110263N			AVAIL (30)		3-A-1-3	
SEAL GLAND WASHERS		20110280N			AVAIL (17)		3-A-2-1C	
ATTACHMENT #6		PIR 3-058-0196						
MATERIALS TO BE PRESTAGED		YES	NO <input checked="" type="checkbox"/>	PRESTAGE LOCATION				

DUKE POWER

NUCLEAR STATION WORK REQUEST

PRIORITY

50

WORK

REQUEST NO

054448 G

T. THOMAS

09/13/88 12:45

SCOTT BATTSON

UNIT II R.F.O

ORIGINATOR

DATE

HR MIN

APPROVED

COMPLETE BY (DATE)

DATE AND TIME AVAILABLE OR HOURS NOTICE

ON 2 RC PU 0001

RECTOR BLOC 835"

2A' RLP

I.D. TAG
PLACEDYES
NODESCRIPTION OF
WORK REQUESTED

PLEASE DETENSION AND REMOVE THE SEAL GLAND NUTS AND WASHERS FROM 2A' RLP SEAL GLAND, AND REPLACE THEM WITH NEW SEAL GLAND NUTS AND WASHERS.

FAILURE DESCRIPTION

DUKE CLASS A
ISI CLASS A

DETERMINED BY

PROCEDURE NUMBER(S)

QA
COND.

1

Tensley E. Thomas

mp/2:3/A/1310/06

RETEST

Q

Tensley E. Thomas

mp/0/A/1800/1

FUNCT.
VERIF.

MAINT

Tensley E. Thomas

RWP

YES

Tensley E. Thomas

DUKE
CLASS

SIZE

N/A

ISI
CLASS

A

ACTIVE

YES NO

RED
TAGS

YES NO

Tensley E. Thomas

NO.

THRU

CLEARED

TYPE OF
WORK

370

QC

YES NO

Charlie Hanson

PRIOR TO
JOB START

YES

AFTER
JOB

YES

EQ
RELATED

YES NO

NPRDS
REPORTABLE

YES NO

ANI

YES NO

Charlie Hanson

FIS
I.D.

7310

RC28

CCOA

CLEAN
ZONE

II

Tensley E. Thomas

CLEARANCE

aps

SIGN

DATE

CONTROL
ACCEPTED

DATE

SPECIAL
INSTRUCTIONS(INCLUDE SAFETY
REMINDER)

Verify Rego Tags

* NOTIFY JAMES SCOTT FOR UT-2 INSPECTION

CORRECT COMPONENT IDENTIFIED BY

DATE

CORRECT COMPONENT VERIFIED BY

DATE

JOB
SEQ.

JOB SEQUENCE DESCRIPTION

SKILL

MEN X HOURS

EST. M/H

1.

M

1X.5 .5

2.

M

2X1 2

3.

M

2X4 8

PRE AND POST JOB MEETING : ALARA CONSIDERATION
DETENSION AND REMOVE THE OLD SEAL GLAND NUTS FROM 2(A') RLP SEAL GLAND AND REPLACE THEM WITH NEW NUTS, ALSO VISUAL INSPECT THE OLD SEAL GLAND WASHERS : REPLACE ONLY IF THEY ARE BAD.

PLANNER

Tensley E. Thomas

CODE

PLA

DATE

09/23/88

TOTAL EST. MAN HOURS

10.5

MATERIAL DESCRIPTION

SEQ./I.D. NO.

EST.
QTY.

STATUS

LOCATION

ACT.
QTY.QA TAG
NUMBER

SEAL GLAND NUTS

20110263N

AVAIL (30)

3-A-1-3

SEAL GLAND WASHERS

20110280N

AVAIL (17)

3-A-2-1C

ATTACHMENT #7 PIR 3-088-6196

MATERIALS TO BE
PRESTAGED

YES

NO

PRESTAGE
LOCATION

LAPTOP

PG

COMPLETE FORM BY PRINTING WITH BLACK BALL POINT PEN OR TYPE

DUKE POWER COMPANY
NUCLEAR STATIONProblem Investigation Report Serial No. 3-088-0206Station OCONEE

Investigation Report No. _____

- I. Problem Occurred-Time/Date: UNKNOWN Discovered-Time/Date: 1000 HRS / 9-15-88
 Units(s): 3 Unit Status At Time Problem Occurred/Discovered: REFUELING OUTAGE
 Description of Problem: DURING QA REVIEW OF EXEMPT CHANGES OE-1825 (WR#054082G) AND OE-1826 (WR#054083G) IT WAS DISCOVERED THAT OTSG-3A HAD 18 AND OTSG-B HAD 4 TUBES REMOVED FROM SERVICE BECAUSE OF >40% TWA DEFECTS OR ENGINEERING EVALUATION. THESE DEFECTS WERE DISCOVERED BY ISI EDDY CURRENT INSPECTIONS.

Location of Problem: OTSG A & BMethod Used to Identify Problem: EDDY CURRENT INSPECTION & THIS REPORTImmediate Corrective Actions Taken (To Be Taken) NONEWork Stoppage Notification (Form QCK-2A) Written ☐ Yes ☒ No; Serial No. N/AInformation Sources/References (Work Requests, Document Violated, etc.): QCK-5 REV. 9Originated By: T.J. ColemanDate: 9-15-88Dept./Group/Section QA TECH SUP.

- II. Compliance Evaluation-Item/System Operable ☒ Yes ☐ No
 Item Reportable ☒ Yes ☐ No Reportable Pursuant To: ☐ 50.73 Section N/A
☐ 50.72 Section N/A ☒ T.S. Section 4.17.6 ☐ Lic. Cond. Section ☐ Part 21
☐ Other _____ Evaluated By/Date: SG Boush
 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 _____ Station Manager _____
 General Office _____ Comments: _____

- IV. Investigation Report 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: _____

Comments: work performed per Exempt change, no further action requiredCompliance Review SG BoushDate 9-26-88QA Review T.J. ColemanDate 9-20-88

Distribution

Initial	Originator	QA G.O.	R.L. Bick	NOGGO	J.L. Tucker	R.B. Priority	G.W. Harris
9-15-88	J.G. Coleman	J. Lowery	2.M. Chase	J.L. Tucker	M. Tucker	R. Elgin	N. Rutherford
Final	Originator	J.G. Coleman	J. Lowery	2.M. Chase	J.L. Tucker	R. Elgin	N. Rutherford
9-26-88	J.G. Coleman	J. Lowery	2.M. Chase	J.L. Tucker	M. Tucker	R. Elgin	N. Rutherford

- a. The rate of change of average temperature is less than 1.0 °F/hour averaged over the last two hours.

$$\left| \frac{(T_t - T_{t-2})}{(t_t - t_{t-2})} \right| < 1.0 \text{ °F} \quad (7.2)$$

-or-

- b. The rate of change of temperature changes less than 0.5 °F/hour/hour averaged over the last two hours.

$$K_1 = \left| \frac{(T_t - T_{t-1})}{(t_t - t_{t-1})} \right| \quad (7.3)$$

$$K_2 = \left| \frac{(T_{t-1} - T_{t-2})}{(t_{t-1} - t_{t-2})} \right| \quad (7.4)$$

$$\left| \frac{(K_1 - K_2)}{(t_t - t_{t-1})} \right| < 0.5 \text{ °F} \quad (7.5)$$

where: T = containment atmosphere weighted average drybulb temperature, (°F)

t = elapsed time, (hours)

subscripts: t the most recent data set

t-1 data set most nearly corresponding to one hour prior to the time of the most recent data set

t-2 data set most nearly corresponding to two hours prior to the time of the most recent data set

t-4 data set most nearly corresponding to four hours prior to the time of the most recent data set

Total Time Acceptance Limits:

(6.4)

$$\text{Upper Limit} = L_o + L_{tt} + 0.25 L_a$$

$$\text{Lower Limit} = L_o + L_{tt} - 0.25 L_a$$

where: L_o = corrected value for superimposed leak (wt. %/day)
 L_{am} = estimate of leakage rate, derived from mass point least squares slope and intercept, (wt. %/day)
 L_{tt} = estimate of leakage rate, derived from total time least squares slope and intercept, (wt. %/day)
 L_a = Maximum allowable leakage rate at calculated peak accident pressure as specified in the station's technical specifications (wt. %/day)

7.0 Temperature Stabilization Criteria

Mass Point:

In accordance with ANSI/ANS 56.8-1987, the temperature can be considered stabilized when, "after reaching test pressure, the latest rate of change of the containment atmosphere volume weighted absolute drybulb temperature, averaged over the last hour, does not deviate by more than 0.5 °F/hr from the average rate of the containment atmosphere volume weighted absolute drybulb temperature averaged over the last four hours." The mass point temperature stabilization criterion is given by 7.1.

$$\left| \frac{|T_t - T_{t-4}|}{(t_t - t_{t-4})} - \frac{|T_t - T_{t-1}|}{(t_t - t_{t-1})} \right| \leq 0.5 \text{ °F} \quad (7.1)$$

BN-TOP-1 Temperature Stabilization Criteria:

The containment atmosphere stabilization requirements of BN-TOP-1 are given by 7.2 and 7.5. Either requirement must be satisfied.

where: $Q(La)$ = Recommended imposed leak setpoint at La , (scfm)
 W_1 = Initial total containment air mass at the start of the test, zero elapsed time, (lbm)
 La = Maximum allowable leakage rate at calculated peak accident pressure as specified in the station's technical specifications (wt. %/day)
1440 = number of minutes in a day
0.07517 = density of dry air at standard conditions, 14.6959 psia and 68 °F, (lbm/ft³)

Manually determine the corrected value for the superimposed leak rate, (Lo) to account for differences between calibration temperature and pressure and actual flow conditions. Remember that a rotameter is a nonlinear flow device and will require a square root correction; a turbine meter is a linear flow device and does not require the square root correction. Given the corrected value for the superimposed leak, Lo in SCFM, it is converted to %/day by 6.2.

