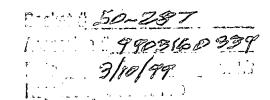
INSERVICE INSPECTION REPORT



DUKE POWER COMPANY OCONEE NUCLEAR STATION UNIT 3 SEVENTEENTH REFUELING OUTAGE



A Duke Energy Company

9903160343 990310 PDR ADDCK 05000287 G PDR

INSERVICE INSPECTION REPORT

Duke Power Company Oconee Nuclear Station Unit Fourteenth Refueling Outage



UNIT 3 OCONEE 1998 REFUELING OUTAGE 17

Location: Hwy. 130/183, Seneca, South Carolina 29679

NRC Docket No. 50-287

Commercial Service Date: December 16, 1974

Owner: Duke Energy Corporation 526 South Church St. Charlotte, N. C. 28201-1006

Revision 0

Prepared By:	Rarry Co. K	eth	Date	2-16-99
Reviewed By:	RGRO	unc	Date	2/16/99
Approved By:	R. Kevin	Phyne	Date	Z/16/99
Сору No.	2	_ Assigned To NRC	Document	Control
Controlled	X	Uncontrolled		

FORM NIS-1 OWNER• S DATA REPORT FOR INSERVICE INSPECTIONS As required by the Provisions of the ASME Code Rules

1.	1. Owner: <u>Duke Energy Corporation</u> , 526 S. <u>Church St.</u> . <u>Charlotte</u> , NC 28201-1006 (Name and Address of Owner)				
2.	2. Plant: Oconee Nuclear Station, Highway 130/183, Seneca, SC 29679 (Name and Address of Plant)				
3.	Plant Unit:	: <u>3</u> 4. Owner	· Certificate of Autho	orization (if require	d) <u>N/A</u>
5.	Commercia	al Service Date:]	1 <u>2/16/74</u> 6. Nation	al Board Number	for Unit <u>N/A</u>
7.	Component	ts Inspected:			
	nponent or ourtenance	Manufacturer Installer	Manufacturer Installer Serial · No.	State or Province No.	National Board No.
		See Se	cti <u>on 1.1 in the A</u> ttach	ed Report	
					
	•				
					

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

FORM NIS-1 (Back)

8. Examination Dates March 15, 1997 to December 19, 1998				
9. Inspection Period Identification: Second Period of the Third Interval				
10. Inspection Interval Identification: Third Inservice Inspection Interval				
11. Applicable Edition of Section XI 1989 Addenda None				
12. Date/Revision of Inspection Plan: April 7, 1998 / Revision 4				
13. Abstract of Examinations and Test. Include a list of examinations and tests and a statement concerning status of work required for the Inspection Plan. See Sections 3.0 and 4.0				
14. Abstract of Results of Examination and Tests. See Section 5.0				
15. Abstract of Corrective Measures. See Section 8.0				
We certify that a) the statements made in this report are correct b) the examinations and tests meet the Inspection Plan as required by the ASME Code, Section XI, and c) corrective measures taken conform to the rules of the ASME Code, Section XI.				
Certificate of Authorization No. (if applicable) NA Expiration Date NA				
Date Feb. 16, 1999 Signed Duke Energy Corp. By Review Physics				
CERTIFICATE OF INSERVICE INSPECTION				
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of				
personal injury or property damage or a loss of any kind arising from or connected with this inspection				
Inspector Signature Commissions NC 914 National Board, State, Province, and Endorsements				
Inspector Signature National Board, State, Province, and Endorsements				
Date				

^{*} The Hartford Steam Boiler Inspection & Insurance Co. 200 Ashford Center North Suite 300 Atlanta, GA. 30338

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4	D. E. LaBarge Project Manager Office of NRR USNRC Washington, DC 20555

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1.0 General Information

This report describes the Inservice Inspection of Duke Energy Corporation's Oconee Nuclear Station, Unit 3, during the 1998 Refueling Outage (also referred to as Outage 17). Outage 17 is the first outage in the second inspection period of the third ten year interval.

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 15, 1997.

1.1 Identification Numbers

Item	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
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
Main Steam System	Duke Energy	NA	NA	NA
Auxiliary Steam System	Duke Energy	NA	NA	NA
Feedwater System	Duke Energy	NA	NA	NA
Emergency Feedwater System	Duke Energy	NA	NA	NA
Steam Generator Flush System	Duke Energy	NA	NA	NA
Condensate System	Duke Energy	NA	NA	NA
Vents and Exhaust System	Duke Energy	NA	NA	NA
Condenser Circulating Water	Duke Energy	NA	NA	NA
High Pressure Service Water System	Duke Energy	NA	NA	NA

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Low Pressure Service Water System	Duke Energy	NA	NA	NA
Reactor Coolant System	Duke Energy	NA	NA	NA
High Pressure Injection System	Duke Energy	NA	NA	NA
Low Pressure Injection System	Duke Energy	NA	NA	NA
Reactor Building Spray System	Duke Energy	NA	NA	NA
Component Cooling System	Duke Energy	NA	NA	NA
Spent Fuel Cooling System	Duke Energy	NA	NA	NA
Vents - Reactor Building Components	Duke Energy	NA	NA	NA
Drains - Reactor Building Components	Duke Energy	NA ,	NA	NA

Authorized Nuclear Inservice Inspector(s) 1.2

Name:

M. B. Chapman

Employer:

The Hartford Steam Boiler Inspection & Insurance Company

Business Address: The Hartford Steam Boiler Inspection & Insurance Co.

200 Ashford Center North

Suite 300

Atlanta, GA 30338

2.0 <u>Summary of Inservice Inspections</u>

The information shown below provides an abstract of ASME Section XI Class 1, Class 2, and Augmented Items scheduled and examined during Outage 17 at Oconee Nuclear Station Unit 3.

2.1 Class 1 Inspection

Examination Category B-A Pressure Retaining Welds in Reactor Vessel

Item Number	Description	Total Examined During Outage
B01.010	Shell Welds	
B01.011	Circumferential	0
B01.012	Longitudinal	NA
B01.020	Head Welds	
B01.021	Circumferential	0
B01.022	Meridional	NA
B01.030	Shell to Flange Welds	0
B01.040	Head to Flange Welds	0
B01.050	Repair Welds	
B01.051	Beltline Region	N/A
TOTALS		0

Examination Category B-B Pressure Retaining Welds in Vessels Other than Reactor Vessels

Item		Total Examined
Number	Description	During Outage
	Pressurizer	7 12 Rvs. 24
B02.010	Shell to Head Welds	A CONTROL OF THE PARTY OF THE P
B02.011	Circumferential	0
B02.012	Longitudinal	0
B02.020	Head Welds	
B02.021	Circumferential	NA
B02.022	Meridional	NA .
	Steam Generator (Primary Side)	
B02.030	Head Welds	
B02.031	Circumferential	1
B02.032	Meridional	N/A
B02.040	Tubesheet to Head Weld	1
	Heat Exchangers (Primary Side) Head	
B02.050	Head Welds	
B02.051	Circumferential	NA
B02.052	Meridional	NA
	Heat Exchangers (Primary Side) Shell	
B02.060	Tubesheet to Head Welds	1
B02.070	Longitudinal Welds	NA
B02.080	Tubesheet-to-Shell Welds	NA
TOTALS		3

Examination Category B-D Full Penetration Welds of Nozzles in Vessels Inspection Program B

Item Number	Description	Total Examined During Outage
Ting (1994) (1994) (1994)	Reactor Vessel	
B03.090	Nozzie-to-Vessel Welds	0
B03.100	Nozzle Inside Radius Section	0
	Pressurizer	
B03.110	Nozzle-to-Vessel Welds	4
B03.120	Nozzle Inside Radius Section	4
	Steam Generators (Primary Side)	
B03.130	Nozzle-to-Vessel Welds	2
B03.140	Nozzle Inside Radius Section	2
	Heat Exchangers (Primary Side)	
B03.150	Nozzle-to-Vessel Welds	2
B03.160	Nozzle Inside Radius Section	Request for Relief ONS-009
TOTALS		14

Examination Category B-E Pressure Retaining Partial Penetration Welds in Vessels

REFERENCE SECTION 11.0 OF THIS REPORT

Examination Category B-F Pressure Retaining Dissimilar Metal Welds

Item Number	Description	Total Examined During Outage
	Reactor Vessel	
B05.010	Nominal Pipe Size 4" or Larger Nozzle-to- Safe End Butt Welds	0
B05.020	Nominal Pipe Size Less Than 4" Nozzle- to-Safe End Butt Weld	NA
B05.030	Nozzle-to-Safe End Socket Welds	NA
	Pressurizer	
B05.040	Nominal Pipe Size 4" or Larger Nozzle- to-Safe End Butt Welds	0
B05.050	Nominal Pipe Size Less Than 4" Nozzle- to-Safe End Butt Welds	3
B05.060	Nozzle-to-Safe End Socket Welds	NA
	Steam Generators	
B05.070	Nominal Pipe Size 4" or Larger Nozzle-to- Safe End Butt Welds	NA
B05.080	Nominal Pipe Size Less Than 4" Nozzle- to-Safe End Butt Welds	NA
B05.090	Nozzle-to-Safe End Socket Welds	NA

Examination Category B-F (Continued)

Item Number	Description	Total Examined During Outage
	Heat Exchangers	7 market 227 to
B05.100	Nominal Pipe Size 4" or Larger Nozzle-to- Safe End Butt Welds	NA
B05.110	Nominal Pipe Size Less Than 4" Nozzle- to-Safe End Butt Welds	NA
B05.120	Nozzle-to-Safe End Socket Welds	NA
	Piping	
B05.130	Nominal Pipe Size 4" or Larger Dissimilar Metal Butt Welds	1
B05.140	Nominal Pipe Size Less Than 4" Dissimilar Metal Butt Welds	1
B05.150	Dissimilar Metal Socket Welds	NA
TOTALS		5

Examination Category B-G-1

Pressure Retaining Bolting, Greater Than 2" in Diameter

Item Number	Description	Total Examined During Outage
	Reactor Vessel	
B06.010	Closure Head Nuts	0
B06.020	Closure Studs, (in place)	NA
B06.030	Closure Studs, (when removed)	0
B06.040	Threads in Flange	0
B06.050	Closure Washers, Bushings	O
2 3 3	Pressurizer	, į į į
B06.060	Bolts and Studs	0
B06.070	Flange Surface, (when connection disassembled)	0
B06.080	Nuts , Bushings and Washers	0
The state of the s	Steam Generators	
B06.090	Bolts and Studs	NA
B06.100	Flange Surface, (when connection disassembled)	NA
B06.110	Nuts , Bushings and Washers	NA
	Heat Exchangers	
B06.120	Bolts and Studs	NA
B06.130	Flange Surface, (when connection disassembled)	NA
B06.140	Nuts , Bushings and Washers	NA

Examination Category B-G-1 (Continued)

ltem Number	Description	Total Examined During Outage
E_{τ}	Piping	
B06.150	Bolts and Studs	NA
B06.160	Flange Surface, (when connection disassembled)	NA
B06.170	Nuts , Bushings and Washers	NA
	Pumps	1992 - Arriva Maria Paris
B06.180	Bolts and Studs	0
B06.190	Flange Surface, (when connection disassembled)	1
B06.200	Nuts , Bushings and Washers	0
	Valves	
B06.210	Bolts and Studs	NA
B06.220	Flange Surface, (when connection disassembled)	NA
B06.230	Nuts , Bushings and Washers	NA
TOTALS		1

Examination Category B-G-2

Pressure Retaining Bolting, 2" and Less in Diameter

Item Number	Description	Total Examined During Outage
100 Telephone (100 Te	Reactor Vessel	
B07.010	Bolts, Studs, and Nuts	NA
	Pressurizer	
B07.020	Bolts, Studs, and Nuts	0
The state of the state of	Steam Generators	
B07.030	Bolts, Studs, and Nuts	1
	Heat Exchangers	
B07.040	Bolts, Studs, and Nuts	NA
	Piping	
B07.050	Bolts, Studs, and Nuts	О
	Pumps	e e e
B07.060	Bolts, Studs, and Nuts	NA
	Valves	
B07.070	Bolts, Studs, and Nuts	1
	CRD Housings	
B07.080	Bolts, Studs, and Nuts In CRD Housing When Disassembled	2
TOTALS		4

Examination Category B-H Integral Attachments for Vessels

ltem Number	Description	Total Examined During Outage
	Reactor Vessel	
B08.010	Integrally Welded Attachments	NA
	Pressurizer	
B08.020	Integrally Welded Attachments	NA
	Steam Generators	
B08.030	Integrally Welded Attachments	NA
	Heat Exchangers	
B08.040	Integrally Welded Attachments	NA
TOTALS		NA

Examination Category B-J Pressure Retaining Welds in Piping

Item Number	Description	Total Examined During Outage
B09.010	Nominal Pipe Size 4" or Larger	
B09.011	Circumferential Welds	6
B09.012	Longitudinal Welds ¹	0
B09.020	Nominal Pipe Size Less Than 4"	
B09.021	Circumferential Welds	6
B09.022	Longitudinal Welds ¹	NA

¹ Longitudinal welds in Examination Category B-J that intersect circumferential welds are examined per Code Case N-524.

Examination Category B-J (Continued)

ltem Number	Description	Total Examined During Outage
B09.030	Branch Pipe Connection Welds	
B09.031	Nominal Pipe Size 4" or Larger	0
B09.032	Less Than Nominal Pipe Size 4"	1
B09.040	Socket Welds	1
TOTALS		14

Examination Category B-K-1

Integral Attachments for Piping, Pumps and Valves

Item Number	Description	Total Examined During Outage
	Piping	The state of the s
B10.010	Integrally Welded Attachments	NA
	Pumps	
B10.020	Integrally Welded Attachments	NA
	Valves	
B10.030	Integrally Welded Attachments	NA
TOTALS		NA

Examination Category B-L-1, B-M-1 Pressure Retaining Welds in Pump Casings and Valve Bodies

B-L-2, B-M-2 Pump Casings and Valve Bodies

Item Number	Description	Total Examined During Outage
	Pumps	
B12.010	Pump Casing Welds (B-L-1)	1
B12.020	Pump Casing (B-L-2) (when disassembled for Maintenance, Repair or Volumetric Examination)	1
c + - 4 + + - >	Valves	
B12.030	Valves, Nominal Pipe Size Less Than 4" Valve Body Welds (B-M-1)	NA
B12.040	Valves, Nominal Pipe Size 4" or Larger Valve Body Welds (B-M-1)	NA
B12.050	Valve Body, Exceeding 4" Nominal Pipe Size (B-M-2)	0
TOTALS		2

Examination Category B-N-1 Interior of Reactor Vessel

B-N-2 Integrally Welded Core Support Structures and Interior Attachments to Reactor Vessels

B-N-3 Removable Core Support Structures

ltem Number	Description	Total Examined During Outage
	Reactor Vessel	
B13.010	Vessel Interior (B-N-1)	0
	Reactor Vessel (PWR)	
B13.050	Interior Attachments Within The Beltline Region (B-N-2)	NA
B13.060	Interior Attachments Beyond The Beltline Region (B-N-2)	NA
B13.070	Core Support Structure (B-N-3)	0
TOTALS		0

Examination Category B-O Pressure Retaining Welds in Control Rod Housings

Item Number	Description	Total Examined During Outage
	Reactor Vessel	
B14.010	Welds in CRD Housing	4
TOTALS		4

Examination Category B-P All Pressure Retaining Components

REFERENCE SECTION 11.0 OF THIS REPORT

Examination Category B-Q Steam Generator Tubing²

Item Number	Description	Total Examined During Outage
B16.010	Steam Generator Tubing in Straight Tube Design	NA
B16.020	Steam Generator Tubing in U-Tube Design	NA
TOTALS		NA

Examination Category F-A Class 1 Component Supports

Item Number	Description	Total Examined During Outage
F1.010	Class 1 Piping Supports Reference Section 4.0 of this report	4
F1.040	Class 1 Supports Other Than Piping Reference Section 4.0 of this report	0
F1.050	Class 1 Snubbers	26
TOTALS		30

² Steam Generator Tubing is examined and documented by Steam Generator Maintenance Group of the Nuclear Services Division as required by the Station Technical Specifications and is not included in this report.

2.2 Class 2 Inspections

Examination Category C-A Pressure Retaining Welds in Pressure Vessel

Item Number Description		Total Examined During Outage
C01.010	Shell Circumferential Welds	0
C01.020	Head Circumferential Welds	0
C01.030	Tubesheet to Shell Weld	1
TOTALS		1

Examination Category C-B Pressure Retaining Nozzle Welds in Vessels

ltem Number	Description	Total Examined During Outage
C02.010	Nozzles in Vessels ≤ ¹ / ₂ " Nominal Thickness	
C02.011	Nozzle-to-Shell (or Head) Weld	0
C02.020	Nozzles Without Reinforcing Plate In Vessels > ¹ / ₂ " Nominal Thickness	
C02.021	Nozzle-to-Shell (or Head) Weld	0
C02.022	Nozzle Inside Radius Section	0
C02.030	Nozzles With Reinforcing Plate in Vessels > 1/2" Nominal Thickness	

Examination Category C-B (Continued)

ltem Number	Description	Total Examined During Outage
C02.031	Reinforcing Plate Welds to Nozzle and Vessel	0
C02.032	Nozzle-to-Shell (or Head) Welds When Inside of Vessel Is Accessible	0
C02.033	Nozzle-to-Shell (or Head) Welds When Inside of Vessel is Inaccessible	0
TOTALS		0

Examination Category C-C Integral Attachments For Vessels, Piping, Pumps and Valves

ltem Number	Description	Total Examined During Outage
	Pressure Vessels	
C03.010	Integrally Welded Attachments	2
	Piping	
C03.020	Integrally Welded Attachments	7
	Pumps	
C03.030	Integrally Welded Attachments	0
	Valves	
C03.040	Integrally Welded Attachments	NA
TOTALS		9

Examination Category C-D Pressure Retaining Bolting Greater Than 2" in Diameter

ltem Number	Description	Total Examined During Outage		
	Pressure Vessels	A STATE OF THE STA		
C04.010	Bolts and Studs	NA		
	Piping			
C04.020	Bolts and Studs	NA		
	Pumps			
C04.030	Bolts and Studs	1		
	Valves			
C04.040	Bolts and Studs	0		
TOTALS		1		

Examination Category C-F-1 Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping

Item		Total Examined	
Number	Description	During Outage	
C05.010	Piping Welds ≥3/8" Nominal Wall Thickness for Piping > Nominal Pipe Size 4"		
C05.011	Circumferential Weld	2	
C05.012	Longitudinal Welds ³	NA	
C05.020	Piping Welds > 1/5" Nominal Wall Thickness for Piping ≥ Nominal Pipe Size		
	2" and ≤ Nominal Pipe Size 4"		
C05.021	Circumferential Welds	10	
C05.022	Longitudinal Welds ³	NA	
C05.030	Socket Welds	1	
C05.040	Pipe Branch Connections of Branch Piping ≥ Nominal Pipe Size 2"		
C05.041	Circumferential Weld	1	
C05.042	Longitudinal Weld ³	NA	
TOTALS		14	

³ Longitudinal welds in Examination Categories C-F-1 and C-F-2 that intersect circumferential welds are examined per Code Case N-524.

Examination Category C-F-2 Pressure Retaining Welds in Carbon or Low Alloy Steel Piping

Item Number	Description	Total Examined During Outage
C05.050	Piping Welds ≥ ³ /8" Nominal Wall Thickness for Piping > Nominal Pipe Size 4"	en e
C05.051	Circumferential Weld	6
C05.052	Longitudinal Weld ³	. NA
C05.060	Piping Welds > ¹ / ₅ " Nominal Wall Thickness for Piping ≥ Nominal Pipe Size 2" and ≤ Nominal Pipe Size 4"	
C05.061	Circumferential Weld	NA
C05.062	Longitudinal Weld ³	NA
C05.070	Socket Welds	NA
C05.080	Pipe Branch Connections of Branch Piping ≥ Nominal Pipe Size 2"	
C05.081	Circumferential Weld	1
C05.082	Longitudinal Weld ³	NA
TOTALS	,	7

³ Longitudinal welds in Examination Categories C-F-1 and C-F-2 that intersect circumferential welds are examined per Code Case N-524.

Examination Category C-G Pressure Retaining Welds in Pumps and Valves

Item Number	Description	Total Examined During Outage
Vitiro de se s	Pumps	
C06.010	Pump Casing Welds	NA
	Valves	
C06.020	Valve Body Welds	0
TOTALS		0

Examination Category C-H All Pressure Retaining Components

REFERENCE SECTION 11.0 OF THIS REPORT

Examination Category F-A Class 2 Component Supports

ltem Number	Description	Total Examined During Outage	
F1.020	Class 2 Piping Supports Reference Section 4.0 of this report	15	
F1.040	Class 2 Supports Other Than Piping Reference Section 4.0 of this report	1	
F1.050	Class 2 Snubbers Reference Section 4.0 of this report	35	
TOTALS		51	

2.3 Augmented Inspections

Item Number	Description	Total Examined During Outage
G01.001	Reactor Coolant Pump Flywheel	4
G02.001	HPI Nozzle Safe End Examinations	25
G03.001	Pressurizer Surge Line Examinations	0
G04.001	Thermal Stress Piping (NRC Bulletin 88-08)	0
G05.001	Pressurizer Spray Piping Thermal Transient Inspection	NA
G06.001	Auxiliary Feedwater Header Water Hammer Examinations (PSC21-82)	0
G07.001	Augmented Examination of Longitudinal Piping Welds With A Nominal Wall Thickness < 3/8" and > Nominal Pipe Size 4"	0
G08.001	Pressurizer Sensing/ Sampling Nozzle Safe Ends	0
G09.001	Class 2 Piping Welds Nominal Pipe Size > 4" With Nominal Wall Thickness< 3/8"	4
G10.001	Class 1 RTE Mounting Bosses	3
G11.001	Reactor Coolant Pumps 3A2 and 3B1 Alternate Examinations	2
G12.001	HPI System Upgrade Piping Welds With A Nominal Wall Thickness ≤ 1/5" on Piping with a Nominal Pipe Size ≥ 2" and Nominal Pipe Size ≤ 4".	4

A detailed description of each examination listed in Sections 2.1 through 2.3 are located in Section 4 of this report. Results of each examination are located in Section 5 of this report.

3.0 Third Ten Year Inspection Status

The completion status of inspections required in the third ten year inspection interval by the 1989 ASME Section XI Code, no Addenda, 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 Table IWC-2500-1 for Class 2 Inspections. Augmented inspections are also included.

Class 1 Inspections

Examination Category	Description	Inspections Required	Inspections Completed	Percentage Completed	⁴ Deferral Allowed
B-A	Pressure Retaining Welds in Reactor Vessel	8 Welds	2.5 Welds	31%	Yes
B-B	Pressure Retaining Welds in Vessels Other than Reactor Vessel	12 Welds	5 Welds	42%	No
B-D	Full Penetration Welds of Nozzles in Vessels Inspection Program B	30 Inspections	16 Inspections	53%	Partial
B-E	Pressure Retaining Partial Penetration Welds in Vessels	REFERENCE SECTION 11.0 OF THIS REPORT			
B-F	Pressure Retaining Dissimilar Metal Welds	28 Welds	12 Welds	43%	No
B-G-1	Pressure Retaining Bolting Greater than 2 Inch Diameter	130 Items	34.33 Items	26%	Yes
B-G-2	Pressure Retaining Bolting 2 Inches and Less in Diameter	24 Items	10 Items	42%	No
В-Н	Integral Attachment for Vessels	N/A	N/A	N/A	N/A
B-J	Pressure Retaining Welds in Piping	143 Welds	56 Welds	39%	No

⁴Deferral of inspection to the end of the interval as allowed by ASME Section XI Tables IWB and IWC 2500-1.

Class 1 Inspections (Continued)

Examination Category	Description	Inspections Required	Inspections Completed	Percentage Completed	⁵ Deferral Allowed
B-K-1	Integral Attachments for Piping, Pumps and Valves	N/A	N/A	N/A	N/A
B-L-1	Pressure Retaining Welds in Pump Casings	1 Weld	1 Welds	100%	Yes
B-L-2	Pump Casings	1 Casing	1 Casing	100%	Yes
B-M-1	Pressure Retaining Welds in Valve Bodies	N/A	N/A	N/A	N/A
B-M-2	Valve Body > 4 in. Nominal Pipe Size	3 Valves	3 Valves	100%	Yes
B-N-1	Interior of Reactor Vessel	3 Inspections	1 Inspection	33%	No
B-N-2	Integrally Welded Core Support Structures and Interior Attachments to Reactor Vessels	N/A	N/A	N/A	N/A
B-N-3	Removable Core Support Structures	1 Item	0 Items	0%	Yes
B-0	Pressure Retaining Welds in Control Rod Housings	3 Housings	2 Housings	67%	Yes
B-P	All Pressure Retaining Components	REFERENCE SECTION 11.0 OF THIS REPORT			EPORT
B-Q	Steam Generator Tubing	N/A	N/A	N/A	N/A
F-A F1.010 & F1.040 items.	Class 1 Component Supports (Except Snubbers)	31Supports	13 Supports	42%	No
F-A F1.050 items	Class 1 Component Supports, Snubbers	26 Snubbers	26 Snubbers	100%	No

 $^{^{5}}$ Deferral of inspection to the end of the interval as allowed by ASME Section XI Tables IWB and IWC 2500-1.

Class 2 Inspections

Examination Category	Description	Inspections Required	Inspections Completed	Percentage Completed	⁵ Deferral Allowed	
C-A	Pressure Retaining Welds in Pressure Vessels	8 Welds	4 Welds	50%	No	
С-В	Pressure Retaining Nozzle Welds in Vessels	4 Welds	2 Welds	50%	No	
C-C	Integral Attachments for Vessels, Piping, Pumps and Valves	62 25 Attachments Attachments		40%	No '	
C-D	Pressure Retaining Bolting Greater Than 2 Inches in Diameter	2 Item	2 Item 2 Items		No	
C-F-1	Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping	136 Welds	46 Welds	34%	No	
C-F-2	Pressure Retaining Welds in Carbon or Low Alloy Steel Piping	59 Welds	22 Welds	37%	No	
C-G	Pressure Retaining Welds in Pumps and Valves	1	1	100%	No	
C-H	All Pressure Retaining Components	REFERENCE SECTION 11.0 OF THIS R			EPORT	
F-A F1.020 & F1.040 items.	Class 2 Component Supports (Except Snubbers)	119 Supports	55 Supports	46%	No	
F-A F1.050 items	Class 2 Component Supports, Snubbers	35 Snubbers	35 Snubbers	100%	No	

 $^{^{5}}$ Deferral of inspection to the end of the interval as allowed by ASME Section XI Tables IWB and IWC 2500-1.

Augmented Inspections

Description	Percentage Complete
Reactor Coolant Pump Flywheels (Item No. Series G01)	100% of EOC 17 Requirements
High Pressure Injection and Make-Up Nozzle Safe- Ends (Item No. Series G02)	100% of EOC 17 Requirements
Pressurizer Surge Line Drain Line (Item No. Series G03)	Not Scheduled
Thermal Stress Piping (Item No. Series G04)	Not Scheduled
Auxiliary Feedwater Header Preliminary Safety Concern (PSC 21-82) Water Hammer Examinations (Item No. Series G06)	Not Scheduled
Augmented Examination of Longitudinal Piping Welds With A Nominal Wall Thickness Less Than 3/8" and Greater Than Nominal Pipe Size 4" (Item No. Series G07)	No longer applicable. Code Case N-524 is being used for the examination of all longitudinal piping welds.
Pressurizer Sensing/Sampling Nozzle Safe Ends (Item No. Series G08)	Not Scheduled
Class 2 Piping Welds Nominal Pipe Size Greater Than 4" With A Nominal Wall Thickness Less Than $^{3}/_{8}$ " (Item No. Series G09)	100% of EOC 17 Requirements
Class 1 RTE Mounting Bosses (Item No. Series G10)	100% of EOC 17Requirements
Reactor Coolant Pump 3A2 and 3B1 Flange Joint, Studs, Adjacent Areas (Item No. Series G11)	100% of EOC 17Requirements
HPI System Upgrade (Item No. Series G12)	100% of EOC 17 Requirements

4.0 Final Inservice Inspection Plan For Outage 17

The final ISI Plan shown in this section lists all ASME Section XI Class 1 and ASME Section XI Class 2, and Augmented examinations credited for Outage 17 at Oconee Nuclear Station Unit 3.

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), IWF-2500-1

(Class 1 and Class 2), Augmented

Requirements

ID Number = Unique Identification Number

Iso / Dwg. Numbers = Location and/or Detail Drawings

Proc = Examination Procedures

Insp Req. = Examination Technique - Magnetic Particle,

Dye Penetrant, etc.

Mat / Sch. = General Description of Material

Diam. / Thick = Diameter/Thickness

Cal Blocks = Calibration Block Number

Comments = General and/or Detail Description

EOC 17

CATEGORY B-B, Pressure Retaining Welds in Vessels Other Than Reactor Vessels

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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Steam Generators (Primary Side)

Inservice Inspection Plan for Interval 3 Outage 3

		•		
DWG NUMBERS	PROC	INSP REO	MAT/SCH DIA/THK CAL BLOCKS	COMMENTS

ITEM NUMBER	ID NUMBER	SYS	ISO/DWG NUMBERS	PROC	INSP RE	Q MAT/S	CH DIA/THK CA	•	S COMMENTS
**** Head We	lds; Circumferentia	al ****							
B02.031.001 Ci	3-SGA-WG172 rcumferential		ISI-OCN3-003 OM-2201-222	NDE-620 NDE-640	UT	CS	102.750 8.000	40393	SGA Lower Head To Transition PC. 7 to 9
Class A					Lower	Head to			
					Trans	ition			
Total B02.031	l Items: 1							· · · · · · · · · · · · · · · · · · ·	

EOC 17

CATEGORY B-B, Pressure Retaining Welds in Vessels Other Than Reactor Vessels

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Steam Generators (Primary Side)

Oconee 3

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Inservice	Inspection	Plan 1	for Ir	nterval	3	Outage 3
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				IIISELVICE I	nahecnou i	riani iori	intervai 3 Outa	ge 3		01/12/100
ITEM NUMBER ID NUMBER		SYS ISO/DWG NUMBERS		PROC	INSP REQ	MAT/S	CH DIA/THK CA	AL BLOCKS	COMMENTS	
**** Tubesh	eet-to-Head Weld **	**								
B02.040.002	3-SGA-WG58-2 Circumferential	50	ISI-OCN3-003 OM-2201-222	NDE-620	UT	CS	119.000	40393		upport Skirt Pc. 9 to Lower
Class A	Circumierentiai		OIVI-2201-222	NDE-640	Head to)	8.000		Tubesheet Pc. 50.	
					Tubesh	eet				
Total B02.0	40 Items: 1									

CATEGORY B-B, Pressure Retaining Welds

in Vessels Other Than Reactor Vessels

Heat Exchangers (Primary Side)-Shell

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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Inservice	Inspection	Plan fo	or Interval 3	Outage 3
-----------	------------	---------	---------------	----------

ITEM NUMBI	ER ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH I	DIA/THK CA	AL BLOCKS	COMMENTS
**** Tubesh	neet-to-Head Welds	***						
B02.060.002	3-LDCA-OUT-V6 Circumferential	51A 1-97347-1 OM-201-3107	NDE-630	UT	SS	8.620 0.875	40411	Letdown Cooler 3A Outlet Tubesheet Pc. 2 to Channel Body Pc. 3.
Class A		•		Tubeshe	•			•

Total B02.060 Items:

1

Total B02 Items:

CATEGORY B-D, Full Penetration Welds of

4

Nozzles in Vessels

Total B03.110 Items:

<u>Pressurizer</u>

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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		01/12/1999							
ITEM NUMB	ER ID NUMBER	SY	S ISO/DWG NUMBERS	PROC	INSP REQ		terval 3 Outaç H DIA/THK CA	•	COMMENTS
**** Nozzle	e-to-Vessel Welds ****								
B03.110.001	3-PZR-WP15	50	ISI-OCN3-002	NDE-620	UT	CS	15.250	40394	Pressurizer Surge Nozzle Pc. 8 To Lower Head Pc. 6.
	Circumferential		OM-2201-229	NDE-640			4.750		Tresourizer dange Hezzle Fe. o To Lower Fledd Fe. o.
Class A			B&W 149786E		Nozzle t	0			
					To Lowe	r Head			
B03.110.006	3-PZR-WP26-4	50	ISI-OCN3-002	NDE-620	UT	CS	5.750	40395	Pressurizer Sensing Nozzle Pc. 30 to Shell Pc. 1
	Circumferential		OM-2201-229	NDE-640			6.187		Between W & X Axis.
Class A			B 7W149789E		Nozzle to	0			
					To Shell				
B03.110.007	3-PZR-WP26-5	50	ISI-OCN3-002	NDE-620	UT	CS	5.750	40395	Pressurizer Sensing Nozzle Pc. 30 to Shell Pc. 1
	Circumferential		OM-2201-229	NDE-640			6.187		Between Z & Y Axis.
Class A			B 7W149789E		Nozzle to	5			
					To Shell				
B03.110.008	3-PZR-WP26-6	50	ISI-OCN3-002	NDE-620	UT	CS	5.750	40395	Pressurizer Sensing Nozzle Pc. 30 to Shell Pc. 1
	Circumferential		OM-2201-229	NDE-640			6.187		Between W & Z Axis.
Class A			B 7W149789E		Nozzle to)			
					To Shell				

CATEGORY B-D, Full Penetration Welds of

4

Nozzles in Vessels

Total B03.120 Items:

<u>Pressurizer</u>

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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		01/12/1999							
ITEM NUMBER	ID NUMBER	SY	S ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CA	AL BLOCKS	COMMENTS
**** Nozzle In	side Radius Sectio	n ***	*						
B03.120.001	3-PZR-WP15	50	ISI-OCN3-002	NDE-680	UT	CS	0.000	40394	Pressurizer Surge Nozzle Pc. 8. (Inside Radius
			OM-2201-229				4.750		Section).
Class A			B 7W149786E		Nozzle	to			,
					Lower H	ead			
B03.120.006	3-PZR-WP26-4	50	ISI-OCN3-002	NDE-680	UT	CS	0.000-	40395	Pressurizer Sensing Nozzle Pc. 30. Between W & X
			OM-2201-229				6.187		Axis (Inside Radius Section).
Class A			B 7W149789E		Nozzle	.0			,
					Shell				
B03.120.007	3-PZR-WP26-5	50	ISI-OCN3-002	NDE-680	UT	CS	0.000	40395	Pressurizer Sensing Nozzle Pc. 30. Between Z & Y
			OM-2201-229				6.187		Axis (Inside Radius Section).
Class A			B 7W149789E		Nozzle 1	О			,
					Shell				
B03.120.008	3-PZR-WP26-6	50	ISI-OCN3-002	NDE-680	UT	CS	0.000	40395	Pressurizer Sensing Nozzle Pc. 30. Between W & X
			OM-2201-229				6.187		Axis (Inside Radius Section).
Class A			B 7W149789E		Nozzle t	0			,
					Shell			`	

CATEGORY B-D, Full Penetration Welds of

Steam Generators (Primary Side)