(6.2)

$$Lo = 100 \% \frac{Lo(\text{scfm}) (1440 \text{ min/day}) (0.07517 \text{ lbm/ft}^3)}{W_1}$$

where: Lo = Corrected value for superimposed leak (wt. %/day)
 W_1 = Initial total containment air mass at the start of the test, zero elapsed time, (lbm)
1440 = number of minutes in a day
0.07517 = density of dry air at standard conditions, 14.6959 psia and 68 °F, (lbm/ft³)

The upper and lower verification test acceptance limits for both the mass point methodology and the total time methodology are given by 6.3 and 6.4 respectively.

Mass Point Acceptance Limits:

(6.3)

$$\text{Upper Limit} = Lo + Lam + 0.25 La$$

$$\text{Lower Limit} = Lo + Lam - 0.25 La$$

$$\bar{L}_i = \frac{\sum L_i}{n} \quad (5.1)$$

where: \bar{L}_i = mean of the measured leak rate for the last five hours or last 20 data sets, whichever provides more data, (wt. %/day)
 L_i = measured leakage rate based on the difference between the initial mass at time t_1 and the mass at time t_i (wt. %/day)
 n = number of data sets

- d. Data shall be recorded at approximately equal intervals and in no case at intervals greater than one hour.

Note: The user specifies the data acquisition frequency. Normally a 15 minute data acquisition frequency is recommended for total time analysis.

- e. At least twenty (20) data points shall be provided for proper statistical analysis.
- f. In no case shall the minimum test duration be less than six (6) hours.

Note: While BN-TOP-1 requires a six hour minimum test duration, the NRC staff strongly recommends that an eight hour minimum test duration be used.

6.0 Verification Test Acceptance Limits

The verification test menu option, selected from the calculations section of the program, will output a recommended imposed leak setpoint in SCFM for the flow device. This value is equal to the plant's maximum allowable leakage, L_a and is calculated by equation 6.1.

$$Q(L_a) = W_1 (L_a/100) \left[\frac{1 \text{ day}}{1440 \text{ min}} \right] \left[\frac{1 \text{ ft}^3}{0.07517 \text{ lbm}} \right] \quad (6.1)$$

- a. The Trend Report based on Total Time calculations shall indicate that the magnitude of the calculated leak rate is tending to stabilize at a value less than $0.75 L_a$. (Note: magnitude of the calculated leak rate may be increasing slightly as it tends to stabilize. In this case the average rate of increase of the calculated leak rate shall be determined from the accumulated data over the last five hours or last twenty data points, whichever provides the most points. Using this average rate the calculated leak rate can then be linearly extrapolated to the 24th hour data point. If this extrapolated value of the calculated leak rate exceeds 75 % of the maximum allowable leak rate (L_a) then the leak rate test is continued.)

Note: The program estimates the calculated leak rate at the 24th hour data point by performing linear least squares regression analysis on the calculated leak rate over the last five hours or last 20 data sets whichever provides the most data. The program determines the slope (A) and intercept (B) of the calculated leak (L_{tt}) in accordance with equations 3.2 and 3.3.

- b. The end of the test upper confidence limit (UCL) for the calculated leak rate based on Total Time calculations shall be less than 75 % of the maximum allowable leak rate.

Note: The upper confidence limit is calculated in accordance with the Total Time Leak Rate Calculations described by Section 3.0. For a test duration less than 24 hours the Upper Confidence limit is calculated at the 97.5 % confidence interval.

- c. The mean of the measured leak rates based on Total Time calculations over the last five hours of test or last twenty points, whichever provides the most data, shall less than the 75 % of the maximum allowable leak rate.

converging. In addition, the predictor equation will provide reasonable assurance that the leakage rate reported following test termination will result in the verification test meeting its acceptance criteria. The predictor equation is given by 4.4.

$$\left[2(UCL - L_{am}) + (A' + 2S_{A'})\tau \right] \frac{100}{L_a} \leq 25\% \quad (4.4)$$

where: A' = the absolute value of the least squares regression slope (L_{am} vs time) for previous four hours of measured leakage rate, (wt. %/day/min)

$S_{A'}$ = an estimate of a standard deviation of slope of least squares regression line for the previous four hours of measured leakage rate.

τ = the time period corresponding to the last four hours of data, (min)

Note: τ will be equal to the time interval of the least squares regression slope calculation A' .

L_a = maximum allowable leakage rate at calculated peak accident pressure as specified in the station's technical specifications, (wt. %/day)

L_{am} = estimate of leakage rate, derived from Mass Point least squares slope and intercept, (wt. %/day)

UCL = approximate 95% upper confidence limit on the measured leakage, L_{am}

This criterion is met when the predictor equation result is less than 25 percent.

5.0 BN-TOP-1 Termination

The following duration criteria, as published in the Bechtel Topical Report, BN-TOP-1 are required to be met in order to conduct a Total Time Test in less than 24 hours:

Note: The maximum allowable leak rate (L_a) requirement specified by BN-TOP-1 has been modified by Appendix J requirements to imply 0.75 L_a .

$$r^2 > \frac{L_{am}^2 [\sum t_i^2 - (\sum t_i)^2/n]}{L_{am}^2 [\sum t_i^2 - (\sum t_i)^2/n] + L_a^2 t_n^2 \chi^2(n-2, 0.95)/122.93} \quad (4.1)$$

where:

r^2 is the coefficient of determination and is defined as;

$$r^2 = \frac{[n(\sum t_i N_i) - (\sum t_i)(\sum N_i)]^2}{[n(\sum t_i^2) - (\sum t_i)^2][n(\sum N_i^2) - (\sum N_i)^2]} \quad (4.2)$$

$\chi^2(n-2, 0.95)$ is the 95th percentile of the chi-square distribution with $n - 2$ degrees of freedom which is approximated by;

$$\sim 1.08916(n-2) \left[\frac{(n + 1.33)(n + 42.603)}{(n - 1.202)(n + 28.155)} \right] \quad (4.3)$$

- L_{am} = estimate of leakage rate, derived from least squares slope and intercept, (wt. %/day)
- L_a = maximum allowable leakage rate at calculated peak accident pressure as specified in plant's technical specifications
- N_i = normalized mass of reading at t_i , ($N_i = W_i/W_1$)
- t_i = elapsed time since first reading, (min)
- t_n = elapsed time of test at time n , (min)
- n = number of points (N_i, t_i pairs)

When the ratio of the left hand side of inequality 4.1 over the right hand side of inequality 4.1 is greater than 1.0, the Limit on Data Scatter is satisfied.

The Predictor Criterion as outlined in T.M. Brown's and L.E. Estenssoro's paper, "Suggested Criteria for a Short Duration ILRT" is the third statistical test performed on the test data. Satisfying this criterion ensures that the measured leakage rate (L_{am}) and the 95 percent upper confidence limit (UCL) are

the window time interval. This data set is called the 'end reading' and represents the latest edge of the window calculation. The leading edge of the window calculation is referred to as the 'begin reading'. Using the Mass Point Method for determining leakage rate described by Section 2.0 of this Appendix, the measured leakage rate (L_m) is calculated through all data points from 'begin reading' to 'end reading'.

The 'begin reading' is then advanced by one reading. The 'end reading' is advanced, such that the time span between the 'begin' and 'end' readings most nearly approximates the time interval of the window; the leakage rate is then recalculated. The window leakage calculations are repeated until the 'end reading' is equal to the last reading of the test duration (reading n). The maximum measured leakage rate (L_m) generated by the sequential window leakage calculations is the $1/2$ or $1/3$ maximum window leakage value for this test duration. The test data satisfies this criterion at the point when the $1/2$ or $1/3$ maximum window leakage value is less than $0.75 L_a$.

The second statistical test is the Limit on Data Scatter as described by Condition 2 of the NRC draft Regulatory Guide MS 021-5. This test ensures a tight fit of the test data about the linear least squares fit regression line used by the mass point method to calculate the leakage rate. The test is acceptable when inequality 4.1 is met.

The approximate upper confidence limit on the Total Time leakage rate is given by equation 3.8.

$$UCL = L_{tt} + t_{\%} S_A \quad (3.8)$$

where: UCL = approximate 95 or 97.5 percent upper confidence level on the Total Time leakage rate, (wt. %/day)

L_{tt} = Total Time leakage rate, (wt. %/day)

$t_{\%}$ = the 95 or 97.5 percentile of the Student's t distribution at time t_n

S_A = standard deviation of the slope A at time t_n

4.0 Mass Point Termination Criteria

The following three statistical tests have been proposed to the NRC staff as a method for determining the acceptability of mass point leakage results for test durations less than 24 hours.

The first of these tests is the Maximum Window Leakage Criterion.

This routine calculates the leakage rate, using the mass point methodology, for all time intervals (windows) equal to 1/2 or 1/3 of the test duration and records the value of the maximum leakage. The default value for the program is the 1/2 window leakage calculation, which has been submitted to the NRC staff for review. The 1/3 window leakage calculation option is also available if desired.

The window time interval is calculated by multiplying the elapsed time between the first reading and the last reading (reading n) by the window multiplier (1/2 or 1/3). Using the first reading as a starting point for the leakage calculation, the program uses the data acquisition frequency and subsequent iterations to find the data set having an elapsed time most closely matching

The standard deviation of the slope, S_A , is calculated from either equation 3.5 or 3.6.

For $t_n < 24$ hours: (3.5)

$$S_A = \left[\frac{\sum L_i^2 - B \sum L_i - A \sum L_i t t_i}{\bar{n} - 2} \left[1 + 1/\bar{n} + \frac{(t t_n - \sum t t_i / \bar{n})^2}{\sum t t_i^2 - (\sum t t_i)^2 / \bar{n}} \right] \right]^{1/2}$$

For $t_n > 24$ hours: (3.6)

$$S_A = \left[\frac{\sum L_i^2 - B \sum L_i - A \sum L_i t t_i}{\bar{n} - 2} \left[1/\bar{n} + \frac{(t t_n - \sum t t_i / \bar{n})^2}{\sum t t_i^2 - (\sum t t_i)^2 / \bar{n}} \right] \right]^{1/2}$$

where: S_A = standard deviation of the slope A at time t_n
 L_i = measured leakage rate based on the difference between the initial mass at time t_1 and the mass at time t_i , (wt. %/day)
A = slope of the least squares line
B = intercept of the least squares line
 $t t_i$ = elapsed time since second reading, (min)
 \bar{n} = number of leakage pairs ($L_i, t t_i$ pairs)
i = 2 to $\bar{n}+1$
n = $\bar{n}+1$

The Total Time method utilizes a 97.5% Student's t distribution for a test duration less than 24 hours and a 95% Student's t distribution for a test duration greater than or equal to 24 hours. The approximation given by equation 3.7 is used for the 97.5% Student's t distribution. Equation 2.5 is used for the 95% Student's t distribution.

For $t_n < 24$ hours:

$$t_{.975} = 1.95996 + \frac{2.37226}{(\bar{n}-2)} + \frac{2.82250}{(\bar{n}-2)^2} \quad (3.7)$$

where: $t_{.975}$ = the 97.5 percentile of the Student's t distribution
 $\bar{n}-2$ = degrees of freedom, where n = the number of leakage pairs ($L_i, t t_i$ pairs)

Plotting the measured leakage rate (L_i) on the y axis and the total time (tt_i) on the x axis, the following regression equations are used to find the slope and intercept:

$$A = \frac{\bar{n}(\sum tt_i L_i) - (\sum L_i)(\sum tt_i)}{\bar{n}(\sum tt_i^2) - (\sum tt_i)^2} \quad (3.2)$$

$$B = \frac{(\sum L_i)(\sum tt_i^2) - (\sum tt_i L_i)(\sum tt_i)}{\bar{n}(\sum tt_i^2) - (\sum tt_i)^2} \quad (3.3)$$

where: A = slope of least squares line
 B = intercept of least squares line
 tt_i = elapsed time since second reading, (min)
 L_i = measured leakage rate based on the difference between the initial mass at time t_1 and the mass at time t_i , (wt. %/day)
 \bar{n} = number of leakage pairs (L_i , tt_i pairs)
 i = 2 to $\bar{n}+1$
 n = $\bar{n}+1$

Note: Each tt_i is the elapsed time between the clock time at which the second test reading is taken and the clock time at which the i th reading is taken. Thus, $tt_2 = 0$ in all test situations, tt_3 is the elapsed time before the next reading, and so on.

The Total Time leakage rate at some specific time, t_i , is calculated from the regression line equation for the Least Squares "best fit" straight line given by equation 3.4.

$$L_{tt} = A (tt_i) + B \quad (3.4)$$

where: L_{tt} = total time leakage rate at time t_i , (wt. %/day)
 A = slope of the least squares line
 B = the intercept of the least squares line
 tt_i = elapsed time since second reading, (min)

Note: The intercept of the least squares line, B, corresponds to the clock time for reading number two; therefore, the Total Time Leakage rate can only be calculated for reading numbers 3 to n.

The ratio S_B/B is small when compared with the ratio S_A/B ; therefore, an approximate upper confidence limit of the 95 percent confidence level on the true leakage rate is provided by equation 2.6.

$$UCL = L_{am} + 144,000 (t_{.95}) (S_A/B) \quad (2.6)$$

where: UCL = approximate 95 percent upper confidence level on the true leakage.
 L_{am} = estimate of leakage rate, derived from least squares slope and intercept, (wt. %/day)
 $t_{.95}$ = the 95th percentile of Student's t distribution
 S_A = standard deviation of the slope A
 B = the intercept of the least squares line

3.0 Total Time Leakage Rate Calculation

The Total Time method calculates a series of leakage rates based on the starting mass point and the most recent mass point (i.e. it calculates a leakage rate between data points 1 & 2; then between 1 & 3; and so on). Each successive leakage calculation is based upon a longer period of time. The overall leakage rate, in weight percent per day, at any given time is determined by applying linear regression analyses to the leakage rates at each time point.

The leak rate corresponding to each data point is determined from equation 3.1.

$$L_i = \frac{144,000}{t_i} (1 - N_i) \quad (3.1)$$

where: L_i = measured leakage rate based on the difference between the initial mass at time t_1 and the mass at time t_i (Note: the normalized mass at at time $t_1=1$), (wt. %/day)
 N_i = normalized mass at time t_i ($N_i = W_i/W_1$)
 t_i = elapsed time since first reading, (min)
 i = 2 to n; where n = number of (N_i, t_i pairs)

The measured leakage rate is expressed as the ratio of the rate of change of mass to the mass in containment at time $t_1 = 0$. Since values of t_i are expressed in units of minutes, the mass point leakage rate is expressed as a positive number by computing equation 2.3.

$$L_{am} = -144,000 (A/B) \quad (2.3)$$

where: L_{am} = estimate of leakage rate, derived from least squares slope and intercept, (wt. %/day)
 A = the slope of the least squares line
 B = the intercept of the least squares line
 $-144,000 = (60 \text{ min/hr})(24 \text{ hrs/day})(100 \%)$

The standard deviation of the slope, S_A , is given by 2.4.

$$S_A = \left[\left(\frac{1}{n-2} \right) \left[\frac{n(\sum N_i^2) - (\sum N_i)^2}{n(\sum t_i^2) - (\sum t_i)^2} - A^2 \right] \right]^{1/2} \quad (2.4)$$

where: S_A = standard deviation of the slope A
 A = slope of the least squares line
 N_i = normalized mass of reading at t_i , ($N_i = W_i/W_1$)
 t_i = elapsed time since first reading, (min)
 n = number of points (N_i, t_i pairs)

The following approximation is given for the 95th percentile of the Student's t distribution, $t_{.95}$:

For $d_F \geq 3$

$$t_{.95} = \frac{1.6449(n-2)^2 + 3.5283(n-2) + 0.85602}{(n-2)^2 + 1.2209(n-2) - 1.5162} \quad (2.5)$$

where: $t_{.95}$ = the 95th percentile of the Student's t distribution
 $n-2$ = degrees of freedom, d_F , where n = the number of (N_i, t_i pairs)

Reference: ANSI/ANS-56.8-1987, Appendix B, footnote 17, p 24.

The normalization equation is given by 1.8.

$$N_i = \frac{W_i}{W_1} \quad (1.8)$$

where: N_i = total normalized containment air mass at the i th interval
 W_i = total containment air mass at the i th interval
 W_1 = total containment mass at start of the test

2.0 Mass Point Leakage Rate Calculation

This analysis method consists of determining the mass of air in containment, absolutely, utilizing the ideal gas law, at each time point during the test and using a straight-line least squares analysis to estimate the leakage rate. The estimate of the leakage rate is a function of both the slope and the intercept of the regression line computed by equations 2.1 and 2.2 respectively.

$$A = \frac{n(\sum t_i N_i) - (\sum N_i)(\sum t_i)}{n(\sum t_i^2) - (\sum t_i)^2} \quad (2.1)$$

$$B = \frac{(\sum N_i)(\sum t_i^2) - (\sum t_i N_i)(\sum t_i)}{n(\sum t_i^2) - (\sum t_i)^2} \quad (2.2)$$

where: A = slope of least squares line
 B = intercept of least squares line
 t_i = elapsed time since first reading, (min)
 N_i = normalized mass of reading at t_i ($N_i = W_i/W_1$)
 n = number of points (N_i, t_i pairs)

Note: Each t_i is the elapsed time between the clock time at which the first test reading is taken and the clock time at which the i th reading is taken. Thus, $t_1 = 0$ in all test situations, t_2 is the elapsed time before the next reading, and so on.