Nozzles in Vessels

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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			inservice i	nspection P	lan for Interval 3 Out	age 3	01/12/19	99
ITEM NUMBER	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH DIA/THK C	AL BLOCKS	COMMENTS	
**** Nozzle-to	o-Vessel Welds ****							
B03.130.003 C	3-SGB-WG50-2 ircumferential	50 ISI-OCN3-004 OM-2201-222	NDE-620 NDE-640	UT	CS 38.380 8.500	40393	Steam Generator 3B Outlet Nozzle Pc. 65 to Lowe Head Pc. 7 Between W-Z Axis.	r
Class A		B&W109610E		Nozzle t Head	0			
B03.130.004 C	3-SGB-WG50-1 ircumferential	50 ISI-OCN3-004 OM-2201-222	NDE-620 NDE-640	UT	CS 38.380 8.500	40393	Steam Generator 3B Outlet Nozzle Pc. 65 to Lowe Head Pc. 7 Between Y-Z Axis.	r ,
Class A		B&W109610E		Nozzle t Head	0			

Total B03.130 Items:

CATEGORY B-D, Full Penetration Welds of

Nozzles in Vessels

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Steam Generators (Primary Side)

Oconee 3

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				Inservice I	nspection F	Plan for Inte	rval 3 Outa	ge 3			01/12/1999
ITEM NUMBE	R ID NUMBER	SYS ISO/D	WG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CA	AL BLOCKS	COMMENTS		
_**** Nozzle I	nside Radius Secti	on ****								,	
B03.140.003	3-SGB-WG50-2	50 ISI-OC	N3-004	NDE-680	UT	CS	38.380	40393	Steam Generator	3B Outlet Nozzle Pc.	65 Between
		OM-22	201-222				8.500		W-Z Axis. (Inside	Radius Section)	
Class A		B&W10	09610E		Nozzle	to				,	
					Lower I	łead				•	
B03.140.004	3-SGB-WG50-1	50 ISI-OC	N3-004	NDE-680	UT	CS	38.380	40393	Steam Generator	3B Outlet Nozzle Pc.	65 Between
		OM-22	201-222				8.500		Y-Z Axis. (Inside F		
Class A		B&W10	09610E		Nozzle	to			· · · · · · · · · · · · · · · · · · ·	,	
					Lower F	lead					

Total B03.140 Items:

CATEGORY B-D, Full Penetration Welds of

Heat Exchangers (Primary Side)

Nozzles in Vessels

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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to 3-LDCA-OUT-V5. Reference Addenda ONS3-013

		01/12/1999						
ITEM NUMB	ER ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SC	H DIA/THK CAI	L BLOCKS	COMMENTS
**** Nozzle	-to-Vessel Welds ***	•						
B03.150.001	3-LDCA-IN-V2	51A 1-97347-1	NDE-630	UT	SS	3.000	40411	LDC-3A Tubeside Inlet Nozzle Pc. C to Channel Head
	Circumferential	OM-201-3107				0.875	-	Pc.A
Class A		OFD-101A-3.1		Nozzle	to			
				Channe	l Body			•
B03.150.002	3-LDCA-OUT-V5	51A 1-97347-1	NDE-630	UT	SS	3.000	40411	LDC-3A Tubeside Outlet Nozzle Pc. D to Channel
	Circumferential	OM-201-3107				0.875		Head Pc. A. Corrected weld ID from 3-LDCA-OUT-V2

Nozzle to

Channel Body

Total B03.150 Items:

Class A

2

OFD-101A-3.1

CATEGORY B-D, Full Penetration Welds of Nozzles in Vessels

Heat Exchangers (Primary Side)

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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		inservice I	nspection P	lan for Inte	erval 3 Outa	ge 3	01/12/1999
R ID NUMBER	SYS ISO/DWG NUMBERS	PROC				_	COMMENTS
nside Radius Sectio	on ****						COMMENTO
3-LDCA-IN-V2	51A 1-97347-1	NDE-680	UT	SS	3.000	40411	LDC-3A Tubeside Inlet Nozzle Pc. C (Inside Radius
			Nozzle	to	0.875		Section). Reference Request for Relief ONS-009.
3-LDCA-OUT-V5	51A 1-97347-1	NDE-680	UT	SS	3.000	40411	LDC-3A Tubeside Outlet Nozzle Pc. D to Channel
	· · · · · · ·		A11-		0.875		Head Pc. A. (Inside Radius Section). Reference
	OPD-101A-3.1						Request for Relief ONS-009.
	nside Radius Section 3-LDCA-IN-V2	3-LDCA-IN-V2 51A 1-97347-1 OM-201-3107 OFD-101A-3.1	A ID NUMBER SYS ISO/DWG NUMBERS PROC Paside Radius Section **** 3-LDCA-IN-V2 51A 1-97347-1 NDE-680 OM-201-3107 OFD-101A-3.1 3-LDCA-OUT-V5 51A 1-97347-1 NDE-680 OM-201-3107	ID NUMBER SYS ISO/DWG NUMBERS PROC INSP REQ	ID NUMBER SYS ISO/DWG NUMBERS PROC INSP REQ MAT/SCH	ID NUMBER SYS ISO/DWG NUMBERS PROC INSP REQ MAT/SCH DIA/THK CANSIDE Radius Section *****	3-LDCA-IN-V2 51A 1-97347-1 NDE-680 UT SS 3.000 40411 OM-201-3107 OFD-101A-3.1 NDE-680 UT SS 3.000 40411 OM-201-3107 OM-201-3107 OM-201-3107 OM-201-3107 OM-201-3107 OM-201-3107 OM-201-3107 OM-201-3107 OM-201-3107 OFD-101A-3.1 Nozzle to

Total B03.160 Items:

Total B03 Items:

CATEGORY B-F, Pressure Retaining Dissimilar Metal Welds

3

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

<u>Pressurizer</u>

Total B05.050 Items:

Oconee 3

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	Inservice Inspection Plan for Interval 3 Outage 3								01/12/1999
ITEM NUMB	ER ID NUMBER	SY	S ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS	
**** Less T	han NPS 4; Nozzle-to	-Safe	End Butt Welds ****						
B05.050.001	3-PZR-WP91-1	50	ISI-OCN3-002	NDE-35	PT	SS-CS	2.500	PZR Relief Nozzle SE weld; W-X Axis	
	Circumferential						0.375		
Class A					Nozzle F	PZR Relief N	ozzle to		
	Dissimilar				Safe En	d			
B05.050.002	3-PZR-WP91-2	50	ISI-OCN3-002	NDE-35	PT	SS-CS	2.500	PZR Relief Nozzle SE weld; X-Y Axis	
	Circumferential						0.375		
Class A					Nozzle F	PZR Relief N	ozzle to		
	Dissimilar				Safe En	d			
B05.050.003	3-PZR-WP91-3	50	ISI-OCN3-002	NDE-35	PT	SS-CS	2.500	PZR Relief Nozzle SE weld; Z-W Axis	
	Circumferential				•		0.375		
Class A	•				Nozzle F	PZR Relief N	ozzle to		
	Dissimilar				Safe End	d			

Piping

CATEGORY B-F, Pressure Retaining Dissimilar Metal Welds

DUKE ENERGY CORPORATION
QUALITY ASSURANCE TECHNICAL SERVICES
Inservice Inspection Database Management System

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Inservice Inspection	Plan fo	or Interval	3 Outage 3
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ITEM NUMBER	ID NUMBER	SY	S ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	I DIA/THK CA	L BLOCKS	COMMENTS
**** NPS 4 or L	arger; Dissimilar	Meta	I Butt Welds ****						
B05.130.009 3	-PDA2-2	50	ISI-OCN3-012	NDE-610	UT	SS-CS	33.500	40350	UT from elbow side
Circ	umferential		OFD-100A-3.1				2.330		or morn orbott dido
Class A					Safe En	d to			
Diss	imilar				Elbow				
305.130.009A 3	-PDA2-2	50	ISI-OCN3-012	NDE-610	UT	SS-CS	33.500	40397	UT from Safe End side
Circu	umferential		OFD-100A-3.1				2.330		
Class A	•				Safe En	d to	_		
Dissi	imilar				Elbow				~
305.130.009B 3-	PDA2-2	50	ISI-OCN3-012	NDE-35	PT	SS-CS	33,500		
Circu	umferential		OFD-100A-3.1				2.330		
Class A					Safe En	d to			
Dissi	imilar				Elbow				
Total B05.130 It	ems: 3	10.8 11							

CATEGORY B-F, Pressure Retaining

Dissimilar Metal Welds

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Piping

Total B05 Items:

Oconee 3

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Inservice Inspection	on Plan for	r Interval 3	Outage 3
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ITEM NUMBER	ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS	•
**** Less Than Ni	PS 4; Dissimilar	Metal Butt Welds ****						
B05.140.006 3-PI	DA2-11	50 ISI-OCN3-012	NDE-35	PT	SS-CS	2.500		
Circum	ferential	OFD-100A-3.1				0.375		
Class A				Nozzle i	HPI Nozzle t	0		
Dissim	ilar			Safe En	d			
Total B05.140 Iten	ns: 1							

CATEGORY B-G-1, Pressure Retaining Bolting, Greater than 2" In Diameter

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Pumps Oconee 3

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Inservice	Inspection	Plan	for	Interval	3	Outage	3
				IIIICI VUI	v	Juliage	·

iaii ioi iii	mapecuon r	III3CI VICC I				
MAT/SC	INSP REQ	PROC	SYS ISO/DWG NUMBERS	MBER S	ID NUMBER	ITEM NUMBER
			ection dissassembled ****	connecti	ırface, when conn	**** Flange S
SS	VT-1	QAL-13	50 OM-1201D-0005	ANGE 50	3RCP-3B1-FLANGE	B06.190.003
			OM-1201D-0057			
						Class A
	•					
	1					
	MAT/SC	INSP REQ MAT/SC	PROC INSPIREQ MAT/SC	YS ISO/DWG NUMBERS PROC INSP REQ MAT/SO on dissassembled **** OM-1201D-0005 QAL-13 VT-1 SS	SYS ISO/DWG NUMBERS PROC INSP REQ MAT/SC ection dissassembled **** 50 OM-1201D-0005 QAL-13 VT-1 SS	urface, when connection dissassembled **** 3RCP-3B1-FLANGE 50 OM-1201D-0005 QAL-13 VT-1 SS

Total B06.190 Items:
Total B06 Items:

CATEGORY B-G-2, Pressure Retaining Bolting, 2" And Less In Diameter

DUKE ENERGY CORPORATION
QUALITY ASSURANCE TECHNICAL SERVICES
Inservice Inspection Database Management System

Oconee 3

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Inservice Inspection Plan for Interval 3 Outage 3

				opcoacii i	idii ioi iiitci vai o Outage o	
ITEM NUMBE	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH DIA/THK CAL BLOCKS	COMMENTS
**** Bolts, S	tuds, and Nuts ****					
B07.030.006	3SGA-LHIC-BOLTS	50 B&W 145470E	QAL-13	VT-1	CS 1.000 0.000	Steam Generator 3A Lower Head Inspection Cover
Class A					0.000	Solding

Total B07.030 Items:

Steam Generators

CATEGORY B-G-2, Pressure Retaining Bolting, 2" And Less In Diameter

DUKE ENERGY CORPORATION
QUALITY ASSURANCE TECHNICAL SERVICES
Inservice Inspection Database Management System

Oconee 3

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Inservice Inspection Plan for Interval 3 Outage 3

NA

ITEM NUMBER ID NUMBER SYS ISO/DWG NUMBERS PROC INSP REQ MAT/SCH DIA/THK CAL BLOCKS COMMENTS

**** Bolts, Studs, and Nuts ****

B07.070.014 3-51A-HP126

3-51A-HP126 51A OM-246-015

QAL-13

VT-1

0.000

High Pressure Injection Valve 3-HP126 Bolting

Class A

<u>Valves</u>

Total B07.070 Items:

CATEGORY B-G-2, Pressure Retaining Bolting, 2" And Less In Diameter

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

CRD Housings

Total B07 Items:

Oconee 3

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		ge 3 01/12/1999				
TEM NUMBER	ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH DIA/THK CA	AL BLOCKS COMMENTS
**** Bolts, Stud	ls, and Nuts ****					
07.080.001 3	-RPV-CRD-BOLTS	50 B&W 149902E B&W 149919E	QAL-13	VT-1	NA 0.000 0.000	Inspect Only If Disassembled; See Request for Relief ONS-004 & ONS-005; 8 bolts per CRD Housing; (14
Class A						Connections inspected up to this Date). Ref. Addendum ONS3-020 - connection not disassembled during 3EOC15.
07.080.002 3	-RPV-CRD-RINGS	50 B&W 149902E B&W 149919E	QAL-13	VT-1	NA 0.000 0.000	Inspect Only If Disassembled; See Request for Relief ONS-004 & ONS-005; 1 Pair per CRD Housing; (14
Class A					0.000	Connections inspected up to this date). Ref. Addendum ONS3-020 - connection not disassembled during 3EOC15.

CATEGORY B-J, Pressure Retaining Welds In

Piping

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Plan Report

NPS 4 or Larger					Page 1			
				Inservice I	nspection P	lan for inte	rval 3 Outage 3	01/12/1999
ITEM NUMB	BER ID NUMBER	SY	S ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS
**** Circur	mferential Welds ****							
B09.011.011	3-PIB1-1 Circumferential	50	ISI-OCN3-009 OFD-100A-3.1	NDE-600	UT	cs	33.500 2.330	Reference Request for Relief 95-GO-03 for calibration block.
Class A	Term end		,		Nozzle S Pipe	S/G 3B Nozz		*.
B09.011.011	A 3-PIB1-1 Circumferential	50	ISI-OCN3-009 OFD-100A-3.1	NDE-25	MT	CS	33.500 2.330	
Class A	Term end				Nozzle S Pipe	S/G 3B Nozz		
B09.011.016	3-PIB2-8 Circumferential	50	ISI-OCN3-010 OFD-100A-3.1	NDE-600	UT ,	SS	33.500 2.330	Reference Request for Relief 95-GO-03 for calibration block.
Class A	Term end				•	fe End to RCP 3B2 Suc	t Nozzle	
B09.011.016	A 3-PIB2-8 Circumferential	50	ISI-OCN3-010 OFD-100A-3.1	NDE-35	PT	SS	33.500 2.330	
Class A	Term end					fe End to RCP 3B2 Suc		
B09.011.021	3-PDB1-1 Circumferential	50	ISI-OCN3-013 OFD-100A-3.1	NDE-600	UT	SS	33.500 2.330	Reference Request for Relief 95-GO-03 for calibration block.
Class A	Term end		01 B 100A 0.1		Nozzle 3 Safe End		tlet Nozzle to	block.
B09.011.021	A 3-PDB1-1 Circumferential	50	ISI-OCN3-013 OFD-100A-3.1	NDE-35	PT	SS	33.500 2.330	
Class A	Term end				Nozzle 3 Safe End		tlet Nozzie to	
B09.011.033	3-PSL-9 Circumferential	50	ISI-OCN3-015	NDE-600	UT	SS	10.000	Reference Request for Relief 95-GO-03 for calibration
Class A	Stress weld		OFD-100A-3.2		Elbow to	o	1.000	block.
B09.011.033A		50	ISI-OCN3-015	NDE-35	PŢ	SS	10.000	
Class A	Circumferential Stress weld		OFD-100A-3.2		Elbow to	o	1.000	

CATEGORY B-J, Pressure Retaining Welds In

12

Piping NPS 4 or Larger

Total B09.011 Items:

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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	7	01/12/1999					
ITEM NUMBER	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/S	CH DIA/THK CAL BLOCKS	COMMENTS
B09.011.043	3-53A-15-55	53A 3-53A-15 (2)	NDE-600	UT	SS	10.000	Reference Request for Relief 95-GO-03 for calibration
С	Circumferential	OFD-102A-3.2				1.000	block.
Class A		OFD-102A-3.3		Elbow to	0		
				Pipe			
B09.011.043A	3-53A-15-55	53A 3-53A-15 (2)	NDE-35	PT	SS	10.000	
С	Circumferential	OFD-102A-3.2				1.000	
Class A		OFD-102A-3.3		Elbow to	0		,
				Pipe			
B09.011.044	3-53A-15-57	53A 3-53A-15 (2)	NDE-600	UT	SS	10.000	Reference Request for Relief 95-GO-03 for calibration
С	ircumferential	OFD-102A-3.2				1.000	block.
Class A		OFD-102A-3.3	•	Elbow to	0		
		•		Pipe			
B09.011.044A	3-53A-15-57	53A 3-53A-15 (2)	NDE-35	PT	SS	10.000	
С	ircumferential	OFD-102A-3.2				1.000	
Class A		OFD-102A-3.3	Elbow to				
				Pipe			

CATEGORY B-J, Pressure Retaining Welds In Piping

QUALITY ASSURANCE TECHNICAL SERVICES

Inservice Inspection Database Management System

DUKE ENERGY CORPORATION

Less Than NPS 4

Total B09.021 Items:

6

Oconee 3

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	01/12/1999							
ITEM NUME	BER ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS	
**** Circur	nferential Welds ****							•
B09.021.009	3-PSP-12	50 ISI-OCN3-016	NDE-35	PT	SS	2.500		۵.
	Circumferential	OFD-100A-3.2				0.375		
Class A				Valve 3f	RC-001 to			
				Pipe				
B09.021.011	3-PSP-15	50 ISI-OCN3-016	NDE-35	PT	SS	2.500		
	Circumferential	OFD-100A-3.2				0.375		
Class A	Stress weld			Tee to				
				Pipe				
B09.021.022	3-51A-142-21	51A 3-51A-142	NDE-35	PT	SS	3.000		
	Circumferential	OFD-101A-3.1				0.438		
Class A	Term end			Elbow to	0			
				Letdown	Cooler 3B I	nlet		
B09.021.023	3-51A-142-25	51A 3-51A-142	NDE-35	PT	SS	2.500		
	Circumferential	OFD-101A-3.1				0.375		
Class A				Pipe to				
				Reducer	•			
B09.021.032	3RC-212-45	51A 3RC-212	NDE-35	PT	SS	2.500		
	Circumferential	OFD-101A-3.4				0.375		
Class A	•			Valve 3F	1P-153 to			
				Pipe				
B09.021.033	3RC-212-44A	51A 3RC-212	NDE-35	PT	SS	2.500	This weld was list	ed previously as 2-51A-61-44A until
•	Circumferential	OFD-100A-3.1	J			0.375	iso 2-51A -61 was	
Class A	Stress weld			Pipe to				
				Nozzle N	lozzie on 3B	1 Disc Line		