The mass of air in each compartment at the i th interval is determined by the ideal gas law, equation 1.7.

$$W_{ik} = \frac{144 V X_k}{R} \left[\frac{(P_i - P_{v_i})}{T_i} \right] \quad (1.7)$$

where: W_{ik} = measured mass of compartment air at the i th interval, (lbm)
 T_i = compartment atmosphere volume weighted absolute drybulb temperature at the i th interval, ($^{\circ}R$; where $^{\circ}R = ^{\circ}F + 459.67$)
 P_i = total absolute pressure in compartment at the i th interval, (psia)
 P_{v_i} = partial pressure of water vapor for compartment at time i , (psia)
 X_k = compartment building volume fraction,
 V^k = total containment vessel volume, (ft^3)
 R = gas constant for air, (53.35 ft lbf/lbm $^{\circ}R$)
144 = conversion constant from in^3 to ft^3

The mass is calculated for each of three compartments (lower containment, upper containment and the ice condenser) at Catawba and McGuire Nuclear Stations. The mass of each of the three compartments is summed together, resulting in the total mass for the containment vessel. For Oconee Nuclear Station, having only one compartment, the containment mass is equal to the compartment mass.

A single total containment mass and a single time is assigned to each reading set number. A normalized containment mass is computed by dividing each reading's mass by the mass corresponding to the containment air mass at the start of the test reading at time t_1 . Normalizing the containment masses for each reading improves the precision of the leakage rate calculations by reducing the truncation errors associated with the large numbers generated by the least squares fit regression calculations.

where:

P_v = vapor press. (Pa) (1 Pa = $1.45037738 \times 10^{-4}$ psi)	$k_3 = -168.1706546$
$P_c = 22120.0$ kPa	$k_4 = 64.23285504$
$\Theta = T/T_c$	$k_5 = -118.9646225$
T = dew point temp. ($^{\circ}$ K) [$^{\circ}$ K = $(5/9)(^{\circ}$ F - 32) + 273.15]	$k_6 = 4.167117320$
$T_c = 647.3$ $^{\circ}$ K	$k_7 = 20.97506760$
$k_1 = -7.691234564$	$k_8 = 1 \times 10^9$
$k_2 = -26.08023696$	$k_9 = 6$

Reference: ASME Steam Tables, Fifth Edition, Appendix 1,
Section 5, Reduced Saturation Pressure, 1983.

For $T \leq 32$ $^{\circ}$ F :

At temperatures less than 32 $^{\circ}$ F, dew point hygrometers measure the frost point temperature rather than the dew point. The saturation pressure over ice is determined by substituting the frost point temperature into equation 1.6.

(1.6)

$$\ln(P_v) = C_1/T + C_2 + C_3T + C_4T^2 + C_5T^3 + C_6T^4 + C_7\ln(T)$$

where:

P_v = vapor press. (Pa) (1 Pa = $1.45037738 \times 10^{-4}$ psi)	$C_4 = 0.62215701 \times 10^{-6}$
T = dew point temp. ($^{\circ}$ K) [$^{\circ}$ K = $(5/9)(^{\circ}$ F - 32) + 273.15]	$C_5 = 0.20747825 \times 10^{-8}$
$C_1 = -5674.5359$	$C_6 = -0.9484024 \times 10^{-12}$
$C_2 = 6.3925247$	$C_7 = 4.1635019$
$C_3 = -0.9677843 \times 10^{-2}$	

Reference: ASHRAE Handbook 1981 Fundamentals, Chapter 5,
page 2.

The average dew point temperature for each compartment at the i th interval is determined by equation 1.3.

$$Tdp_i = \sum_{j=1}^k Tdp_{ij} Vf_j \quad (1.3)$$

where: Tdp_i = average compartment dew point temperature at i th interval, ($^{\circ}F$)
 Tdp_{ij} = dew point temperature recorded by sensor j at i th interval, ($^{\circ}F$)
 Vf_j = volume fraction corresponding to dew point sensor j
 k = number of dew point sensors in compartment

Reference: ANSI-56.8-1987

The total absolute pressure for each compartment at the i th interval is determined by equation 1.4.

$$P_i = \sum_{j=1}^k P_{ij} Vf_j \quad (1.4)$$

where: P_i = total compartment absolute pressure at the i th interval, (psia)
 P_{ij} = total absolute pressure recorded by sensor j at the i th interval, (psia)
 Vf_j = volume fraction corresponding to pressure sensor j
 k = number of pressure sensors in compartment

The weighted average dew point temperature for each compartment is substituted into either equation 1.5 or equation 1.6 to calculate the compartment partial pressure of water vapor.

For $T > 32^{\circ}F$: (1.5)

$$\frac{P_v}{P_c} = \exp \left[\frac{1}{\theta} \frac{\sum_{n=1}^5 k_n (1 - \theta)^n}{1 + k_6 (1 - \theta) + k_7 (1 - \theta)^2} - \frac{(1 - \theta)}{k_8 (1 - \theta)^2 + k_9} \right]$$

1.0 RAW DATA CALCULATIONS

The raw data set consists of clock time, absolute pressure readings in psia, air temperature sensor readings in ohms and dew point hygrometer readings in milliamps. Catawba and McGuire use three precision absolute pressure sensors, 52 RTD's for temperature measurements and six hygrometers for dew point temperature measurement. Oconee uses two precision absolute pressure sensors, 24 RTD's for temperature measurement and six hygrometers for dew point temperature measurement. All raw data values are converted into engineering units by equation 1.1.

$$Y = C0 + C1(X) + C2(X)^2 + C3(X)^3 + C4(X)^4 \quad (1.1)$$

where: Y = converted value (°F, psia)
X = raw data value (ohms, psia, amps)
C0, C1, C2, C3, C4 = conversion constants

Note: For Pressure, C1=1; C0, C2, C3 & C4 = 0.0.
For Dew Point, C0, C1, C2, C3 and C4 are obtained manufacturer's. instrument specification sheet.
For Temperature, C0, C1 and C2 are obtained from Standard's Lab calibration sheets; C3 & C4 = 0.

The mean absolute temperature for each compartment at the ith interval is determined by equation 1.2.

$$T_i = \frac{1}{\sum_{j=1}^m \frac{Vf_j}{T_{ij}}} \quad (\text{ref ANSI 56.8 P.13}) \quad (1.2)$$

where: T_i = containment atmosphere volume weighted absolute drybulb temperature at the ith interval, (°R)
 T_{ij} = absolute temperature of the jth sensor at the ith interval, (°R; where °R = °F + 459.67)
 Vf_j = volume fraction assigned to temp. sensor j
 m = number of temperature sensors in compartment

Reference: ANSI/ANS-56.8-1987

SYMBOLS AND DEFINITIONS

- A - Slope of least squares line
- B - Intercept of least squares line
- L_a - Maximum allowable leakage rate at calculated peak accident pressure as specified in the station's technical specifications, (wt. %/day)
- L_{am} - Estimate of leakage rate, derived from Mass Point least squares slope and intercept, expressed as a positive number, (wt. %/day)
- L_i - Measured leakage rate based on the difference between the initial mass at time t_1 and the mass at the i th interval, (wt. %/day)
- L_{tt} - Estimate of leakage rate, derived from the Total Time least squares slope and intercept, (wt. %/day)
- n - Number of (N_i, t_i) pairs of measurements
- \bar{n} - Number of (L_i, tt_i) pairs of measurements
- N_i - Normalized mass of containment air at the i th interval
- P - Total compartment absolute pressure in containment, (psia)
- P_v - Partial pressure of water vapor, (psia)
- R - Gas constant for air, 53.35 ft lbf/lbm °R
- S_A - Estimate of standard deviation of slope term A derived from least squares line
- T - Mean compartment absolute temperature of containment air, (°R)
- t_i - elapsed time since first reading, (min)
- tt_i - elapsed time since second reading, (min)
- $t_{.95}$ - 95th percentile of Students t distribution
- UCL - Upper Confidence Limit; a calculated value constructed from test data with the intention of placing an upper bound on the time leakage rate, (wt. %/day)
- V - Internal free volume of containment (assumed to remain constant for test duration), (ft³)
- W_i - Measured mass of containment air at i th interval
- i - subscript i indicates i th data point; i.e., (W_i, t_i) , $i = 1, 2, \dots, n$

10.0 Reference Documents

Babcock & Wilcox Volumetric Examination Evaluation Report - Evaluation Number 883-001, dated September 1, 1988.



Babcock & Wilcox
a McDermott company

VOLUMETRIC EXAMINATION EVALUATION REPORT

EVALUATION NUMBER

883-001

FILE NO. OR REFERENCE

METHOD: UT ☒ RT ☐

WELD NO. OR IDENTIFICATION: STM. GEN. B UPPER HEAD TO TUBESHEET PG 8 TO 51 ID# 35GR-WG58-1

APPLICABLE CODE YEAR AND ADDENDA: ASME SEC. XI 1980 Thru Win '80 Addenda

DATE OF INITIAL EXAMINATION: 26, 27 AUG '88

RE-EXAMINATION:

REPORTABLE INDICATION NUMBER(S): 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215,

COMMENTS: 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 229A, 230, 231, 232, 233, 234, 235, 236, 400, 401, 401A, 401B, 401BA, 401BB, 401BC, 401BD, 401BE, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 411A, 411B, 411C, 412, 413

ORIGINATOR: Howard Stoppelman

LEVEL: II

DATE: 1 Sept '88

PRELIMINARY DISPOSITION

ACCEPTANCE STANDARD: IWB-3511-1

COMMENTS: See attachments A, B and C. All indications are acceptable based on the 1982 fracture mechanics analysis referenced below.