CATEGORY B-J, Pressure Retaining Welds In

Piping

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

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Branch Pipe Connection Welds	Oconee 3
	Inservice Inspection Plan for Interval 3 Outage 3

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ITEM NUMBER	ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS	
**** Less Than N	PS 4 ****						<u> </u>	
B09.032.002 3-P	IA2-10	50 ISI-OCN3-008	NDE-35	PT	CS-Inconel	12.000	NPS of the Drain No:	zzle = 1.5 inch Diameter & .281
Branch	1	OFD-100A-3.1	*			2.250	Thickness	
Class A				Pipe to				
Dissim	ilar			Nozzle [Drain Nozzle			
Total B09.032 Iter	ns: 1			······································				

CATEGORY B-J, Pressure Retaining Welds In

Piping Socket Welds

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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Inservice	Inspection	Plan fo	or Interva	13	Outage 3
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inservice inspection Plan for interval 3 Outage 3									
ITEM NUMBE	ER ID NUMBER	SYS	ISO/DWG NUMBERS	PROC	INSP REQ	MAT/S	SCH DIA/THK CAL BLOCKS	COMMENTS	
B09.040.002	3-50-152-15	50	3-50-152	NDE-35	PT	SS	1.500		
	Socket	(OFD-100A-3.2				0.281	· ·	
Class A					Tee to				
					Pipe				
T-4-L DOG O	40 14								

Total B09.040 Items:

1

Total B09 Items:

<u>Pumps</u>

CATEGORY B-L-1, Pressure Retaining Welds

In Pump Casings

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

Plan Report Page 22 01/12/1999

AU MADED ON			Inservice Inspection Plan for Interval 3 Outage 3							
NUMBER SY	YS ISO/DWG NUMBERS	PROC	INSP REQ		DIA/THK CAL BLOCKS	COMMENTS				
ds ****										
1 50	ISI-OCN3-009	NDE-12	RT	SS	0.000	Reactor Coolant Pump	3B1Casing Weld (Inspect onl			
	OM-1201D-0057				6.500		- , ,			
	OM-1201D-0005		Casing t	o		repair,ect.) See Reques	t for Relief ONS-008. Ref.			
			Casing			Addendum ONS3-047 -	connection not disassembled			
						during 3EOC16.				
							met for the interval by			
						inspecting 3RCP-3B1.				
-	l ds **** :1 50	1 50 ISI-OCN3-009 OM-1201D-0057	ds **** 1 50 ISI-OCN3-009 NDE-12 OM-1201D-0057	Ids **** 1 50 ISI-OCN3-009 NDE-12 RT	Ids **** 1 50 ISI-OCN3-009 NDE-12 RT SS OM-1201D-0057 OM-1201D-0005 Casing to	Ids **** 1 50 ISI-OCN3-009 NDE-12 RT SS 0.000 OM-1201D-0057 6.500 OM-1201D-0005 Casing to	1			

CATEGORY B-L-2, Pump Casings

2

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

<u>Pumps</u>

Total B12 Items:

Oconee 3

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Inservice Inspection Plan for Interval 3 Outage 3								01/12/1999
ITEM NUMBER	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS	
**** Pump Ca	asing ****							
12.020.003	3RCP-3B1-CASING	50 ISI-OCN3-009	QAL-14	VT-3	SS	0.000	Reactor Coolant Pun	np 3B1 Casing Internal
		OM-1201D-0057				0.000		ly if disassembled for
Class A		OM-1201D-0005		Casing I	nternal Surfa	ces to	ONS3-020 - connect 3EOC15. Ref. Adde not disassembled du Ref. Addendum ONS	es, repair,etc.). Ref. Addendum ion not disassembled during ndum ONS3-044 - connection ring 3EOC16. 53-089 - connection was spected during 3EOC17.
Total B12.020	0 Items: 1				····			·

Total B14 Items:

CATEGORY B-O, Pressure Retaining Welds In Control Red Housings

In Control Rod Housings Reactor Vessel

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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		Inservice Inspection Plan for Interval 3 Outage 3								
ITEM NUMBER	ID NUMBER	SY	S ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS		
**** Welds in	CRD Housing ****									
314.010.009 Class A	3RPV-CRD-54WH9	50	B&W 149920E	NDE-35	PT	SS-Inconel	4.060 0.650	Peripheral CRDM-HOUSING Body to Adapter		
314.010.010 .	3RPV-CRD-54WH60	50	B&W 43-53-032-12	NDE-35	РТ	SS-CS	5.000 0.500	CRDM Base to Motor Tube		
Class A										
314.010.011	3RPV-CRD-54	50	B&W 43-53-033-09	NDE-35	PT	SS-CS	4.300 0.400	CRDM Motor Tube to Extension		
Class A							0.100	-		
314.010.012	3RPV-CRD-54W61	50	B&W 43-53-031-02	NDE-35	PT	SS	4.190 0.380	Peripheral CRDM Extension to Cap		
Class A										

CATEGORY C-A, Pressure Retaining Welds

In Pressure Vessels

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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Tubesheet-to-Shell Weld

Inservice Inspection Plan for Interval 3 Outage 3

			IIISCI VICC I	iispeettoii i	ian ioi iii	ieivai 3 Oula	ge o		
ITEM NUMBER	ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SC	H DIA/THK CA	L BLOCKS	COMMENTS	•
C01.030.002 3	SGB-WG59	ICL CONO COA	NDE see						
		ISI-OCN3-004	NDE-620	UT	CS	138.000	40338	S/G B Shell to B	ottom Tube Sht. PC.6 to PC.50
Circ	umferential	OFD 122A-3.1	NDE-640			6.625			
Class B		OM 2201-222		Tube Sh	it. to				
				Shell					

Total C01.030 Items:

Total C01 Items:

CATEGORY C-C, Integral Attachments For Vessels, Piping, Pumps, And Valves

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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Inservice Insp	pection Plan f	or Interval 3	Outage 3
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ITEM NUMBER	R ID NUMBER	SYS ISO/DWG NUM	MBERS PROC	INSP REQ	MAT/SC	H DIA/THK CAL BLOCKS	COMMENTS
**** Integrall	y Welded Attachme	nts ****	-				
C03.010.007	3SGB-WG84-ZW	03 B&W-149824E	NDE-25	MT	CS	0.000	SGB FDW. HDR. ATTACH.Z-W QUAD. NEAREST
		OM 2201-1451				1.000	TO Z-AXIS
Class B							
C03.010.008	3SGB-WG84-WZ	03 B&W-149824E	NDE-25	MT	CS	0.000	SGB FDW. HDR. ATTACH.W-Z QUAD. NEAREST
		OM 2201-1451				1.000	TO W-AXIS
Class B							
			·				

Total C03.010 Items:

Pressure Vessels

CATEGORY C-C, Integral Attachments For Vessels, Piping, Pumps, And Valves

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

<u>Piping</u>

Inservice Inspection Plan for Interval 3 Outage 3

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						rvai o Outage o	
ITEM NUMBER	ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS
**** Integrally	Welded Attachme	nts ****					
C03.020.010	3-01A-H9A	01A 0-2481A	NDE-25	MT	CS	26.000	File no. 0SC-1334
Co	nstant Support	OFD-122A-3.1				1.000	Prob. No. 3-01-08
Class B		0-2490A-3(S)					Main Steam System
C03.020.045	3SGB-WG87-ZW	03 B&W-149824E	NDE-25	MT	CS	0.000	SGB FDW. HDR. ATTACH. Z-W QUAD. NEAREST
						1.000	TO Z-AXIS
Class B							
C03.020.046	3SGB-WG87-WZ	03 B&W-149824E	NDE-25	MT	CS	0.000	SGB FDW. HDR. ATTACH. W-Z QUAD. NEAREST
						1.000	TO W-AXIS
Class B							
	3-01A-R7	01A 0-2441	NDE-25	MT	CS	36.000	Struc. calc # OSC-1000-01-0018; Prob. # OS
	nstant Support	OFD-122A-3.1				1.000	506/3-01A; Data point 6(627)
Class B							
C03.020.052	3-01A-H13	01A 0-2441	NDE-25	MT	cs	36.000	Struc. calc # OSC-1000; Prob. # OS 506/3-01A; Data
Rig	id Support	OFD-122A-3.1				0.750	point 10(640)
Class B							
C03.020.053	3-01A-H14	01A 0-2441	NDE-25	MT	CS	36.000	Struc. calc # OSC-1000-01-0021; Prob. # OS
Rig	id Support	OFD-122A-3.1				0.750	506/3-01A; Data point 1(645)
Class B							
C03.020.054	3-01A-H18	01A 0-2401B	NDE-25	MT	CS	36.000	Struc. calc # OSC-1000-01-0029; Prob. # OS
· Coi	nstant Support	OFD-122A-3.1	NDE-35			1.000	506/3-01A; Data point 28. In order to achieve 90%
Class B							examination coverage on this weld, it is necessary to add a PT examination and procedure NDE-35 to the exmaination required.

Total C03.020 Items:

7

Total C03 Items:

CATEGORY C-D, Pressure Retaining Bolting Greater Than 2 in. In Diameter

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES

Inservice Inspection Database Management System

<u>Pumps</u>

Oconee 3

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			Inservice I	nspection f	Plan for Int	terval 3 Outage	∍ 3	01	1/12/1999
ITEM NUMBE	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	H DIA/THK CAL	BLOCKS	COMMENTS	
**** Bolts ar	nd Studs ****					31	·		
C04.030.002	3-HPI-PUMP-3B	51A OM 201-1704 OFD-101A-3.3	NDE-943	UT	NA	2.500 0.000	40422	Case Bolting on HPI Pump 3B. (2.5" in dia 12" in length; 20 bolts total)	meter and
Class B		·		•		0.000		We are required to inspect the Case bolting one of the HPI pumps during the 3rd interval Pump 3A, 3B or 3C). We scheduled the inster of every outage hoping that one of the pump disassembled during the interval. If one is redisassembled then we will have to inspect the in one of the pumps in place.	ul. (HPI spection aps will be not

Total C04.030 Items:

Total C04 Items:

Total C05.011 Items:

CATEGORY C-F-1, Pressure Retaining Welds In Austenitic SS or High Alloy Piping

DUKE ENERGY CORPORATION
QUALITY ASSURANCE TECHNICAL SERVICES
Inservice Inspection Database Management System

Piping Welds >= 3/8 in. Nominal Wall Thickness

4

Oconee 3

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01/12/1999		al 3 Outage 3	an for Inte	nspection Pl	Inservice I		for Piping > NPS 4				
	COMMENTS	DIA/THK CAL BLOCKS		INSP REQ	PROC	SYS ISO/DWG NUMBERS	ID NUMBER	ITEM NUMBER			
							ential Weld ****	**** Circumfe			
est for Relief 95-GO-03 for calibration	Reference Request	10.000	SS	UT	NDE-600	53A 3LP-132	3LP-132-11	C05.011.006			
	block.	1.125	•			OFD-102A-3.2	cumferential	С			
sted previously as 3-53A-24-11 until	This weld was listed			Pipe to				Class B			
as redrawn.	iso 3-53A-24 was ı		P-17	Valve 3L							
sted previously as 3-53A-24-11 until	This weld was lister	10.000	SS	PT	NDE-35	53A 3LP-132	3LP-132-11	C05.011.006A			
	iso 3-53A-24 was re	1.125				OFD-102A-3.2	cumferential	С			
				Pipe to				Class B			
			P-17	Valve 3L							
est for Relief 95-GO-03 for calibration	Reference Request	10.000	SS	UT	NDE-600	53A 3LP-132	3LP-132-5	C05.011.007			
	block.	1.125				OFD-102A-3.2	cumferential	Ci			
sted previously as 3-53A-24-5 until			•	Pipe to				Class B			
s redrawn.	iso 3-53A-24 was re			Elbow							
sted previously as 3-53A-24-5 until	This weld was listed	10.000	SS	PT	NDE-35	53A 3LP-132	BLP-132-5	C05.011.007A			
	iso 3-53A-24 was re	1.125				OFD-102A-3.2	cumferential	Ci			
				Pipe to				Class B			
				Elbow							

CATEGORY C-F-1, Pressure Retaining Welds In Austenitic SS or High Alloy Piping

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

Piping Welds > 1/5 in. Nom Wall For Piping >= NPS 2 And <= NPS 4

Inservice Inspection Plan for Interval 3 Outage 3

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NPS Z AF	10 <= NPS 4		Inservice I	nspection F	Plan for int	erval 3 Outage 3	01/12/1999
ITEM NUMBE	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	H DIA/THK CAL BLOCKS	COMMENTS
**** Circum	ferential Weld ****					•	
C05.021.006	3-51A-118-13	51A 3-51A-118	NDE-600	UT ·	SS	4.000	Reference Request for Relief 95-GO-03 for calibration
(Circumferential	OFD-101A-3.4				0.531	block.
Class B				Elbow	to		
				Pipe			
C05.021.006A	3-51A-118-13	51A 3-51A-118	NDE-35	PT	SS	4.000	
. (Circumferential	OFD-101A-3.4				0.531	
Class B				Elbow	to		
				Pipe			
C05.021.014	3-51A-119-40	51A 3-51A-119	NDE-600	UT	SS	4.000	Reference Request for Relief 95-GO-03 for calibration
(Circumferential	OFD-101A-3.4				0.531	block.
Class B				Pipe to			
				Valve 3	HP-410		
C05.021.014A	3-51A-119-40	51A 3-51A-119	NDE-35	PT	SS	4.000	
(Circumferential	OFD-101A-3.4				0.531	
Class B				Pipe to			
				Valve 3	HP-410		
C05.021.023	3-51A-121-20	51A 3-51A-121	NDE-600	UT	SS	4.000	Reference Request for Relief 95-GO-03 for calibration
(Circumferential	OFD-101A-3.4				0.674	block.
Class B				Elbow t	0		
		-		Elbow			
C05.021.023A	3-51A-121-20	51A 3-51A-121	NDE-35	PT	SS	4.000	
	Circumferential	OFD-101A-3.4				0.674	
Class B				Elbow t	0		
				Elbow			
C05.021.039	3-51A-52-44	51A 3-51A-52	NDE-600	UT	SS	3.000	Reference Request for Relief 95-GO-03 for calibration
(Circumferential	OFD-101A-3.3				0.438	block.
Class B		-			HP-105 to		
				Pipe			
C05.021.039A	3-51A-52-44	51A 3-51A-52	NDE-35	PT	SS	3.000	
C	Circumferential	OFD-101A-3.3				0.438	
Class B				Valve 3	HP-105 to		
				Pipe		•	•

CATEGORY C-F-1, Pressure Retaining Welds In Austenitic SS or High Alloy Piping

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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Pipi	<u>ng Welds</u>	<u>> 1/5 in.</u>	<u>Nom Wall</u>	For Piping >=
NPS	2 And <	<u> NPS 4</u>		

NPS 2 An	And <= NPS 4 Inservice Inspection Plan for Interval 3 Outage 3					01/12/1999	
ITEM NUMBE	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS
C05.021.042	3-51A-59-90	51A 3-51A-59	NDE-600	UT	SS	4.000	Reference Request for Relief 95-GO-03 for calibration
(Circumferential	OFD-101A-3.4				0.674	block.
Class B				Elbow t	0		
	-			Pipe			
C05.021.042A	3-51A-59-90	51A 3-51A-59	NDE-35	PT	SS	4.000	
C	Circumferential	OFD-101A-3.4				0.674	
Class B				Elbow t	0		
				Pipe			
C05.021.053	3-51A-67-10	51A 3-51A-67	NDE-600	UT	SS	2.500	Reference Request for Relief 95-GO-03 for calibration
C	Circumferential	OFD-101A-3.1				0.375	block.
Class B				Pipe to			
				Elbow			
C05.021.053A	3-51A-67-10	51A 3-51A-67	NDE-35	PT	SS	2.500	
	Circumferential	OFD-101A-3.1				0.375	
Class B				Pipe to			
				Elbow			
C05.021.063	3-51A-87-44A	51A 3-51A-87	NDE-600	UT	SS	4.000	Reference Request for Relief 95-GO-03 for calibration
C	Circumferential	OFD-101A-3.4				0.531	block.
Class B				Valve 3h	HP-129 to		
				Pipe			
C05.021.063A	3-51A-87-44A	51A 3-51A-87	NDE-35	PT	SS	4.000	
C	Circumferential	OFD-101A-3.4				0.531	
Class B				Valve 3H	HP-129 to		
				Pipe			
C05.021.073	3-51A-118-8	51A 3-51A-118	NDE-600	UT	SS	4.000	Reference Request for Relief 95-02 for calibration
C	Circumferential	OFD-101A-3.4				0.531	block.
Class B				Pipe to			
				Elbow			
C05.021.073A	3-51A-118-8	51A 3-51A-118	NDE-35	PT	SS	4.000	
C	Circumferential	OFD-101A-3.4		•		0.531	
Class B				Pipe to			

Elbow

CATEGORY C-F-1, Pressure Retaining Welds In Austenitic SS or High Alloy Piping

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

Plan Report

Dining W	elds > 1/5 in. Nom W	lell Fam Diminu	•	Ocon	?	,	Plan Report
					Page 32		
	<u>nd <= NPS 4</u>		Inservice I	nspection P	lan for Inte	erval 3 Outage 3	01/12/1999
ITEM NUMBE	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS
C05.021.083	3-51A-50-48	51A 3-51A-50	NDE-600	UT	SS	4.000	Reference Request for Relief 95-02 for calibration
(Circumferential	OFD-101A-3.3				0.237	block.
Class B				Reducer	r to		
				Elbow			•
C05.021.083A	3-51A-50-48	51A 3-51A-50	NDE-35	PT	SS	4.000	
(Circumferential	OFD-101A-3.3				0.237	
Class B				Reducer	to		
				Elbow			
C05.021.088	3HP-312-20	51A 3HP-312	NDE-600	UT	SS	2.500	Reference Request for Relief 95-02 for calibration
(Circumferential	OFD-101A-3.4				0.375	block.
Class B				Tee to			This weld was originally listed as 3-51A-59-20, until
				Pipe			isometric 3-51A-59 was redrawn as 3HP-312.
C05.021.088A	3HP-312-20	51A 3HP-312	NDE-35	PT	SS	2.500	This weld was originally listed as 3-51A-59-20, until
(Circumferential	OFD-101A-3.4				0.375	isometric 3-51A-59 was redrawn as 3HP-312.
Class B				Tee to			
				Pipe			·

Total C05.021 Items:

CATEGORY C-F-1, Pressure Retaining Welds In Austenitic SS or High Alloy Piping

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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<u>Soc</u>	<u>ket</u>	<u>W</u>	el	ds	į

Total C05.030 Items:

ITEM NUMBER	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ		terval 3 Outage 3 H DIA/THK CAL BLOCKS	COMMENTS		01/12/1999
C05.030.002	3-51A-77-15	51A 3-51A-77	NDE-35	PT	SS	2.000			
Class B	ocket	OFD-101A-3.1		Pipe to		0.436		•	
				Valve 3					

CATEGORY C-F-1, Pressure Retaining Welds In Austenitic SS or High Alloy Piping

DUKE ENERGY CORPORATION
QUALITY ASSURANCE TECHNICAL SERVICES
Inservice Inspection Database Management System

Pipe Branch Connections of Branch Piping >= NPS 2

Oconee 3

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Inservice Inspection Plan for Interval 3 Outage 3							01/12/1999	
ITEM NUMBE	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS	
**** Circum	ferential Weld ****				, <u>-</u>			
C05.041.001	3-53B-52-3	53B 3-53B-52	NDE-35	PΤ	SS	8,000		
	Branch	OFD-104A-3.1		•		0.250		
Class B				Weld-o-	let to			
				Pipe				
Total C05.0	41 Items: 1							:

CATEGORY C-F-2, Pressure Retaining Welds In Carbon Or Low Alloy Steel Piping

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

Piping Welds >= 3/8 in. Nominal Wall Thickness for Piping > NPS 4

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for Pipin	-		Inservice I	01/12/19			
ITEM NUMBE	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/S	CH DIA/THK CAL BLOCKS	COMMENTS
**** Circum	ferential Weld ****						
005.051.001	3-01A-10-1	01A 3-01A-10	NDE-600	UT	CS	36.000	Inspect with item number C05.052.001
	Circumferential	OFD-122A-3.1				1.164	Reference Request for Relief 95-02 for calibration
Class B				Pipe to			block.
			·	Elbow			
C05.051.001A	3-01A-10-1	01A 3-01A-10	NDE-25	MT	CS	36.000	Inspect with item number C05.052.001A.
(Circumferential	OFD-122A-3.1				1.164	·
Class B		•		Pipe to			
		<u>-</u>		Elbow			
C05.051.002	3-01A-10-19	01A 3-01A-10	NDE-600	UT	CS	12.000	Reference Request for Relief 95-02 for calibration
(Circumferential	OFD-122A-3.1				0.562	block.
Class B				Pipe to			
				Valve 3N	MS-79		The state of the s
C05.051.002A	3-01A-10-19	01A 3-01A-10	NDE-25	MT	CS	12.000	
(Circumferential	OFD-122A-3.1				0.562	
Class B				Pipe to		•	
				Valve 3N	/IS-79		
C05.051.016	3FWD-74-A	03 3-03-27	NDE-600	UT	CS	24.000	Grinnell Subassembly 3FWD-74.
(Circumferential	OFD-121B-3.3				1.218	Reference Request for Relief 95-02 for calibration
Class B		3FWD-74		Pipe to			block.
				Elbow			
C05.051.016A	3FWD-74-A	03 3-03-27	NDE-25	MT	CS	24.000	Grinnell Subassembly 3FWD-74 .
(Circumferential	OFD-121B-3.3				1.218	,
Class B		3FWD-74		Pipe to			
				Elbow			
005.051.024	3-03A-15-8	03A 3-03A-15	NDE-600	UT	CS	6.000	Reference Request for Relief 95-02 for calibration
C	Circumferential	OFD-121D-3.1				0.432	block.
Class B				Pipe to			
				Elbow			
C05.051.024A	3-03A-15-8	03A 3-03A-15	NDE-25	MT	CS	6.000	
C	Dircumferential Company	OFD-121D-3.1			~ =	0.432	
Class B				Pipe to			
				Elbow			

CATEGORY C-F-2, Pressure Retaining Welds In Carbon Or Low Alloy Steel Piping

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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Piping Welds >= 3/8 in. Nominal Wall Thickness for Piping > NPS 4

Inservice Inspection Plan for Interval 3 Outage 3 ITEM NUMBER **ID NUMBER** SYS ISO/DWG NUMBERS INSP REQ MAT/SCH DIA/THK CAL BLOCKS COMMENTS 3-14B-116-42 C05.051.029 14B 3-14B-116 NDE-600 UT CS 8.000 Reference Request for Relief 95-02 for calibration Circumferential OFD-124B-3.2 0.500 block. Class B Elbow to Pipe C05.051.029A 3-14B-116-42 14B 3-14B-116 NDE-25 MT CS 8.000 Circumferential OFD-124B-3.2 0.500 Elbow to Class B Pipe C05.051.037 3LPS-478-40A 14B 3LPS-478 UT CS NDE-600 8.000 This weld was listed previously as 3-14B-119-40A 0.500 until iso 3-14B-119 was redrawn. Circumferential OFD-124B-3.2 Reference Request for Relief 95-02 for calibration Pipe to Class B block. Pipe C05.051.037A 3LPS-478-40A 14B 3LPS-478 NDE-25 MT CS 8.000 This weld was listed previously as 3-14B-119-40A until iso 3-14B-119 was redrawn. Circumferential OFD-124B-3.2 0.500 Pipe to Class B

Pipe

Total C05.051 Items:

CATEGORY C-F-2, Pressure Retaining Welds In Carbon Or Low Alloy Steel Piping

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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Pipe Branch Connections of Branch Piping >=

NPS 2

Inservice Inspection Plan for Interval 3 Outage 3

ITEM NUMBE	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	PROC INSPIREO		CH DIA/THK CAL BLOCKS	COMMENTS	
**** Circumi	erential Weld ****					•	.	
C05.081.004	3MS-12B-J	01A 3-01A-13	NDE-25	MT	CS	12.000	Grinnell Subassembly 3MS-12B	
E	Branch	OFD-122A-3.1				0.562		
Class B	Class B 3MS-12B		Pipe to					2
				Pipe				·

Total C05.081 Items:

1

Total C05 Items:

Integral Attachment

CATEGORY D-B, Systems in Support Of ECC, CHR, Atmos. Cleanup, And Reactor RHR

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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Inservice	Inspection	Plan for	Interval	3 (Outage 3
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ITEM NUMB	ER ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH [DIA/THK CAL BLOCKS	COMMENTS
**** Compo	onent Supports and R	estraints ****					
D02.020.001 Class C	3-01A-HTT-2300 Rigid Restraint	01A 0-2403D OFD-122A-3.4	QAL-14	VT-3	NA	6.000 0.500	File no. 0SC-510 Sht 2of3 Prob. No. 3-01A-04 Page 68 Main Steam to Emergency F.W. Pump
D02.020.005	3-01A-R5 Rigid Restraint	01A 4-0-2403D OFD-122A-3.4	QAL-14	VT-3	NA	6.000 0.125	File no. 0SC-510 Sht 1of3 Prob. No. 3-01A-04 Main Steam to Emergency F.W. Pump
D02.020.007	3-01A-R13A Rigid Restraint	01A 4-2-0-2403D OFD-122A-3.4	QAL-14	VT-3	NA	6.000 0.125	File no. 0SC-510 Sht 1of3 Prob. No. 3-01A-04 Main Steam to Emergency F.W. Pump
D02.020.037	3-03A-H7 Rigid Restraint	03A 1-0-2439C OFD-121D-3.1	QAL-14	VT-3	NA	6.000 0.375	File No. OSC-1224-23 Page No. 25.3; Problem No. 3-03A-13 Aux Service Water Piping
D02.020.042	3-03A-SR166 Rigid Restraint	03A 1-0-2401B OFD-121D-3.1	QAL-14	VT-3	NA	6.000 0.500	File No. OSC-527 Page No. 39; Problem No. 3-03A-10 Emergency Feedwater System
D02.020.044 Class C	3-03A-SR179 Rigid Restraint	03A 1-0-2439B OFD-121D-3.1	QAL-14	VT-3	NA	6.000 0.500	File No. OS-524 Page No. 63; Problem No. 3-03A-07 Emergency Feedwater System
D02.020.056	3-03A-H6 Rigid Restraint	03A 1-0-2439C OFD-121D-3.1	QAL-14	VT-3	NA	6.000 0.375	File No. OSC-1224-23 Page No. 25.3; Problem No. 3-03A-13 Aux Service Water Piping
D02.020.074	3-03A-SR150 Rigid Restraint	03A 1-0-2400B OFD-121D-3.1	QAL-14	VT-3	NA	6.000 1.000	File No. OSC-527 Page No. 39; Problem No. 3-03A-10 Emergency Feedwater System

CATEGORY D-B, Systems In Support Of ECC, CHR, Atmos. Cleanup, And Reactor RHR

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Integral Attachment Oconee 3

gement System

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		Inservice Inspection Plan for Interval 3 Outage 3								
ITEM NUMB		SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SC	H DIA/THK CAL BLOCKS	COMMENTS			
D02.020.077	3-03A-SR181 Rigid Restraint	03A 1-0-2439C OFD-121D-3.1	QAL-14	VT-3	NA	6.000 0.500	File No. OS-524 Page No. 63; Problem No. 3-03A-07			
Class C							Emergency Feedwater System			
D02.020.078		03A 1-0-2439C	QAL-14	VT-3	NA	6.000	File No. OSC-1224-23			
Class C	Rigid Restraint	OFD-121D-3.1				0.500	Page No. 25.3; Problem No. 3-03A-13 Aux Service Water Piping			
D02.020.084	3-03A-SR46	03A 1-0-2401A	QAL-14	VT-3	NA	6.000	File no. 0SC-513 Page 72			
Class C	Rigid Restraint	OFD-121B-3.3				1.000	Prob. No. 3-03A-02 EmergencyFeedwater System			
					n.		amongoneyi obumator byotom			
D02.020.085	3-03A-SR5	03A 1-0-2401B	QAL-14	VT-3	NA	6.000	File No. OSC-513			
Class C	Rigid Restraint	OFD-121D-3.1				1.000	Page No. 71; Problem No. 3-03A-02 Emergency Feedwater Pump Discharge			
Class C							Emergency recovator rump bischarge			
D02.020.097	3-07A-SR18	07A 4-0-2402A	- QAL-14	VT-3	NA	30.000	File no. 0SC-521 Page 124			
01 0	Rigid Restraint	OFD-121A-3.7				1.000	Prob. No. 3-07-01			
Class C							Condensate System			
D02.020.101	3-07A-SR7	07A 4-0-2400A	QAL-14	VT-3	NA	24.000	File no. 0SC-1211 Page 28			
	Rigid Restraint	OFD-121A-3.7				2.000	Prob. No. 3-07-05			
Class C							Condensate System			
D02.020.140	3-14B-WM-7001	14B 0-2437A	QAL-14	VT-3	NA	6.000	File No. OSC-529			
	Rigid Restraint	OFD-121D-1.2				0.125	Page No. 67.1			
Class C							Problem No. 3-14B-2; Aux Service Water Piping			
D02.020.145	1-WL-100A-K0005	WL KFD-100A-1.1	QAL-14	VT-3	NA	8.000	Integral Attachment Inspection			
Class C	Rigid Restraint					0.500	Keowee Unit 1			
0.000										

Total D02.020 Items:

CATEGORY D-B, Systems In Support Of ECC, CHR Atmos Cleanup And Reactor PHR

CHR, Atmos. Cleanup, And Reactor RHR
Integral Attachment

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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miscrifice inspection i lati for litter var 5 Outage 5								01/12/1999
ITEM NUMBER	ID NUMBER	SYS ISO/DWG NUMBERS	PROC	PROC INSP REQ		DIA/THK CAL BLOCKS	COMMENTS	
**** Spring Typ	pe Supports ****							
D02.040.008	3-03A-H157	03A 1-0-2401B	QAL-14	VT-3	NA	6.000	File No. OSC-527	· · · · · · · · · · · · · · · · · · ·
Spri	ing Hgr	OFD-121D-3.1				0.500	Page No. 39; Problem No. 3-03A-10	
Class C							Emergency Feedwater System	
D02.040.009 3	3-03A-H165	03A 1-0-2401B	QAL-14	VT-3	NA	6.000	File No. OSC-527	
Spri	ing Hgr	OFD-121D-3.1				0.500	Page No. 39; Problem No. 3-03A-10	
Class C							Emergency Feedwater System	

Total D02.040 Items:

2

Total D02 Items:

18

Total F01.012 Items:

CATEGORY F-A, Supports (Category C)

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Class 1 Mech. Conn. to Press. Retaining Comp. &

Oconee 3

Bld. Str	<u>ucture</u>			inservice	Inspection P	lan for In	terval 3 Outage 3	01/12/199	
ITEM NUMB	ER ID NUMBER	SYS ISO/DWG NUMBERS		PROC	PROC INSP REQ		H DIA/THK CAL BLOCKS	COMMENTS	
F01.012.001 Class A	3-50-H1A Hyd Snubber	50	0-2479A OFD-100A-3.2	QAL-14	VT-3	NA	10.000 0.000	Dwg. No.0-2491B-2A PZR Surge Line. Inspect with Item No. F01.05	50.006
F01.012.002 Class A	3-50-H6 Constant Support	50	0-2481A OFD-100A-3.2	QAL-14	VT-3	NA	2.500 0.154	File No. OSC-1343-06 Vol.A of C Prob.No. 3-53-09 Page 138 Low Pressure Inj. Supply to PZR Spray	
F01.012.005 Class A	3-51A-H2A Hyd Snubber	51A	0-2479A OFD-101A-3.4	QAL-14	VT-3	NA	2.500 0.154	File No. OSC-1343 Vol.B of C Prob. No. 3-53-10 Page 59 H.P.I. East Coolant Loop. Inspect with Item No. F01.050.009	0.
F01.012.008 Class A	3-50-RCPM-3A1-SS2 Mech Snubber	50	0-1066A OFD-100A-3.1 OFD-100A-3.3	QAL-14	VT-3	NA	6.000 0.000	Calculaton No. OSC-1011-01-0001, Reactor C Pump Motor Snubbers. Reference PIP 0-096- Inspect with F01.050.108	

Total F01.020 Items:

8

CATEGORY F-A, Supports (Category A)

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Class 2 Weld Connections to Building Structure

Oconee 3

		Inservice Inspection Plan for Interval 3 Outage 3								
ITEM NUMB	BER ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS			
F01.020.023 Class B	3-53B-H118 Rigid Restraint	53B 5-0-2435B OFD-102A-3.1	QAL-14	VT-3	NA	12.000 0.187	File N0. OS-549 Page 78; Problem No. 3-53-01 L P Injection & Decay Heat Removal			
F01.020.026 Class B	3-53B-H20 Rigid Restraint	53B 5-0-2435B OFD-102A-3.1	QAL-14	VT-3	NA	14.000 0.187	File N0. OS-549 Page 78; Problem No. 3-53-01 L P Injection & Decay Heat Removal			
F01.020.028 Class B	3-53B-H43 Rigid Restraint	53B 2-0-2435D OFD-101A-3.3	QAL-14	VT-3	NA	6.000 0.000	File No. OSC-539 Prob. No. 3-51-2 Page 145 H.P.I. Pumps 3A,3B,&3C Suction Header			
F01.020.036 Class B	3-54A-SR20 Rigid Restraint	54A 3-0-2439B OFD-103A-3.1	QAL-14	VT-3	NA	8.000 0.500	File No. OSC-556 Page No. 65.1 Problem No. 3-54-03			
F01.020.038 Class B	3-55-SR1 Rigid Restraint	55 1-0-2439C OFD-144A-3.2	QAL-14	VT-3	NA	6.000	File No. OSC-558 Page 42.3 Prob. No. 3-55-01 System 55			
F01.020.041 Class B	3-01A-H13 Rigid Support	01A 0-2441 OFD-122A-3.1	QAL-14	VT-3	CS	36.000 0.000	Struc. calc # OSC-1000; Prob. # OS 506/3-01A; Dat point 10(640)			
F01.020.042 Class B	3-01A-H14 Rigid Support	01A 0-2441 OFD-122A-3.1	QAL-14	VT-3	CS	36.000 0.000	Struc. calc # OSC-1000-01-0021; Prob. # OS 506/3-01A; Data point 11(645)			
F01.020.046 Class B	3-51B-H14 Rigid Restraint	51B 2-0-2436C OFD-101A-3.2	QAL-14	VT-3	NA	2.000 0.000	File No. OSC-538 Page 108 Prob. No. 51-1 sht.4 of 9			

CATEGORY F-A, Supports (Category B)

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Class 2 Weld Connections to Building Structure