INDICATION COMPARED WITH PREVIOUS EXAMINATION ☐ N/A ☐ NO ☒ YES NUMBERS ALL - Refer to ER# 82-005 (1982) and ER# 84-001 (1984)☐ ACCEPTABLE INDICATION NUMBER(S)

all

☐ REJECTABLE INDICATION NUMBER(S)

LEVEL III: M. A. Hachen

DATE: 9-12-88

FRACTURE MECHANICS ANALYSIS

☒ YES ☐ NO

DOCUMENT NUMBER (1982) 32-1135097-00

FINAL DISPOSITION

COMMENTS: The fracture mechanics analysis performed in 1982 (B&W document NO. 32-1135097-00) bounds the indications recorded in 1988. Based on the 1982 Fracture mechanics analysis all of these indications recorded in 1988 are acceptable.

☒ ACCEPTABLE INDICATION NUMBER(S)

All

☐ REJECTABLE INDICATION NUMBER(S)

LEVEL III: Keith Hachen

DATE: 9-16-88

FIGURE NO.

B02.040.003

RTF Unit
HSD
4-27-88

ATTACHMENT A

Duke Power Company - Oconee Unit 3
Steam Generator B - Upper Head-to-Tubesheet
Weld ID No. 3SGB-WG58-1
Figure No. B03.001.004 (1982 and 1984)/(B02.040.003 (1988)
Evaluation Report No. 883-001

This evaluation report addresses the data recorded during the 1988 examination of the "B" steam generator upper head-to-tubesheet weld. These indications were initially detected during the 1982 outage and were re-examined again in 1984. Comparisons of the examination results from 1982, 1984, and 1988 are presented in Attachment B. This attachment shows the maximum amplitude, length, and throughwall dimension for each indication recorded. By reviewing these values for each set of examinations, the change in each indication dimension can be observed. Although differences do exist in the recorded dimensions, this does not necessarily indicate a change in the actual physical dimension of the reflector. Many of these differences are attributed to variables in the examination process.

The recorded indications must be characterized in accordance with IWA-3000 of the Section XI Code. In this characterization process, the proximity of adjacent indications must be considered when determining the length and throughwall dimensions that are compared to the acceptance standards of IWB-3500. As shown in Attachment B, indications No. 401B, 411, and 412 were of substantial length in 1982 and 1984. However, the length of these indications recorded in 1988 was much less. This changed the way that the indications recorded during this examination are combined to determine the length and throughwall dimensions for acceptance. Attachment C shows the evaluations for 1982, 1984, and 1988 using the rules of IWA-3000. The maximum throughwall dimensions for each of these sets of data are:

- o 1982 - maximum a/T value = 9.52%
- o 1984 - maximum a/T value = 10.1%
- o 1988 - maximum a/T value = 8.9%

Even though the grouping arrangement has changed; i.e., large groups of indications have been broken down into smaller groups of indications, all of the recorded dimensions for 1988 are bounded by those from 1982 and 1984. The fracture mechanics analysis performed in 1982 (B&W Document No. 32-1135097-00) bounds the data obtained in 1984 and 1988. All of the indications recorded in 1988 are acceptable based on the 1982 fracture mechanics analysis. On the basis of the maximum a/T values recorded in 1982, 1984, and 1988, and the examination process capabilities, it appears that the flaw indications have remained essentially unchanged since 1982.

ATTACHMENT B

Page 1

Duke Power Company - Oconee Unit 3
 Steam Generator "B" Upper Head-to-Tubesheet
 ID No. 3SGB-WG58-1

Ind. No.	1982 Results			Max. Amp	1984 Results		Max. Amp	1988 Results	
	Max. Amp	Length	Thru-wall		Length	Thru-wall		Length	Thru-wall
200	200	2.00	0.40	200	2.00	0.40	50	2.10	0.40
201	63	1.10	0.40	63	1.10	0.40	159	2.10	0.30
202	125	0.80	0.30	125	0.80	0.30	159	1.30	0.30
203	251	1.00	0.40	251	1.00	0.40	159	1.10	0.40
204	70	0.10	0.20	70	0.90	0.45	70	1.30	0.45
205	80	0.65	0.20	80	0.65	0.25	125	1.30	0.5
206	80	1.10	0.25	80	1.10	0.20	159	1.65	0.40
207	80	1.85	0.30	80	1.85	0.35	80	1.85	0.35
208	80	0.90	0.25	80	0.90	0.20	159	1.10	0.25
209	56	0.45	0.15	56	0.45	0.15	100	1.05	0.30
210	200	1.10	0.25	200	1.10	0.25	300	3.30	0.20
211	100	0.80	0.30	100	0.80	0.25			
212	63	0.90	0.20	63	0.90	0.20	159	1.20	0.35
213	50	0.00	0.00	50	0.10	0.05	63	0.60	0.10
214	80	0.35	0.30	80	0.60	0.40	80	0.80	0.30
215	100	0.70	0.35	100	0.70	0.35	125	1.30	0.35
216	159	0.80	0.30	159	0.80	0.30	251	0.70	0.30
217	100	1.00	0.20	100	1.00	0.20	125	1.10	0.10
218	100	0.40	0.30	100	0.40	0.30	63	1.30	0.70
218A	Not Recordable			Not Recordable			125	1.20	0.25
219	159	2.30	0.30	159	2.30	0.30	160	1.80	0.40
220	125	1.70	0.30	125	1.70	0.30	159	1.70	0.30
221	80	1.20	0.15	80	1.20	0.15	100	1.10	0.30
222	125	0.50	0.30	125	0.50	0.30	125	0.60	0.50
223	100	2.20	0.30	100	2.80	0.30	125	3.90	0.60
224	125	2.50	0.40	125	2.50	0.40	159	2.40	0.30
225	50	0.00	0.00	50	0.10	0.20	63	0.90	0.50

ATTACHMENT B

Page 2

Duke Power Company - Oconee Unit 3
 Steam Generator "B" Upper Head-to-Tubesheet
 ID No. 3SGB-WG58-1

Ind. No.	1982 Results			1984 Results			1988 Results		
	Max. Amp	Length	Thru-wall	Max. Amp	Length	Thru-wall	Max. Amp	Length	Thru-wall
226	100	4.00	0.40	100	4.00	0.40	80	1.4	0.20
227	70	0.80	0.30	70	0.80	0.30	80	0.6	0.35
228	112	1.20	0.20	112	1.20	0.20	100	1.0	0.30
229	125	1.60	0.30	125	1.60	0.30	224	3.6	1.00
229A	Not Recordable			Not Recordable			160	1.6	0.20
230	90	0.70	0.20	90	0.70	0.20	125	1.3	0.70
231	159	0.90	0.20	159	0.90	0.20	159	1.8	0.20
232	251	0.90	0.30	251	0.90	0.30	251	1.5	0.50
233	251	0.60	0.80	251	0.60	0.80	125	1.0	0.40
234	100	0.60	0.30	100	0.60	0.30	100	1.1	0.40
235	Not Recordable			159	0.60	0.60	159	1.4	0.40
236	Not Recordable			125	0.70	0.30	100	1.1	0.50
400	400	6.00	0.65	400	6.00	0.80	159	3.6	0.50
401	63	0.90	0.20	63	0.90	0.30	50	0.3	0.10
401A	159	3.70	0.40	159	3.70	0.40	100	0.9	0.30
401B	355	37.00	0.45	355	37.20	0.50	251	6.5	0.30
401BA	Not Recordable			Not Recordable			100	1.4	0.30
401BB	Not Recordable			Not Recordable			100	1.6	0.30
401BC	Not Recordable			Not Recordable			100	3.3	0.60
401BD	Not Recordable			Not Recordable			63	1.4	0.30
401BE	Not Recordable			Not Recordable			200	3.8	0.50
402	90	1.80	0.50	90	1.80	0.60	50	1.8	0.40
403	400	9.30	0.45	400	9.30	0.55	316	9.3	0.40
404	50	0.25	0.00	50	0.25	0.10	Not Recordable		
405	100	0.90	0.15	100	0.90	0.20	50	0.9	0.40
406	200	3.90	0.45	200	3.90	0.50	125	3.0	0.40
407	501	31.00	0.95	501	31.00	1.00	501	28.8	1.00
408	80	0.50	0.25	80	0.50	0.25	Not Recordable		
409	50	0.20	0.00	50	0.20	0.00	Not Recordable		

ATTACHMENT B

Page 3

Duke Power Company - Oconee Unit 3
 Steam Generator "B" Upper Head-to-Tubesheet
 ID No. 3SGB-WG58-1