Oconee 3

	.=.				Inspection P		01/12/19	
TEM NUME	BER ID NUMBER	SYS ISC	D/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS
01.021.029 Class B	3-55-DE002 Rigid Restraint	55 0-2- OFI	439A D-144A-3.2	QAL-14	VT-3	NA	6.000 0.000	File noOSC-559 Page 60A Prob. No. 3-55-02 System 55
01.021.033 Class B	3-51B-DE014 Rigid Restraint	51B 243 OF(6G D-101A-3.2	QAL-14	VT-3	NA	2.500 0.000	File No. OSC-538 Page 110 Prob. No. 51-1 sht.6 of 9
Total F01.	021 Items: 2		-				78.	
Class B	3-01A-H9A Constant Support		481A D-122A-3.1 490A-3(S)	QAL-14	VT-3	CS	26.000 1.000	File no. 0SC-1334 Prob. No. 3-01-08 Main Steam System
01.022.018 Class B	3-55-H33 Spring Hgr		2439A D-144A-3.2	QAL-14	VT-3	NA	6.000 0.000	File No. OSC-559 Page 60A Prob. No. 3-55-02 System 55
01.022.019 Class B	3-56-H10 Hyd Snubber		178A D-104A-3.1	QAL-14	VT-3	NA	8.000 0.000	File No. OSC-1339 Page No. 81 Problem No. 3-56-03 Spent Fuel Cooling. Inspect with Item No. F01.050.004
01.022.023 Class B	3-01A-R7 Hyd Snubber	01A 0-24 OFE	141 D-122A-3.1	QAL-14	VT-3	CS	36.000 0.000	Struc. calc # OSC-1000-01-0018; Prob. # OS 506/3-01A; Data point 6(627)
01.022.024 Class B	3-01A-H18 Spring Hgr	01A 0-24 OFE	I01B 0-122A-3.1	QAL-14	VT-3	CS	36.000 0.000	Struc. calc # OSC-1000-01-0029; Prob. # OS 506/3-01A; Data point 28

CATEGORY F-A, Supports (Category B)

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

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Class 3	Weld/Mech Conns at	Inter Joints in		Ocon		Page 44		
Multicor	nn Int & Nonint Supp	-	Inservice	Inspection P		01/12/1999		
ITEM NUMB	MBER ID NUMBER SYS ISO/DWG NUMBER		PROC INSP REQ MAT/SCH DIA/THK CAL BLOCKS				COMMENTS	
F01.031.008	3-03A-H6	03A 1-0-2439C	QAL-14	VT-3	NA	6.000	File No. OSC-1224-23	
	Rigid Restraint	OFD-121D-3.1				0.375	Page No. 25.3	
Class C							Problem No. 3-03A-13	
							Aux Service Water Piping	
F01.031.013	3-07A-SR7	07A 4-0-2400A	QAL-14	VT-3	NA	24.000	File no. 0SC-1211 Page 28	
	Rigid Restraint	OFD-121A-3.7				2.000	Prob. No. 3-07-05	•
Class C							Condensate System	
F01.031.020	3-14B-WM-7001	14B 0-2437A	QAL-14	VT-3	NA	6.000	File No. OSC-529	
	Rigid Restraint	OFD-121D-1.2				0.125	Page No. 67.1	
Class C							Problem No. 3-14B-2	•
							Aux Service Water Piping	

Total F01.031 Items:

3

CATEGORY F-A, Supports

Total F01.040 Items:

4

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Clearan	ces of Guides & Stops	s, Align of Supps,		Ocon	iee 3	,		Plan Report Page 45
<u>Assemb</u>	ly of Supp Items		Inservice	Inspection P	lan for	Interval 3 Outage 3		01/12/1999
ITEM NUMB	ER ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/	SCH DIA/THK CAL BLOCKS	COMMENTS	
F01.040.009	3-EFDW-TD-PU	0M 206A-0001	QAL-14	VT-3	NA	0.000	Emerg. Feedwater Turbine	Driven Pump.Pump
Class C		OFD 121D-3.1				0.000	Support & Pad.Class C	
F01.040.010	3-EFDW-MD-PU-A	03A 0M 206-0036 OFD 121D-3.1	QAL-14	VT-3	NA	0.000	Emerg. Feedwater Motor D Support & Pad.Class C	riven Pump 3A.Pump
Class C				•				
F01.040.022	1-GOV-OIL-PUMP-A	WL KFD-105A-1.1	QAL-14	VT-3	NA	0.000	Governor Oil Pump A Supp	port
Class C	Rigid Restraint	KM-200-158				0.000	Keowee Unit 1	
F01.040.025	3-RCSR-COOLER-3A		QAL-14	VT-3	NA	0.000	3A RC Seal Return Cooler	Support.Class B
Class B		OFD-101A-3.1				0.000		
	· · · · · · · · · · · · · · · · · · ·							

CATEGORY F-A, Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

Plan Report

Spring	Supports & Constant	Load	Supports		Ocon	iee 3	,	Plan Repo Page 4	
				Inservice	Inspection F	lan for Inte	erval 3 Outage 3	01/12/19	
ITEM NUME	BER ID NUMBER	SYS	S ISO/DWG NUMBERS	PROC	INSP REQ		DIA/THK CAL BLOCKS	COMMENTS	
F01.050.001 Class C	3-03-SR3 Hyd Snubber	03	0-2401A OFD-121B-3.3	QAL-14	VT-3	NA	24.000 0.406	File no. 0SC-512 Page136.1 Prob. No. 3-03-01 Main Feedwater System.	
F01.050.002 Class C	3-NPS-03-H28 Hyd Snubber	03A	0-2478 OFD-121D-3.1	QAL-14	VT-3	NA	3.000 0.000	File No.= OSC-1224-18, Page No. 39.2; Problem No.= 3-03A-14; Aux Service Water Piping	
F01.050.003 Class A	3-53-H3 Hyd Snubber	53A	0-2478A OFD-102A-3.1	QAL-14	VT-3	NA	12.000 0.280	File No. OSC-1339 Page 82 Problem No. 3-56-03; Spent Fuel Cooling.	
F01.050.004 Class B	3-56-H10 Hyd Snubber	56	0-2478A OFD-104A-3.1	QAL-14	VT-3	NA	8.000 0.000	File No. OSC-1339 Page No. 81 Problem No. 3-56-03 Spent Fuel Cooling.	
F01.050.005 Class A	3-50-H12 Hyd Snubber	50	0-2479A OFD-100A-3.2	QAL-14	VT-3	NA	2.500 0.000	File No. OSC-1343-06 Vol.A of C Prob.No. 3-53-09 Page 138 Low Pressure Inj. Supply to PZR Spray	
F01.050.006 Class A	3-50-H1A Hyd Snubber	50	0-2479A OFD-100A-3.2	QAL-14	VT-3	NA	10.000	Dwg. No.0-2491B-2A PZR Surge Line.	
F01.050.007 Class A	3-50-H2A Hyd Snubber	50	0-2479A OFD-100A-3.2	QAL-14	VT-3	NA	10.000 0.000	Dwg. No.0-2491B-2A PZR Surge Line	
-01.050.008 Class A	3-50-H3A Hyd Snubber	50	0-2479A OFD-100A-3.2	QAL-14	VT-3	NA	10.000	Dwg. No.0-2491B-2A PZR Surge Line	

CATEGORY F-A, Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Covina	Cumparta 9 Canatant						cinem System		Plan Report
Spring	Supports & Constant	Load	Supports		Ocon				Page 47
ITEM NUME	BER ID NUMBER	ev	S ISO/DWG NUMBERS		nservice Inspection Plan for Interval 3 Outage 3		•		01/12/1999
F01.050.009			0-2479A	PROC	INSP REQ		DIA/THK CAL BLOCKS	COMMENTS	
1 01.050.009	Hyd Snubber	517		QAL-14	VT-3	NA	2.500	File No. OSC-1343	
Class A	riya Shabbei		OFD-101A-3.4				0.154	Vol.B of C Prob. No. 3-53-10 Page 59	
Olass A								H.P.I. East Coolant Loop.	
F01.050.010	3-03-H6B	03	0-2480A	QAL-14	VT-3	NA	20.000		
	Hyd Snubber		OFD-121B-3.3	G/12 / /	*10	IVA	0.000	File no. 0SC-1335 Page 6(2)-71 Prob. No. 3-03-06	
Class B	•						0.000	Main Feedwater System	
							•	The second control of	
F01.050.011	3-03-H7A	03	0-2480A	QAL-14	VT-3	NA	24.000	File no. 0SC-1335 Page 6(1)-72	
	Hyd Snubber		OFD-121B-3.3				0.237	Prob. No. 3-03-07	
Class B								Main Feedwater System	
F01.050.012		50	0-2480A	QAL-14	VT-3	NA	2.500	File No. OSC-1343-06 Vol.A of C	
0	Hyd Snubber		OFD-100A-3.2				0.000	Prob.No. 3-53-09 Page 138	
Class A								Low Pressure Inj. Supply to PZR Spra	у
F01.050.013	3-50-H11	50	0-2480A	QAL-14	VT-3	NA	2.500	File No. 000 1040 00 Vol. 4 - 4 0	
	Hyd Snubber	•	OFD-100A-3.2	Q/AL*14	V1-3	IVA	0.000	File No. OSC-1343-06 Vol.A of C Prob.No. 3-53-09 Page 138	
Class A	,		01 5 100/10.2				0.000	Low Pressure Inj. Supply to PZR Spra	v
								Ten Freedom inj. Cappiy to 1 211 Opia	,
F01.050.014	3-50-H8	50	0-2480A	QAL-14	VT-3	NA	2.500	File No. OSC-1343-06 Vol.A of C	
	Hyd Snubber		OFD-100A-3.2			•	0.000	Prob.No. 3-53-09 Page 138	
Class A								Low Pressure Inj. Supply to PZR Sprag	у
F01.050.015	3-50-H9	50	0-2480A	QAL-14	VT-3	NA	2.500	File No. OSC-1343-06 Vol.A of C	
	Hyd Snubber		OFD-100A-3.2				0.000	Prob.No. 3-53-09 Page 138	•
Class A						••		Low Pressure Inj. Supply to PZR Sprag	у
F01.050.016	3-50-H1	50	0-2481A	QAL-14	VT-3	NA	0.500	File No. 000 4040 00 V/ 14 4 5	
	Hyd Snubber	50	OFD-100A-3,2	QAL-14	V 1-3	INA	2.500 0.000	File No. OSC-1343-06 Vol.A of C Prob.No. 3-53-09 Page 138	
Class A	, 4 01140001		01 D-100A-0.2				0.000	Low Pressure Inj. Supply to PZR Spray	.,
0.00071						e .		2011 1 1000die inj. Oupply to FZH Spia	у

CATEGORY F-A, Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

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Spring	Supports & Constant	Load	Supports		Ocon	ee 3			Page 48
				Inservice	Inspection P	lan for int	erval 3 Outage 3	01/12/	
ITEM NUME	BER ID NUMBER	SY	S ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	I DIA/THK CAL BLOCKS	COMMENTS	
F01.050.017 Class A	3-50-H3 Hyd Snubber	50	0-2481A OFD-100A-3.2	QAL-14	VT-3	NA	2.500 0.154	File No. OSC-1343-06 Vol.A of C Prob.No. 3-53-09 Page 138 Low Pressure Inj. Supply to PZR Spray	
F01:050.018 Class A	3-57-H13A Hyd Snubber	57	0-2481A OFD-100A-3.2	QAL-14	VT-3	NA	4.000 0.000	File No.OSC-1351-06 Problem No.3-57-01 Dwg # 0-3RB-357001-01 PZR Relief Valve System.	
F01.050.019 Class C	3-57-H15 Hyd Snubber	57	0-2481A OFD-100A-3.2	QAL-14	VT-3	NA	6.000 1.000	File No.OSC-1351-06 Problem No.3-57-01 Dwg # 0-3RB-357001-01 PZR Relief Valve System.	
F01.050.020 Class C	3-57-H16 Hyd Snubber	57	0-2481A OFD-100A-3.2	QAL-14	VT-3	NA	6.000 0.000	File No.OSC-1351-06 Problem No.3-57-01 Dwg # 0-3RB-357001-01 PZR Relief Valve System	
F01.050.021 Class C	3-57-H17 Hyd Snubber	57	0-2481A OFD-100A-3.2	QAL-14	VT-3	NA	6.000 0.000	File No.OSC-1351-06 Problem No.3-57-01 Dwg # 0-3RB-357001-01 PZR Relief Valve System	
F01.050.022 Class C	3-57-H20 Hyd Snubber	57	0-2481A OFD-100A-3.2	QAL-14	VT-3	NA	6.000 0.000	File No.OSC-1351-06 Problem No.3-57-01 Dwg # 0-3RB-357001-01 PZR Relief Valve System	
F01.050.023 Class C	3-57-H21 Hyd Snubber	57	0-2481A OFD-100A-3.2	QAL-14	VT-3	NA	6.000 0.000	File No.OSC-1351-06 Problem No.3-57-01 Dwg # 0-3RB-357001-01 PZR Relief Valve System	
F01.050.024 Class C	3-57-H23 Hyd Snubber	57	0-2481A OFD-100A-3.2	QAL-14	VT-3	NA	6.000 0.000	File No.OSC-1351-06 Problem No.3-57-01 Dwg # 0-3RB-357001-01 PZR Relief Valve System	

CATEGORY F-A, Supports

Spring Supports & Constant Load Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

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			Inservice Inspection Plan for Interval 3 Outage 3									
ITEM NUMB	ER ID NUMBER	SYS ISO/DWG NUMBER	RS PROC	INSP REQ	MAT/SC	CH DIA/THK CAL BLOCKS	COMMENTS					
F01.050.025	3-57-H25 Hyd Snubber	57 0-2481A OFD-100A-3.2	QAL-14	VT-3	NA	6.000 0.000	File No.OSC-1351-06 Problem No.3-57-01					
Class C		·					Dwg # 0-3RB-357001-01 PZR Relief Valve System					
F01.050.026	3-57-H7	57 0-2481A	QAL-14	VT-3	NA	8.000	File No.OSC-1351-06					
	Hyd Snubber	OFD-100A-3.2				0.000	Problem No.3-57-01					
Class C				•		J	Dwg # 0-3RB-357001-01					
							PZR Relief Valve System					
F01.050.027	3-57-H9	57 0-2481A	QAL-14	VT-3	NA	8.000	File No.OSC-1351-06					
	Hyd Snubber	OFD-100A-3.2				0.216	Problem No.3-57-01					
Class C				•			Dwg # 0-3RB-357001-01					
							PZR Relief Valve System					
F01.050.028	3-01A-H2A	01A 0-2481B	QAL-14	VT-3	NA	26.000	File no. 0SC-1334					
	Hyd Snubber	OFD-122A-3.1				0.322	Prob. No. 3-01-08					
Class B		0-2490A-3(S)					Main Steam System	٠				
F01.050.029	3-01A-H2B	01A 0-2481B	QAL-14	VT-3	NA	26.000	File no. 0SC-1334					
	Hyd Snubber	OFD-122A-3.1				0.322	Prob. No. 3-01-07					
Class B		0-2490A-2(S)					Main Steam System					
=01.050.030	3-01A-H8A	01A 0-2481B	QAL-14	VT-3	NA	26.000	File no. 0SC-1334					
	Hyd Snubber	OFD-122A-3.1				0.322	Prob. No. 3-01-08					
Class B		0-2490A-3(S)					Main Steam System					
F01.050.031	3-01A-H8B	01A 0-2481B	QAL-14	VT-3	NA	26.000	File no. 0SC-1334					
	Hyd Snubber	OFD-122A-3.1				0.322	Prob. No. 3-01-07					
Class B		0-2490A-2(S)					Main Steam System					
F01.050.032	3-03A-SR103PO	03A 1-0-2400A	QAL-14	VT-3	NA	6.000	File No.= OSC-526, Page No. 41; Prob	lem No.=				
	Hyd Snubber	OFD-121D-3.1				0.000	3-03A-09; Emergency Feedwater Syste					
Class C							•					

CATEGORY F-A, Supports

Hyd Snubber

Class C

OFD-104A-3.1

Spring Supports & Constant Load Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

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		•	Inservice	Inspection P	Plan for Interval 3 Outage 3	01/12/199	
ITEM NUMB		SYS ISO/DWG NUMBER	S PROC	INSP REQ	MAT/SCH DIA/THK CAL BLOCKS	S COMMENTS	
F01.050.033 Class C	3-03A-SR104PO Hyd Snubber	03A 1-0-2400A OFD-121D-3.1	QAL-14	VT-3	NA 6.000 0.000	File No.= OSC-526, Page No. 41; Problem No.= 3-03A-09; Emergency Feedwater System	
F01.050.034	3-03A-SR100PO Hyd Snubber	03A 1-0-2401A OFD-121D-3.1	QAL-14	VT-3	NA 6.000 0.203	File No. OS-519 Page No. 55 Problem No. 3-03A-06 Emergency Feedwater System	
F01.050.035 Class C	3-03A-SR101PO Hyd Snubber	03A 1-0-2401A OFD-121B-3.3	QAL-14	VT-3	NA 6.000 0.000	File no. 0SC-513 Page72 Prob. No. 3-03A-02 EmergencyFeedwater System	
F01.050.036 Class C	3-03A-SR102PO Hyd Snubber	03A 1-0-2401A OFD-121B-3.3	QAL-14	VT-3	NA 6.000 0.000	File no. 0SC-513 Page71 Prob. No. 3-03A-02 EmergencyFeedwater System	
F01.050.037 Class C	3-56-SR107 Hyd Snubber	56 1-0-2437A OFD-104A-3.1	QAL-14	VT-3	NA 8.000 0.000	File No.= OSC-563, Page No. 92.2; Problem No.= 3-56-02; Spent Fuel Cooling	
F01.050.038 Class C	3-56-SR109 Hyd Snubber	56 1-0-2437A OFD-104A-3.1	QAL-14	VT-3	NA 8.000 0.000	File No.= OSC-563, Page No. 92.2; Problem No.= 3-56-02; Spent Fuel Cooling	
F01.050.039 Class C	3-56-SR112 Hyd Snubber	56 1-0-2437A OFD-104A-3.1	QAL-14	VT-3	NA 8.000 0.000	File No.= OSC-563, Page No. 92.2; Problem No.= 3-56-02; Spent Fuel Cooling	
F01.050.040	3-56-SR116	56 1-0-2437A	QAL-14	VT-3	NA 8.000	File No OSC-563	

Page No. 93.2

Problem No. 3-56-02

Spent Fuel Cooling

0.237

CATEGORY F-A, Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Spring Supports & Constant Load Supports Oco

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			Inservice I	nspection P	lan for Inte	rval 3 Outage 3	01/12/1999
ITEM NUMBE		SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS
F01.050.041	3-56 - SR119	56 1-0-2437A	QAL-14	VT-3	NA	6.000	File No.= OSC-563, Page No. 93.2; Problem No.=
	Hyd Snubber	OFD-104A-3.1				0.000	3-56-02; Spent Fuel Cooling
Class C							
F01.050.042	3-51A-SR14	51A 1-0-2444	QAL-14	VT-3	NA	4.000	File No. OSC-542
	Hyd Snubber	OFD-101A-3.3				0.000	Prob. No. 3-51-05 Page 42
Class B							H.P.I. Pump Discharge
F01.050.043	3-01A-R10	01A 1-1-0-2401B	QAL-14	VT-3	NA	12.000	File no. 0S-507 Sht 1of2
	Hyd Snubber	OFD-122A-3.2				0.000	Prob. No. 3-01-09
Class B							Main Steam ByPass to Condenser
F01.050.044	3-01A-R12	01A 1-1-0-2401B	QAL-14	VT-3	NA	12.000	File no. 0S-507 Sht 1of2
	Hyd Snubber	OFD-122A-3.2				0.280	Prob. No. 3-01-09
Class B							Main Steam ByPass to Condenser
F01.050.045	3-01A-R9	01A 1-1-0-2401B	QAL-14	VT-3	NA	12.000	File no. 0S-507 Sht 1of2
	Hyd Snubber	OFD-122A-3.2				0.000	Prob. No. 3-01-09
Class B		•				•	Main Steam ByPass to Condenser
F01.050.046	3-53B-SR22	53B 2-0-2435B	QAL-14	VT-3	NA .	14.000	File N0.= OS-549, Page 78; Problem No.= 3-53-01; L
	Hyd Snubber	OFD-102A-3.1				0.000	P Injection & Decay Heat Removal
Class B							•
F01.050.047	3-54A-SR22	54A 3-0-2435B	QAL-14	VT-3	NA	8.000	File No.= OSC-554, Page No. 47.1; Problem No.=
	Hyd Snubber	OFD-103A-3.1				0.000	3-54-01; Reactor Bld Spray
Class B							· · · ·
F01.050.048	3-54A-SR7	54A 3-0-2435B	QAL-14	VT-3	NA	8.000	File No. OSC-555
,	Hyd Snubber	OFD-103A-3.1				1.000	Page No. 42.1
Class B							Problem No. 3-54-02

CATEGORY F-A, Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

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Spring S	Supports & Constant	Load Supports		Ocon	iee 3	goment cyclem	Plan Repor Page 5
			Inservice	Inspection P	lan for In	terval 3 Outage 3	01/12/1999
ITEM NUMB	ER ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ		H DIA/THK CAL BLOCKS	COMMENTS
F01.050.049 Class B	3-54A-SR14 Hyd Snubber	54A 3-0-2439A OFD-103A-3.1	QAL-14	VT-3	NA	8.000 0.000	File No.= OSC-556, Page No. 64.1; Problem No.=3-54-03
F01.050.050 Class B	3-01A-R4 Hyd Snubber	01A 3-803E245-2 OFD-122A-3.1	QAL-14	VT-3	NA	12.000 0.000	File no. 0SC-511 Page50 Prob. No. 3-01-06 Main Steam System
F01.050.051 Class C	3-01A-R8 Hyd Snubber	01A 4-0-2403D OFD-122A-3.4	QAL-14	VT-3	NA	6.000	File no. 0SC-510 Sht 1of3 Prob. No. 3-01A-04 Main Steam to Emergency F.W. Pump
F01.050.052 Class C	3-01A-R12 Hyd Snubber	01A 4-2-0-2403A OFD-122A-3.4	QAL-14	VT-3	NA	6.000 0.000	File no. 0SC-510 Sht 2of3 Prob. No. 3-01A-04 Page 68 Main Steam to Emergency F.W. Pump
F01.050.053 Class C	3-01A-R11 Hyd Snubber	01A 4-2-0-2403D OFD-122A-3.4	QAL-14	VT-3	NA	6.000	File no. 0SC-510 Sht 2of3 Prob. No. 3-01A-04 Page 68 Main Steam to Emergency F.W. Pump
F01.050.054 Class C	3-01A-R4 Hyd Snubber	01A 4-2-0-2403D OFD-122A-3.4	QAL-14	VT-3	NA	6.000 0.000	File no. 0SC-510 Sht 2of3 Prob. No. 3-01A-04 Page 68 Main Steam to Emergency F.W. Pump
F01.050.055 Class B	3-53B-SR32 Hyd Snubber	53B 5-0-2435B OFD-102A-3.2	QAL-14	VT-3	NA .	10.000	File No.= OS-550, Page No. 57; Problem No.= 3-53-03; System 53B
F01.050.056 Class B	3-53B-SR33 Hyd Snubber	53B 5-0-2435B OFD-102A-3.2	QAL-14	VT-3	NA	10.000 0.000	File No.= OS-550, Page No. 57; Problem No.= 3-53-03; System 53B

CATEGORY F-A, Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Spring Supports & Constant Load Supports

Oconee 3

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			Inservice	nspection P	lan for l	nterval 3 Outage 3	01/12/1	
TEM NUMB	ER ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ		CH DIA/THK CAL BLOCKS	COMMENTS	
Class B	3-53B-SR38 Hyd Snubber	53B 5-0-2435B OFD-102A-3.2	QAL-14	VT-3	NA	10.000 0.000	File No. OS-550 Page No. 56 Problem No. 3-53-03; System 53B	
01.050.058 Class B	3-53B-SR39 Hyd Snubber	53B 5-0-2435B OFD-102A-3.2	QAL-14	VT-3	NA	10.000 0.000	File No.= OS-550, Page No. 58; Problem No.= 3-53-03; System 53B	
01.050.059 Class C	3-13-SR1 Hyd Snubber	13 7-0-2400A OFD-133A-3.2	QAL-14	. VT-3	NA	12.000 0.000	File no. OSC-523 Page 40 Prob. No. 13-7 Condenser Circulating Water Emerg. Disch.	
01.050.060 Class C	3-13-SR3 Hyd Snubber	13 7-0-2400A OFD-133A-3.2	QAL-14	VT-3	NA	24.000 0.000	File noOSC-523 Page 40 Prob. No. 13-7 Condenser Circulating Water Emerg. Disch.	
01.050.061 Class C	3-13-SR4 Hyd Snubber	13 7-0-2400B OFD-133A-3.2	QAL-14	VT-3	NA	30.000 0.000	File noOSC-523 Page 40 Prob. No. 13-7 Condenser Circulating Water Emerg. Disch.	
01.050.062 Class C	3-07A-DE027 Mech Snubber	07A 0-2400A OFD-121A-3.8	QAL-14	VT-3	NA	8.000 0.000	File No.= OS-522, Page No. 59.1; Problem No.= 3-07-03; System 07A	
01.050.063 Class C	3-03-DE001 Mech Snubber	03 0-2401A OFD-121B-3.3	QAL-14	VT-3	NA	24.000 0.000	File no. 0SC-512 Page136.1 Prob. No. 3-03-01 Main Feedwater System	
01.050.064 Class C	3-03-SR1 Mech Snubber	03 0-2401A OFD-121B-3.3	QAL-14	VT-3	NA	24.000 0.000	File no. 0SC-512 Page136.1 Prob. No. 3-03-01 Main Feedwater System	

CATEGORY F-A, Supports

Spring Supports & Constant Load Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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Inserv	ice Inspectio	า Plan for	Interval 3	Outage 3
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				IIISEI VICE	mspection r	ian for inte	ervai 3 Outage 3	01/121000
ITEM NUME	BER ID NUMBER	SYS	ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS
F01.050.065	3-03-SR10 Mech Snubber	03	0-2401A OFD-121B-3.3	QAL-14	VT-3	NA	24.000 0.000	File no. 0SC-512 Page136.1 Prob. No. 3-03-01
Class C					•			Main Feedwater System
F01.050.066		03	0-2401A	QAL-14	VT-3	NA	24.000	File no. 0SC-512 Page136.1
Class C	Mech Snubber		OFD-121B-3.3				0.000	Prob. No. 3-03-01 Main Feedwater System
F01.050.067		03	0-2401A	QAL-14	VT-3	NA	24.000	File no. 0SC-512 Page136.1
Class C	Mech Snubber		OFD-121B-3.3				0.435	Prob. No. 3-03-01 Main Feedwater System
F01.050.068		03A	0-2401A	QAL-14	VT-3	NA	6.000	File no. 0SC-519 Page55
Class C	Mech Snubber		OFD-121B-3.3				0.000	Prob. No. 3-03A-06 EmergencyFeedwater System
F01.050.069	· · · -		0-2403A	QAL-14	VT-3	NA	6.000	File no. 0SC-510 Sht 2of3
Class C	Mech Snubber		OFD-122A-3.4		,		0.000	Prob. No. 3-01A-04 Page 68 Main Steam to Emergency F.W. Pump
F01.050.070			0-2402A	QAL-14	VT-3	NA	6.000	File No.= OS-519, Page No. 55; Problem No.=
Class C	Mech Snubber		OFD-121D-3.1				0.000	3-03A-06; Emergency Feedwater System
F01.050.071	3-53B-DE013	53B	0-2435B	QAL-14	VT-3	NA	14.000	File N0. OS-549
Class B	Mech Snubber		OFD-102A-3.1				0.000	Page 78 Problem No. 3-53-01
Ulass D	·							L P Injection & Decay Heat Removal
F01.050.072	3-56-DE005 Mech Snubber		0-2437A OFD-104A-3.1	QAL-14	VT-3	NA	8.000	File No.= OSC-563, Page No. 93.2; Problem No.=
Class C	MECH SHUDDE		OFD-104A-3.1				0.000	3-56-02; Spent Fuel Cooling
								•

CATEGORY F-A, Supports

Mech Snubber

Class C

OFD-100A-3.2

Spring Supports & Constant Load Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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			Inservice I	Inspection P	lan for Interval 3 Outage 3	01/12/1999
ITEM NUMB	BER ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH DIA/THK CAL BLOCKS	S COMMENTS
F01.050.073 Class C	3-56-DE007 Mech Snubber	56 0-2437A OFD-104A-3.1	QAL-14	VT-3	NA 8.000 0.000	File No.= OSC-563, Page No. 92.2; Problem No.= 3-56-02; Spent Fuel Cooling
F01.050.074	3-53B-DE008 Mech Snubber	53B 0-2438B OFD-102A-3.1	QAL-14	VT-3	NA 8.000 0.000	File No.= OS-551, Page 60.2; Problem No.3-53-04; System 53
Olass D						•
F01.050.075	3-56-DE008 Mech Snubber	56 0-2438B OFD-104A-3.1	QAL-14	VT-3	NA 8.000 0.000	File No.= OSC-563, Page No. 94.6; Problem No.= 3-56-02; Spent Fuel Cooling
Class C						
F01.050.076	3-03-H6034 Mech Snubber	03A 0-2480A OFD-121D-3.1	QAL-14	VT-3	NA 6.000 0.000	File No.= OSC-1224-18, Page No. 38.2; Problem No.= 3-03A-14; Aux Service Water Piping
F01.050.077	3-03-H6036 Mech Snubber	03A 0-2480A OFD-121D-3.1	QAL-14	VT-3	NA 6.000 0.000	File No.= OSC-1224-18, Page No. 38.2; Problem No.= 3-03A-14; Aux Service Water Piping
F01.050.078	3-03-H6038 Mech Snubber	03A 0-2480A OFD-121D-3.1	QAL-14	VT-3	NA 6.000 0.000	File No.= OSC-1224-18, Page No. 40.2; Problem No.= 3-03A-14; Aux Service Water Piping
F01.050.079	3-03-H6187 Mech Snubber	03A 0-2480A OFD-121D-3.1	QAL-14	VT-3	NA 6.000 0.000	File No.= OSC-1224-18, Page No. 40.2; Problem No.= 3-03A-14; Aux Service Water Piping
F01.050.080	3-57-NWIZ	57 0-2480A	QAL-14	VT-3	NA 12.000	File No.OSC-1351-06

0.000

Problem No.3-57-01 Dwg # 0-3RB-357001-01

PZR Relief Valve System

CATEGORY F-A, Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Spring Supports & Constant Load Supports

Oconee 3

			Inservice I	nspection P	lan for Inter	rval 3 Outage 3	01/12/1999
ITEM NUMB		SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS
F01.050.081	3-50-H7	50 0-2481A	QAL-14	VT-3	NA	2.500	File No. OSC-1343-06 Vol.A of C
	Mech Snubber	OFD-100A-3.2				0.500	Prob.No. 3-53-09 Page 138
Class A							Low Pressure Inj. Supply to PZR Spray
F01.050.082	3-03A-H204	03A 1-0-2400A	QAL-14	VT-3	NA	6.000	File No.= OSC-1209, Page No. 28; Problem No.=
	Mech Snubber	OFD-121D-3.1				0.000	3-03A-12; Emergency Feedwater System
Class C						Æ	·
F01.050.083	3-03A-SR33	03A 1-0-2401A	QAL-14	VT-3	NA	6.000	File No. OS-519
	Mech Snubber	OFD-121D-3.1				0.000	Page No. 55
Class C							Problem No. 3-03A-06
							Emergency Feedwater System. Inspect with Item No. F01.032.010
F01.050.084	3-51A-H308	51A 1-0-2439A	QAL-14	VT-3	NA	4.000	File No. OSC-541
	Mech Snubber	OFD-101A-3.4				0.000	Prob. No. 3-51-04 Page 66
Class B							H.P.I.to Reactor Coolant Loops "A" &"B"
F01.050.085	3-51A-H309	51A 1-0-2439A	QAL-14	VT-3	NA	4.000	File No. OSC-541
	Mech Snubber	OFD-101A-3.4				0.000	Prob. No. 3-51-04 Page 66
Class B							H.P.I.to Reactor Coolant Loops "A" &"B"
F01.050.086	3-51A-H294	51A 1-0-2439C	QAL-14	VT-3	NA	4.000	File No. OSC-542
	Mech Snubber	OFD-101A-3.4				0.000	Prob. No. 3-51-05 Page 44.1
Class B		·					H.P.I.Crossover to Reactor Coolant Inj. Loops "A"&"B"
F01.050.087	3-51A-H304	51A 1-0-2439C	QAL-14	VT-3	NA	4.000	File No. OSC-541
	Mech Snubber	OFD-101A-3.4				0.000	Prob. No. 3-51-04 Page 66
Class B					-		H.P.I.to Reactor Coolant Loops "A" &"B"
F01.050.088	3-51A-H318	51A 1-0-2444	QAL-14	VT-3	NA	4.000	File No. OSC-541
	Mech Snubber	OFD-101A-3.4				0.000	Prob. No. 3-51-04 Page 67
Class B							H.P.I.Crossover to Reactor Coolant Loops "A" &"B"

CATEGORY F-A, Supports

Spring Supports & Constant Load Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

r Interval 3 Outage	n Plan	Inspection	Inservice			
SCH DIA/THK CAL			PROC	SYS ISO/DWG NUMBERS	R, ID NUMBER SY	ITEM NUMBE
12.000	NA	VT-3	QAL-14		3-01A-R13 01/	-01.050.089
0.000				OFD-122A-3.2	Mech Snubber	
						Class B
6.000	NA	VT-3	QAL-14	53B 2-0-2435D	3-53B-SR46 538	01.050.090
0.000				OFD-101A-3.3	Mech Snubber	
						Class B
8.000	NA	VT-3	QAL-14	54A 3-0-2435B	3-54A-R1000 54A	01.050.091
0.000				OFD-103A-3.1	Mech Snubber	
						Class B
8.000	NA	VT-3	QAL-14	54A 3-0-2435B	3-54A-R1001 54A	01.050.092
0.000				OFD-103A-3.1	Mech Snubber	
						Class B
8.000	NA	VT-3	QAL-14	54A 3-0-2435B	3-54A-SR23 54A	01.050.093
0.500				OFD-103A-3.1	Mech Snubber	
				•		Class B
4.000	NA	VT-3	QAL-14	51B 3-0-2436G	3-51B-H62 51E	01.050.094
1.062				OFD-101A-3.2	Mech Snubber	i
					•	Class B
8.000	NA	VT-3	QAL-14	54A 3-0-2438A	3-54A-SR12 54A	01.050.095
0.500				OFD-103A-3.1	Mech Snubber	!
					,	Class B
6.000	NA	VT-3	QAL-14	01A 4-0-2403D	3-01A-R10 01A	01.050.096
0.000				OFD-122A-3.4	flech Snubber	i
						Class C
7THK CAL 12.000 0.000 6.000 0.000 8.000 0.000 8.000 0.500 4.000 1.062 8.000 0.500	AT/SCH DIA	NA NA NA NA NA NA NA	INSP REQ MAT/SCH DIA VT-3 NA VT-3 NA VT-3 NA VT-3 NA VT-3 NA VT-3 NA	QAL-14 VT-3 NA QAL-14 VT-3 NA	Inservice Inspection Plan for Interval S ISO/DWG NUMBERS	### ID NUMBER