Ind. No.	1982 Results			Max. Amp	1984 Results			Max. Amp	1988 Results		
	Max. Amp	Length	Thru-wall		Max. Amp	Length	Thru-wall		Max. Amp	Length	Thru-wall
410	200	3.10	0.30		200	3.10	0.30		200	1.30	0.40
411	316	20.60	0.70		316	20.60	0.70		200	12.0	0.80
411A	Not Recordable				Not Recordable				200	1.4	0.50
411B	Not Recordable				Not Recordable				50	1.4	0.60
411C	Not Recordable				Not Recordable				50	1.1	0.60
412	400	31.10	0.80		251	9.80	0.40		251	5.5	0.90
413	Not Recordable				125	5.40	0.50		159	1.3	0.40

ATTACHMENT C

Page 1 of 3

Figure No. B02.040.003 Customer: Duke Power Company ER No. 883-001 Date: 9/10/88

Description: Oconee Unit 3, "B" OTSG Upper Head-to-Tubesheet Weld No. 3SGB-WG58-1

1988 DATA

Ind. No.	l	2a	S	T	a/l	a/T	Status	Remarks
200	2.1	.40	3.1	8.4	.09	2.4%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.88%
201/411A	2.1	.50	3.1	8.4	.12	3.0%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.02%
235/236	2.9	.50	3.1	8.4	.09	3.0%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.88%
411B	1.4	.60	3.2	8.4	.21	3.6%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.7%
202/411C	1.3	.60	3.2	8.4	.23	3.6%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.9%
203/413	1.4	.50	3.1	8.4	.18	3.0%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.44%
400	3.6	.50	3.8	8.4	.07	3.0%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.84%

ATTACHMENT C

Page 2 of 3

Figure No. B02.040.003 Customer: Duke Power Company ER No. 883-001 Date: 9/10/88

Description: Oconee Unit 3, "B" OTSG Upper Head-to-Tubesheet Weld No. 3SGB-WG58-1

1988 DATA

Ind. No.	1	2a	S	T	a/l	a/T	Status	Remarks
401/402	1.8	.40	4.0	8.4	.11	2.4%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.96%
204	1.3	.45	3.9	8.4	.17	2.7%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.36%
205	1.3	.50	3.9	8.4	.19	3.0%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.52%
206, 207, 208, 209, 401A, 401B	7.7	.55	4.0	8.4	.03	3.3%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.72%
210, 211, 212, 213, 214, 215, 216, 231, 232, 401BA, 401BB, 401BC, 401BD, 401BE, 403	18.2	1.1	3.3	8.4	.03	6.5%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.72%
233	1.0	.40	4.0	8.4	.20	2.4%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.6%

ATTACHMENT C

Page 3 of 3

Figure No. B02.040.003 Customer: Duke Power Company ER No. 883-001 Date: 9/10/88

Description: Oconee Unit 3, "B" OTSG Upper Head-to-Tubesheet Weld No. 3SGB-WG58-1

1988 DATA

Ind. No.	l	2a	S	T	a/l	a/T	Status	Remarks
234/405	1.1	.40	4.0	8.4	.18	2.4%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.44%
217/406	3.0	.40	4.0	8.4	.07	2.4%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.84%
229/230	3.7	1.0	3.3	8.4	.14	6.0%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.14%
218A, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229A, 407, 410, 411, 412	28.8	1.5	3.3	8.4	.03	8.9%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.72%

ATTACHMENT C

Page 1 of 1

Figure No. B03.01.004 Customer: Duke Power Company ER No. 883-001 Date: 9/10/88

Description: Oconee Unit 3, "B" OTSG Upper Head-to-Tubesheet Weld No. 3SGB-WG58-1

1984 DATA

Ind. No.	l	2a	S	T	a/l	a/T	Status	Remarks
204, 205, 206, 207, 208, 209, 210, 211, 212, 214, 215, 216, 231, 232, 233, 234, 401A, 401B, 403, 405	42.45	1.70	3.3	8.4	.02	10.1%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.68%
400	6.00	.80	3.40	8.4	.07	4.8%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.84%
401/402	2.10	1.20	3.10	8.4	.29	7.1%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 4.50%
404	0.25	0.10	2.05	8.4	.20	0.6%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.60%

All remaining indications were unchanged from 1982 data.

ATTACHMENT C

Page 1 of 3

Figure No. B03.01.004 Customer: Duke Power Company ER No. 883-001 Date: 9/10/88

Description: Oconee Unit 3, "B" OTSG Upper Head-to-Tubesheet Weld No. 3SGB-WG58-1

1982 DATA

Ind. No.	1	2a	S	T	a/l	a/T	Status	Remarks
204, 205, 206, 207, 208, 209, 210, 211, 212, 214, 215, 216, 231, 232, 233, 234, 401A, 401B, 403, 405	42.45	1.60	3.3	8.4	0.02	9.52%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.68%
400	6.00	0.65	3.4	8.4	0.05	3.87%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.8%
401/402	2.10	1.00	3.1	8.4	0.24	5.95%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 4.0%
404	0.25	0.00	2.05	8.4	0.00	0%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.6%
200	2.00	0.40	3.4	8.4	0.10	2.38%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.9%

ATTACHMENT C

Page 2 of 3

Figure No. B03.01.004 Customer: Duke Power Company ER No. 883-001 Date: 9/10/88

Description: Oconee Unit 3, "B" OTSG Upper Head-to-Tubesheet Weld No. 3SGB-WG58-1

1982 DATA

Ind. No.	1	2a	S	T	a/l	a/T	Status	Remarks
201	1.10	0.40	3.4	8.4	0.18	2.38%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.44%
202	0.80	0.30	3.4	8.4	0.19	1.78%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.52%
203	1.00	0.40	3.4	8.4	0.20	2.38%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 3.6%
218, 219, 220, 221, 222, 223, 224, 226, 227, 228, 229, 230, 407, 410, 411, 412	53.60	1.70	3.1	8.4	0.02	10.1%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.68%
217/406	5.40	0.85	3.7	8.4	0.08	5.0%	Unacceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 2.86%

ATTACHMENT C

Page 3 of 3

Figure No. B03.01.004 Customer: Duke Power Company ER No. 883-001 Date: 9/10/88

Description: Oconee Unit 3, "B" OTSG Upper Head-to-Tubesheet Weld No. 3SGB-WG58-1

1982 DATA

Ind. No.	l	2a	S	T	a/l	a/T	Status	Remarks
408	0.50	0.25	3.8	8.4	0.25	1.48%	Acceptable	IWB 3511.1 maximum allowable for sub-surface flaw is 4.1%

Indications 213, 225, and 409 have no measurable throughwall dimension and result in an evaluation similar to that of indication 404. These indications are acceptable.

11.0 Classes 1 and 2 Repairs and Replacements

As required by ASME Section XI, 1980 Edition, a record of the Classes 1 and 2 Repairs and Replacements for work performed from March 29, 1987 to September 21, 1988 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: 03-29-87 To: 09-21-88 (1)

Note: (1) Unit #3 Refueling outage #10 Start-up Leak Test

* Indeterminate from Work Request Review

Prepared By QA Technical Support

Reviewed By St. R. Hunt Date 9-28-88

Transmitted to
ISI Supervisor By St. R. Hunt Date 9-28-88

REPAIRS AND REPLACEMENT LOG
UNIT 3, RFO-10
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	UNIT	ASME CLASS	DESCRIPTION
	0		
00536C	3	2	REPLACED STUDS/NUTS ON VALVE LP5W-18
00537C	3	2	REPLACED BONNET STUDS ON VALVE LP5W-24
00538C	3	2	REPLACED VALVE LP5W-21
01351B	3	1	REPLACED VALVE 3RC-66
04504C	3	2	REMOVED AND REPLACED MAIN FOW NOZZLE #15 OSTG-A
08118C	3	*	REPLACED CYLINDER ON SNUBBER ON HANGER NPS-03-0-2478-H28
50287F	3	2	REPLACED BODY TO BONNET STUDS & NUTS ON VALVE 3LP-33
50289F	3	2	REPLACED BODY TO BONNET STUDS & NUTS ON VALVE 3LP-31
50578H	3	1	REPLACED VALVE 3HP-324
50753F	3	*	REPAIRED S/R 3-50-0-1066A-RCPM-3B1-553
50756F	3	*	REPAIRED S/R 3-57-0-2481A-H19
50757F	3	*	REPAIRED S/R 3-57-0-2481A-H16
50760F	3	*	REPAIRED S/R 3-50-0-2480A-H8
50763F	3	*	REPAIRED S/R 3-50-0-2479H-H57B
50764F	3	*	REPAIRED S/R 3-51-2478C-H6194
50765F	3	*	REPAIRED S/R 3-50-0-2479H-H39A
50776E	3	*	REPAIRED S/R #3-50-0-2479H-H54, 3-55-0-2479F-PM-2603, 3-50-0-1479G-H1F, 3-50-0-1066A-RCPM-3B2-551, 3-50-0-2479H-H47, 3-50-2479H-H49, 3-50-0-2479H-H44,
50776E	3	*	(CONT) 3-50-0-2479H-H43
50813F	3	*	REPAIRED S/R 3-50-0-1066A-RCPM-3A1-553, 3-55-0-2479E-RDM-2603, 3-50-0-1479G-H1F, 3-50-0-2479G-H60, 3-50-0-2479G-H22, 3-50-0-2479G-H18, 3-50-0-2479G-H17
50907F	3	1	REPAIRED LEAKING FLANGE ON CRDM NOZZLE #42
50920F	3	1	REPAIRED LEAKING FLANGE ON CRDM NOZZLE #33
50921F	3	1	REPAIRED LEAKING FLANGE ON CRDM NOZZLE #40

REPAIRS AND REPLACEMENT LOG
UNIT 3, RFQ-10
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	UNIT	ASME CLASS	DESCRIPTION
50981H	3	2	REPLACED MECHANICAL SEAL 3B HPI PUMP
51042H	3	2	REPLACED VALVE 3LWD-27
51101F	3	*	REPAIRED S/R 3-50-0-2479G-H23, 3-50-0-2479G-H28, 3-55-0-2479E-RDM-2703, 3-50-0-1066A-RCPM-3A2-552, 3-55-0-2479E-RDM-2702, 3-55-0-2479E-RDM-2701
51101F	3	*	(CONT) 3-50-0-2479G-H24, 3-50-0-1479G-H1F, 3-50-0-2479G-H53
51145F	3	2	REMOVED AND REPLACED MAIN FDW NOZZLE #20 OTSG-A
51151F	3	*	REPAIRED S/R 3-50-0-1066A-RCPM-3A2-551
51153F	3	*	REPAIRED S/R 3-50-0-1066A-RCPM-3A2-553
51157F	3	*	REPAIRED S/R 3-03A-2401A-DE004
51159F	3	*	REPAIRED S/R 3-03A-1-0-2444-H184
51161F	3	*	REPAIRED S/R 3-01A-0-2441-H4
51163F	3	*	REPAIRED S/R 3-03A-2401B-DE032
51165F	3	*	REPAIRED S/R 3-03-0-2480A-H6B
51170F	3	*	REPAIRED S/R 3-03-0-2439B-H64
51171F	3	*	REPAIRED S/R 3-01A-1-1-0-2401B-H40
51172F	3	*	REPAIRED S/R 3-51A-6-0-2435D-H129
51379F	3	*	REPAIRED S/R 3-53B-5-0-2439B-H53
51380F	3	*	REPAIRED S/R 3-03A-2401B-DE033
51381F	3	*	REPAIRED S/R 3-53B-5-0-2436D-H92
51383F	3	*	REPAIRED S/R 3-54A-3-0-2436D-H47
51384F	3	*	REPAIRED S/R 3-01A-3-0-2401B-H13
51385F	3	*	REPAIRED S/R 3-14B-2480A-H6056
51390F	3	*	REPAIRED S/R 3-03-2480A-H6037
51393F	3	*	REPAIRED S/R 3-54A-1-0-2435B-H33
51394F	3	*	REPAIRED S/R 3-14B-0-2437A-DE079

REPAIRS AND REPLACEMENT LOG
UNIT 3, RFD-10
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	UNIT	ASME CLASS	DESCRIPTION
51395F	3	*	REPAIRED S/R 3-01A-3-0-2401B-H22
51397F	3	*	REPAIRED S/R 3-53B-4-0-2435B-H31
51429F	3	2	REPAIRED MAIN FW NOZZLE #20
51429H	3	*	REPAIRED HANGER 3-01A-2441-R7
51432H	3	*	REPAIRED S/R 3-53B-4-0-2435B-H31 REV 1
51433H	3	*	REPAIRED S/R 3-53B-2435B-DE012 REV 1
51434H	3	*	REPAIRED HANGER 3-03A-1-0-2400A-H226
51441H	3	*	REPAIRED HANGER 3-01A-0-2431B-H2B
51446H	2	*	REPAIRED S/R 3-01A-0-2481A-H4B REV 0
51448H	3	*	REPAIRED S/R 3-50-0-2479A-H1A REV 2
51449H	3	*	REPAIRED S/R 3-03-2480A-H6187 REV 3
51450H	3	*	REPAIRED S/R 3-03-2480A-H6031 REV 3
51472F	3	1	REPLACED OTSG-A LOWER PRIMARY HANDHOLE STUDS & NUTS
51522H	3	*	REPAIRED S/R 3-03A-2401B-DE029 REV. 0
51585F	3	2	REPAIRED 3LPSW-24
51617C	3	2	REPLACED FLANGE STUDS & NUTS ON RBCU "C"
51619F	3	2	REMOVED & REPLACED BOLTING MATERIAL ON RBCU "A" FLANGES
51621E	3	*	REPAIRED S/R 3-53B-2-0-2436C-H147
51682E	3	*	REPAIRED HANGER 3-56-1-0-2437A-SR107
51686E	3	*	REPAIRED HANGER 3-56-1-0-2437A-SR119
51711H	3	*	REPAIRED S/R 01A-0-2480A-H1B REV 0
51717H	3	*	REPAIRED S/R 3-03-0-2481A-H12A REV 0
51726E	3	*	REPAIRED S/R 3-01A-0-2481B-H2A
51727E	3	*	REPAIRED S/R 3-01A-0-2481B-H2B
51727H	3	*	REPAIRED S/R 3-14-2478F-H6026 REV 3

REPAIRS AND REPLACEMENT LOG
UNIT 3, RFG-10
ASME SECTION XI - 1980
OCOONEE NUCLEAR STATION

WORK REQUEST	UNIT	ASME CLASS	DESCRIPTION
51728E	3	*	REPAIRED S/R 3-01A-0-2481B-H8A
51729E	3	*	REPAIRED S/R 3-01A-0-2481B-H8B
51729H	3	*	REPAIRED S/R 03-0-2481A-H14A REV 1
51739E	3	*	REPAIRED S/R 3-01A-0-2401B-R15
51744E	3	*	REPAIRED S/R 3-04A-0-2478A-NP5-H46
51745E	3	*	REPAIRED S/R 3-04A-0-2478A-NP5-H4B
51748E	3	*	REPAIRED S/R 3-50-0-2481A-H1
51751E	3	*	REPAIRED S/R 3-50-0-2481A-H3
51753E	3	*	REPAIRED S/R 3-50-0-2481A-H4
51754E	3	*	REPAIRED S/R 3-50-0-2481A-H5
51756E	3	*	REPAIRED S/R 3-50-0-2480A-H10
51765E	3	*	REPAIRED S/R 3-54B-0-2477-H9B
51768E	3	*	REPAIRED S/R 3-57-0-2481A-H7
51769E	3	*	REBUILT HYDR. SNUBBER 3-57-0-2481A-H9
51770E	3	*	REPAIRED S/R 3-57-0-2481A-H12
51771E	3	*	REPAIRED S/R 3-57-0-2481A-H13
51772E	3	*	REPAIRED S/R 3-57-0-2481A-H13A
51773E	3	*	REPAIRED S/R 3-57-0-2481A-H15
51774E	3	*	REPAIRED S/R 3-57-0-2481A-H17
51775E	3	*	REPAIRED S/R 3-57-0-2481A-H20
51775F	3	1	REPLACED STUDS & NUTS ON VALVE RC-4
51776E	3	*	REPAIRED S/R 3-57-0-2481A-H21
51776F	3	*	REPAIRED S/R 3-01A-0-2401B-R14
51777E	3	*	REPAIRED S/R 3-57-0-2481A-H23
51777F	3	*	REPAIRED S/R 3-01A-0-2401B-R15

REPAIRS AND REPLACEMENT LOG
UNIT 3, RFD-10
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	UNIT	ASME CLASS	DESCRIPTION
51778E	3	*	REPAIRED S/R 3-57-0-2481A-H25
51778F	3	*	REPAIRED S/R 3-01A-0-2481B-H2B
51779E	3	*	REPAIRED S/R 3-57-0-2481A-H26
51779F	3	*	REPAIRED S/R 3-04A-0-2479A-NP5-H52
51790E	3	*	REPAIRED HANGER 3-01A-3-803E245-2-R5
51791E	3	*	REPAIRED HANGER 3-01A-0-2401B-R6
51797E	3	*	REPAIRED HANGER 3-01A-1-1-02401B-R10
51810E	3	*	REPAIRED HANGER 3-03A-1-0-2401A-SR100PO
51813E	3	*	REPAIRED HANGER 3-03A-1-0-2400A-SR103PO
51825E	3	*	REPAIRED HANGER 3-54A-3-0-2435B-SR7
52176F	3	*	REPAIRED S/R 3-14B-2479A-H6256
52226G	3	1	MODIFIED "A" OTSG SUPPORT SKIRT
52227G	3	1	MODIFIED "B" OTSG SUPPORT SKIRT
52664F	3	*	ADJUSTED HANGER 3-07A-0-2400A-OL-508
52755F	3	*	REPAIRED S/R 3-56-0-2437A-DE020
52756F	3	*	REPAIRED S/R 3-53B-7-0-2436C-SR31
52826E	3	2	REPLACED BOLTS ON OTSG-A MAIN FDW NOZZLE #9
52827E	3	2	REMOVED AND REPLACED MAIN FDW NOZZLE #1 OTSG-A
52828E	3	2	REPLACED BOLTS ON OTSG-A MAIN FDW NOZZLE #32
52829E	3	2	REPLACED BOLTS ON OTSG-A MAIN FDW NOZZLE #26
52936E	3	2	REMOVED AND REPLACED MAIN FDW NOZZLE #26 ON OTSG-B
52937E	3	2	REMOVED AND REPLACED MAIN FDW NOZZLE #9 ON OTSG-B
53004D	3	1	REPAIRED VALVE 3RC-66
53121E	3	*	REPAIRED S/R 3-53B-6-0-2439C-H126
53354G	3	1	REPAIRED SHAFT ON RCP-3A1

REPAIRS AND REPLACEMENT LOG
UNIT 3, RFO-10
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	UNIT	ASME CLASS	DESCRIPTION
53355G	3	1	REPAIRED SHAFT ON RCP-3A2
53356G	3	1	REPAIRED SHAFT ON RCP-3B1
53357G	3	1	REPAIRED SHAFT ON RCP-3B2
53388G	3	2	REPLACED VALVE 3LP-54
53392D	3	*	REPAIRED S/R 3-03A-2401A-DE014
53821D	3	1	REPLACED BONNET/STUDS & NUTS ON VALVE 3LP-1
54182G	3	*	REPAIRED HANGER 3-03A-1-0-2400A-H243
54183G	3	*	REPAIRED S/R 3-53B-5-0-2436D-H93 REV 0
54339E	3	2	REPLACED BODY TO BONNET STUDS & NUTS ON VALVE 3LP-35
54446E	3	*	REPLACED S/R 3-01A-2-0-2403D-R6
54532E	3	1	REPLACED RCP-3B1 WITH SPARE
54583E	3	1	REPLACED RCP-3B2 WITH SPARE RCP #4.
54592E	3	2	REPLACED PIPING REMOVED DURING RCP REMOVAL
54594E	3	2	REPAIRED S/R 3-50-0-1479G-H1F, 3-50-0-1066A-RCPM-3B1-552, 3-50-0-2479H-H33, 3-50-0-2479H-H32, 3-50-0-2479H-H33, 3-55-2479F-PH-2601
54594E	3	2	(CONT) 3-57-0-2481A-H7, 3-57-0-2481A-H8A, 3-57-0-2481A-H5, 3-57-0-2481A-H6, 3-57-0-2481A-H14, 3-57-0-2481A-H19, 3-57-0-2481A-H10, 3-57-0-2481A-H22
54594E	3	*	(CONT) 3-57-0-2481A-H13, 3-57-0-2481A-H11
54597E	3	1	REPLACED RCP-3A1 WITH REBUILT PUMP, ALSO CASING MACHINED
57047A	3	1	REPAIRED RCP 3A1 SEALS
57048A	3	1	REPAIRED RCP 3A2 SEALS
57049A	3	1	REPAIRED RCP 3B1 SEALS
57050A	3	1	REPLACED 3B2 RCP SEALS
57057A	3	1	REMOVED/REPLACED UPPER AND LOWER PRIMARY MANWAYS & UPPER HANDHOLE "A" OTSG
57064A	3	1	HAND REPAIRED INDICATION ON RX VESSEL INTER. "O" RING GROOVE

REPAIRS AND REPLACEMENT LOG
UNIT 3, RFO-10
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	UNIT	ASME CLASS	DESCRIPTION
57293A	3	1	REPLACED INLET FLANGE STUDS/NUTS ON VALVE RC-67
57294A	3	1	REPLACED INLET FLANGE STUDS/NUTS ON VALVE RC-68
57471D	3	2	REPLACED VALVE RC-66 AND STUDS & NUTS ON OUTLET FLANGE
57474D	3	1	REPLACED STUDS & NUTS ON VALVE RC-4
61767C	3	2	REPLACED 3 BONNET STUDS & ONE NUT ON VALVE FDW-317
91579C	3	2	MACHINED BONNET FLANGE ON VALVE CC-24
91745C	3	1	REPAIRED SEAT LEAK VALVE 3-H93
92556C	3	2	REPLACED VALVE 3C5-12
95306C	3	*	REPAIRED S/R 3-14B-0-AA-H715
96047C	3	*	REPAIRED S/R 3-63-2435-H5535 REV A
96072B	3	*	REPAIRED HANGER 3-53B-7-0-24383-R-12, 3-53B-7-0-2438B-DE050, 3-56-4-2437A-H6
96302C	3	*	REPAIRED HANGER 3-50-0-2481A-H6
96303C	3	*	REPAIRED HANGER 3-01A-2403E-H4216, 3-01A-2403E-H4217, 3-01A-4-0-2403C-R1, 3-50-0-2479H-H49, 3-50-2479H-H6458
96307C	0	*	ERECTED HANGERS 0-14-447A-H7336, 0-13-447A-H7335, 0-14-447A-H7327, 0-14-447A-H7326 (55F BLDG.)
96315C	3	2	REPLACED VALVE 3HP-154
96323C	3	*	REPAIRED HANGER 3-01A-3-0-2403D-SR10, 3-01A-3-0-2403D-SR13
96325C	3	1	MODIFIED AUX PRESSURIZER SPRAY LINE AND HPI NOZZLE WARMING FLOW LINE (NSM 2004)
96325C	3	*	REPAIRED HANGER 3-51A-1-0-2444-H318, 3-51A-2439A-H5576, 3-51A-2439A-H5579, 3-51A-2439A-H5577, 3-53A-2479A-H6452, 3-51A-1-0-2439C-H294
96325C	3	*	(CONT) 3-51A-2479A-H6451, 3-51A-1-0-2439A-SR11, 3-51A-1-0-2439A-H308
96406C	3	*	REPAIRED HANGER 3-51A-2479C-H6459, 3-50-2479C-H6455, 3-50-2479C-H6456, 3-51A-2479C-H6460, 3-51A-2479C-H6461, 3-50-2479H-H6457
96970E	3	*	REPAIRED HANGER 3-51A-0-2479A-H3A
97062C	3	*	REPAIRED HANGER 3-01A-4-2-0-2403A-R12

REPAIRS AND REPLACEMENT LOG
UNIT 3, RFO-10
ASME SECTION XI - 1980
OCONEE NUCLEAR STATION

WORK REQUEST	UNIT	ASME CLASS	DESCRIPTION
97063C	3	*	REPAIRED HANGER 3-01A-4-2-0-2403D-R11
97075C	3	*	REPAIRED HANGER 3-03A-1-0-2401B-SR6
97077C	3	*	REPAIRED HANGER 3-57-0-2481A-EWD-H1701
97078	3	*	REPAIRED HANGER 03-0-2481A-H11A
97459	3	*	REPAIRED HANGER 3-53B-2436E-DE033, 3-53B-5-0-2439B-H97, 3-53B-2438B-DE008, 3-53B-5-0-2435B-H1, 3-53B-2436C-DE034, 3-53B-5-0-2436D-H93
97459	3	*	(CONT) 3-53B-6-0-2439C-H106, 3-53B-6-0-2439C-H105, 3-53B-6-0-2439C-H107, 3-53B-6-0-2439C-H108, 3-53B-6-0-2438B-H113, 3-53B-6-0-2438B-H115
97459	3	*	(CONT) 3-53B-5-0-2435B-H117, 3-53B-5-0-2435B-H120, 3-53B-6-0-2439C-H123, 3-53B-0-2444-HTT-0501, 3-53B-0-2444-HTT-0502, 3-53B-0-2436E-HTT-0701
97459	3	*	(CONT) 3-53B-5-0-2439B-R15, 3-53B-5-0-2444-R18, 3-53B-2-0-2435B-SR22, 3-53B-2-0-2435B-SR27, 3-53B-5-0-2435B-SR36, 3-53B-2436D-WR1000
97459	3	*	(CONT) 3-53B-2437A-DE037, 3-53B-0-2437A-DE038, 3-53B-2438A-DE039, 3-53B-2438B-DE040, 3-53B-5-0-2435B-H5, 3-53B-5-0-2435B-H20, 3-53B-4-0-2435B-H27
97459	3	*	(CONT) 3-53B-5-0-2436D-H32, 3-53B-5-0-2436D-H47, 3-53B-5-0-2436D-H50 3-53B-5-0-2437B-H51, 3-53B-5-0-2439B-H56, 3-53B-6-0-2439B-H132
97459	3	*	(CONT) 3-53B-5-0-2435B-H28, 3-53B-2-0-2435B-SR26, 3-53B-5-0-2435B-SR34
97459	3	*	(CONT) 3-53B-5-0-2439B-H57, 3-53B-5-0-2435B-H10, 3-53B-2438B-JTC-2401, 3-53B-2438B-JTC-2402, 3-53B-2438B-JTC-2403, 3-53B-5-0-2439B-R14
97459	3	*	(CONT) 3-53B-2438B-JTC-2405, 3-53B-2438B-DE010, 3-53B-2435B-DE010, 3-53B-2435B-DE013, 3-53B-2435B-DE017, 3-53B-2435B-DE025
97459	3	*	(CONT) 3-53B-2435B-DE026, 3-53B-2435B-DE027, 3-53B-2435B-DE030, 3-53B-2444-DE032, 3-53B-2438B-DE035, 3-53B-2438B-DE036, 3-53B-0-2438B-HTT-1203
97462	3	*	REPAIRED HANGER 3-56-2437A-WDB-0406, 3-56-2437A-WDB-0405, 3-56-2437A-H5575, 3-56-2437A-H5576, 3-56-2437A-H5574

*** Total ***