CATEGORY F-A, Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

						ement System		Plan Report
Spring S	Supports & Constant	<u>Load Supports</u>		Ocon				Page 5
			Inservice I	Inspection P	lan for Inte	rval 3 Outage 3		01/12/1999
ITEM NUMB		SYS ISO/DWG NUMBERS	PROC	INSP REQ	MAT/SCH	DIA/THK CAL BLOCKS	COMMENTS	
F01.050.097	3-01A-R6	01A 4-0-2403D	QAL-14	VT-3	NA	6.000	File no. 0SC-510 Sht 1of3	
	Mech Snubber	OFD-122A-3.4				0.000	Prob. No. 3-01A-04	
Class C							Main Steam to Emergency F.W. Pum	р
F01.050.098	3-01A-R9	01A 4-0-2403D	QAL-14	VT-3	NA	6.000	File no. 0SC-510 Sht 1of3	·
	Mech Snubber	OFD-122A-3.4			-	0.000	Prob. No. 3-01A-04	
Class C							Main Steam to Emergency F.W. Pum	p
F01.050.099	3-01A-R3	01A 4-2-0-2403E	QAL-14	VT-3	NA	6.000	File no. 0SC-510 Sht 2of3	
	Mech Snubber	OFD-122A-3.4				0.000	Prob. No. 3-01A-04 Page 68	
Class C		•					Main Steam to Emergency F.W. Pum	p ,
F01.050.100	3-07A-H70	07A 6-0-2400A	QAL-14	VT-3	NA	20.000	File No.= OSC-1211, Page No. 27; Pro	oblem No –
	Mech Snubber	OFD-121A-3.8				0.000	3-07-05; System 07A	351CIII 140.=
Class C							•	
F01.050.101	3-07A-H71	07A 6-0-2400A	QAL-14	VT-3	NA	20.000	File No.= OSC-1211, Page No. 27; Pro	oblem No =
Class C	Mech Snubber	OFD-121A-3.8				0.000	3-07-05; System 07A	
Class C								
F01.050.102	3-07A-H72	07A 6-0-2400A	QAL-14	VT-3	NA	24.000	File No.= OSC-1211, Page No. 28; Pro	oblem No.=
	Mech Snubber	OFD-121A-3.8				0.000	3-07-05; System 07A	
Class C								
F01.050.103	3-07A-H74	07A 6-0-2400A	QAL-14	VT-3	NA	20.000	File No.= OSC-1211, Page No. 28; Pro	oblem No.=
	Mech Snubber	OFD-121A-3.8				0.000	3-07-05; System 07A	
Class C								
F01.050.104	3-07A-DE031	07A 6-0-2402A	QAL-14	VT-3	NA	24.000	File no. 0SC-521 Page 120	·
	Mech Snubber	OFD-121A-3.7				0.000	Prob. No. 3-07A-01	
Class C	•			,			Condensate System	

CATEGORY F-A, Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Spring Supports & Constant Load Supports

Oconee 3

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raye Ja					-		appoint a contotaint Et	
01/12/1999	rval 3 Outage 3	an for Inte	nspection Pl	Inservice I				
COMMENTS	DIA/THK CAL BLOCKS		INSP REQ	PROC	S ISO/DWG NUMBERS	SYS	ER ID NUMBER	ITEM NUMB
File No. OSC-523 Page 40 Prob. No. 13-7	30.000 0.000	NA	VT-3	QAL-14	7-0-2400B OFD-133A-3.2		3-13-DE002 Mech Snubber	F01.050.105
Condenser Circulating Water Emerg. Disch.	0.000							Class C
File No.= OS-539, Page 143; Problem No.3-51-2;	14.000	NA	VT-3	QAL-14	7-0-2436C			F01.050.106
	0.000				OFD-102A-3.1	(Mech Snubber	Class B
Calculaton No. OSC-1011-01-0001, Reactor Coolant	6.000	NA ·	VT-3	QAL-14	0-1066A		3-50-RCPM-3A1-SS1	F01.050.107
Pump Motor Snubbers. Reference PIP 0-096-1575.	0.000				OFD-100A-3.1 OFD-100A-3.3		Mech Snubber	Class A
Calculaton No. OSC-1011-01-0001, Reactor Coolant	6.000	NA .	VT-3	QAL-14	0-1066A		3-50-RCPM-3A1-SS2 {	F01.050.108
Pump Motor Snubbers. Reference PIP 0-096-1575. Inspect with F01.012.008.	0.000				OFD-100A-3.1 OFD-100A-3.3		Mech Snubber	Class A
Calculaton No. OSC-1011-01-0001, Reactor Coolant	6.000	NA	VT-3	QAL-14	0-1066A	50 (3-50-RCPM-3A1-SS3 5	F01.050.109
Pump Motor Snubbers. Reference PIP 0-O96-1575. Inspect with F01.012.009.	0.000				OFD-100A-3.1 OFD-100A-3.3		Mech Snubber	Class A
Calculaton No. OSC-0991, Reactor Coolant Pump	6.000	NA	VT-3	QAL-14	0-1066A	50 0	3-50-RCPM-3A2-SS1 5	F01.050.110
Motor Snubbers. Reference PIP 0-096-1575.	0.000				OFD-100A-3.1 OFD-100A-3.3		Mech Snubber	Class A
Calculaton No. OSC-0991, Reactor Coolant Pump	6.000	NA AV	VT-3	QAL-14	0-1066A	50 0	3-50-RCPM-3A2-SS2 5	F01.050.111
Motor Snubbers. Reference PIP 0-096-1575.	0.000				OFD-100A-3.1 OFD-100A-3.3		Mech Snubber	Class A
Calculaton No. OSC-1011-01-0002, Reactor Coolant		NA	VT-3	QAL-14	0-1066A	-	3-50-RCPM-3A2-SS3 5	F01.050.112
Pump Motor Snubbers. Reference PIP 0-096-1575. nspect with F01.012.010.	0.000			.*	OFD-100A-3.1 OFD-100A-3.3	_	Mech Snubber	Class A

CATEGORY F-A, Supports

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Oconee 3

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				•		J	Plan Report
Spring S	Supports & Constant Loa	ad Supports	,	Ocon	iee 3		Page 60
			Inservice	Inspection P	lan for Int	terval 3 Outage 3	01/12/1999
ITEM NUME	II NOMBER	YS ISO/DWG NUMBERS	PROC	INSP REQ		H DIA/THK CAL BLOCKS	COMMENTS
F01.050.113	3-50-RCPM-3B1-SS1 50	O 0-1066A	QAL-14	VT-3	NA	6.000	Calculaton No. OSC-1011-01-0003, Reactor Coolant
	Mech Snubber	OFD-100A-3.1				0.000	Pump Motor Snubbers. Reference PIP 0-096-1575.
Class A		OFD-100A-3.3					Inspect with F01.012.011.
F01.050.114	3-50-RCPM-3B1-SS2 50	O 0-1066A	QAL-14	VT-3	NA	6.000	Calculaton No. OSC-1011-01-0003, Reactor Coolant
	Mech Snubber	OFD-100A-3.1				0.000	Pump Motor Snubbers. Reference PIP 0-096-1575.
Class A		OFD-100A-3.3					
F01.050.115	3-50-RCPM-3B1-SS3 50	0-1066A	QAL-14	VT-3	NA	6.000	Calculaton No. OSC-0991, Reactor Coolant Pump
	Mech Snubber	OFD-100A-3.1				0.000	Motor Snubbers. Reference PIP 0-096-1575.
Class A		OFD-100A-3.3					
F01.050.116	3-50-RCPM-3B2-SS1 50	O-1066A	QAL-14	VT-3	NA	6.000	Calculaton No. OSC-1011-01-0004, Reactor Coolant
	Mech Snubber	OFD-100A-3.1				0.000	Pump Motor Snubbers. Reference PIP 0-096-1575.
Class A		OFD-100A-3.3					
F01.050.117	3-50-RCPM-3B2-SS2 50) 0-1066A	QAL-14	VT-3	NA	6.000	Calculaton No. OSC-1011-01-0004, Reactor Coolant
•	Mech Snubber	OFD-100A-3.1				0.000	Pump Motor Snubbers. Reference PIP 0-096-1575.
Class A		OFD-100A-3.3		·			Inspect with F01.012.012.
F01.050.118	3-50-RCPM-3B2-SS3 50	0-1066A	QAL-14	VT-3	NA	6.000	Calculaton No. OSC-1011-01-0004, Reactor Coolant
	Mech Snubber	OFD-100A-3.1				0.000	Pump Motor Snubbers. Reference PIP 0-096-1575.
Class A		OFD-100A-3.3					

Total F01.050 Items:

118

Total F01 Items:

144

Total G01 Items:

CATEGORY AUG, Augmented Inspections

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Reactor Coolant Pump Flywheel

Oconee 3

01/12/1999		Inservice Inspection Plan for Interval 3 Outage 3									
	COMMENTS	HK CAL BLOCKS		REQ			S ISO/DWG NUMBERS	SYS	ID NUMBER	ITEM NUMBER	
			د	•							
7 Paragraph 7.1.1 of the ISI Plan	Reference Section 7	000	OS 72	(UT	NDE-900	OM-201D-038	50	3-RCP-3A1	G01.001.001 3	
	Volume 1.	500	,				OFD-100A-3.1				
			Flywheel to	RCP 3A1	1		e.		*	Class A	
n 7 Paragraph 7.1.1 of the ISI Plan	Reference Section 7	000	OS 72		UT	NDE-900	OM-201D-038	50	B-RCP-3A2	G01.001.002 3	
	Volume 1.	500	9				OFD-100A-3.1				
			Flywheel to	RCP 3A2	I					Class A	
n 7 Paragraph 7.1.1 of the ISI Plan	Reference Section 7	000	OS 72	(UT	NDE-900	OM-201D-038	50	-RCP-3B1	G01.001.003 3	
	Volume 1.	500	(OFD-100A-3.1				
			Flywheel to	CP 3B1	ŀ					Class A	
n 7 Paragraph 7.1.1 of the ISI Plan	Reference Section 7	000	DS 72	(UT	NDE-900	OM-201D-038	50	-RCP-3B2	G01.001.004 3	
and a supplier of the formation	Volume 1.	500					OFD-100A-3.1				
			Flywheel to	CP 3B2	F					Class A	

CATEGORY AUG, Augmented Inspections

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

High Pressure Injection Nozzle Safe End

Oconee 3

: 3	Oconee			<u>re End</u>	re injection Nozzie S	<u>ign Press</u>
n for Interval 3	ion Pla	vice Inspec	Inservice			
MAT/SCH DIA/TH	REQ	OC INSF	PROC	S ISO/DWG NUMBERS	ID NUMBER S	NUMBER
S 3.5	C	·690 UT	NDE-690	ISI-OCN3-011 OFD-100A-3.1	-PDA1-46 51	
				OM-201-597		ss A
S 3.5	· C	690 UT	NDE-690	ISI-OCN3-012	PDA2-46 51	01.005B
2.5				OFD-100A-3.1		ss A
				OM-201-597		
	С	690 UT	NDE-690	ISI-OCN3-013	PDB1-46 51.	01.005C
2.5				OFD-100A-3.1 OM-201-597		ss A
	С	690 UT	NDE-690	ISI-OCN3-014	PDB2-46 51,	01.005D
2.5				OFD-100A-3.1		
				OM-201-597		ss A
S-Inconel 3.5	S	610 UT	NDE-610	ISI-OCN3-011 OFD-100A-3.1	PDA1-11 51/	01.006A
lozzle, PC 46 to	ike Up N fe End,			OM-201-597		ss A
S-Inconel 3.5 0.7	S	610 UT	NDE-610	ISI-OCN3-012 OFD-100A-3.1	PDA2-11 51/	01.006B 3
lozzle, PC 46 to	ke Up N fe End, I			OM-201-597		ss A

CATEGORY AUG, Augmented Inspections

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

High Pressure Injection Nozzle Safe End

Oconee 3

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Inservice Inspection Plan for Interval 3 Outage 3

ITEM NUMBER ID NUMBER SYS ISO/DWG NUMBERS PROC INSP REQ MAT/SCH DIA/THK CAL BLOCKS

with Engineering prior to scheduling the fourth

COMMENTS

								with Engineering prior to scheduling the fourth interval.
G02.001.006C Class A	3-PDB1-11	51A ISI-OCN3-013 OFD-100A-3.1 OM-201-597	NDE-610		SS-Inconel Nozzle, PC 46 to e End, PC 47	3.500 0.750	40416 Component	Reference Section 7 of the ISI Plan, Volume 1. 3B1 HPI Nozzle PC 46 to Safe End PC 47. Perform UT on the nozzle to safe end weld. Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.006D Class A	3-PDB2-11	51A ISI-OCN3-014 OFD-100A-3.1 OM-201-597	NDE-610		SS-Inconel Nozzle, PC 46 to e End, PC 47	3.500 0.750	40416 Component	Reference Section 7 of the ISI Plan, Volume 1. 3B2 HPI Nozzle PC 46 to Safe End PC 47. Perform UT on the nozzle to safe end weld. Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.007A Class A	3-PDA1-47	51A ISI-OCN3-011 OFD-100A-3.1 OM-201-597	NDE-960	UT	SS	3.500 0.750	Component	Reference Section 7 of the ISI Plan, Volume 1. Safe End PC 47 adjoining Make-Up Nozzle 3A1. Perform UT on the Safe End base metal (between the nozzle to safe end weld and the safe end to pipe weld). Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.007B Class A	3-PDA2-47	51A ISI-OCN3-012 OFD-100A-3.1 OM-201-597	NDE-960	UT	SS	3.500 0.750	Component	Reference Section 7 of the ISI Plan, Volume 1. Safe End PC 47 adjoining Make-Up Nozzle 3A2. Perform UT on the Safe End base metal (between the nozzle to safe end weld and the safe end to pipe weld). Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.007C Class A	3-PDB1-47	51A ISI-OCN3-013 OFD-100A-3.1 OM-201-597	NDE-960	UT	SS	3.500 0.750	Component	Reference Section 7 of the ISI Plan, Volume 1. Safe End PC 47 adjoining HPI Nozzle 3B1. Perform UT on the Safe End base metal (between the nozzle to safe end weld and the safe end to pipe weld). Perform UT examination during outages 17, 19 & 21 for the third

CATEGORY AUG, Augmented Inspections

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Plan Report

Check with Engineering prior to scheduling the fourth

High Pres	sure Injection Nozz	le Safe End			onee 3			Page 64
			Inservice I	nspection	Plan for Interva	age 3	01/12/1999	
ITEM NUMBER	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP RE	Q MAT/SCH DI.	A/THK (CAL BLOCKS	COMMENTS interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.007D Class A	3-PDB2-47	51A ISI-OCN3-014 OFD-100A-3.1 OM-201-597	NDE-960	UT	SS	3.500 0.750	Component	Reference Section 7 of the ISI Plan, Volume 1. Safe End PC 47 adjoining HPI Nozzle 3B2. Perform UT on the Safe End base metal (between the nozzle to safe end weld and the safe end to pipe weld). Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.008A Class A	3RC-211-56	51A 3RC-211 OFD-100A-3.1 OM-201-597	NDE-960	UT Pipe S Pipe	SS Safe End PC 47 to	2.500 0.375	Component	Reference Section 7 of the ISI Plan, Volume 1. Make-Up Nozzle 3A1. Perform UT on weld 3RC-211-56 and adjoining base metal out to weld 3RC-211-54 (at valve 3HP-127). Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.008B Class A	3RC-210-24A	51A 3RC-210 OFD-100A-3.1 OM-201-597	NDE-960	UT Safe E Pipe	SS End PC 47 to	2.500 0.375	Component	Reference Section 7 of the ISI Plan, Volume 1. Make-Up Nozzle 3A2. Perform UT on weld 3RC-210-24A and adjoining base metal out to weld 3RC-210-31 (at valve 3HP-126). Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.008C Class A	3RC-212-44A	51A 3RC-212 OFD-100A-3.1 OM-201-597	NDE-960	UT Safe E Pipe	SS End PC 47 to	2.500 0.375	Component	Reference Section 7 of the ISI Plan, Volume 1. HPI Nozzle 3B1. Perform UT on weld 3RC-212-44A and adjoining base metal out to weld 3RC-212-45 (at valve 3HP-153). There is a circumferential weld located between weld 3RC-212-44A and 3RC-212-45. This weld (3RC-212-43C) will be documented as item number G02.001.009B. Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed.

ITEM NUMBER

CATEGORY AUG, Augmented Inspections

ID NUMBER

SYS ISO/DWG NUMBERS

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

High Pressure Injection Nozzle Safe End

Oconee 3

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Inservice Inspection Plan for Interval 3 Outage 3

PROC INSP REQ MAT/SCH DIA/THK CAL BLOCKS

COMMENTS

interval.

	•							
G02.001.008D Class A	3RC-213-26	51A 3RC-213 OFD-100A-3.1 OM-201-597	NDE-960	UT Safe Pipe	SS End PC 47 to	2.500 0.375	Component	Reference Section 7 of the ISI Plan, Volume 1. HPI Nozzle 3B2. Perform UT on weld 3RC-213-26 and adjoining base metal out to weld 3RC-213-27 (at valve 3HP-152). Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.009B Class A	3RC-212-43C	51A 3RC-212 OFD-100A-3.1 OM-201-597	NDE-960	UT Pipe Pipe		2.500 0.375	Component	Reference Section 7 of the ISI Plan, Volume 1. HPI Nozzle 3B1. Perform UT on weld 3RC-212-43C. Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.010A Class A	3RC-211-54	51A 3RC-211 OFD-100A-3.1 OM-201-597	NDE-960	UT Pipe Valv	SS to e 3HP-127	2.500 0.375	Component	Reference Section 7 of the ISI Plan, Volume 1. Make Up Nozzle 3A1. Perform UT on weld 3RC-211-54 (at valve 3HP-127). Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.010B Class A	3RC-210-31	51A 3RC-210 OFD-100A-3.1 OM-201-597	NDE-960	UT Pipe Valv	SS to e 3HP-126	2.500 0.375	Component	Reference Section 7 of the ISI Plan, Volume 1. Make Up Nozzle 3A2. Perform UT on weld 3RC-210-31 (at valve 3HP-126). Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.
G02.001.010C Class A	3RC-212-45	51A 3RC-212 OFD-100A-3.1 OM-201-597	NDE-960	UT Pipe Valve	SS to 3HP-153	2.500 0.375	Component	Reference Section 7 of the ISI Plan, Volume 1. HPI Nozzle 3B1. Perform UT on weld 3RC-212-45 (at valve 3HP-153). Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.

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DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

High Pressure Injection Nozzle Safe End

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rage oo						TO EIIU	o injuditori recepto car	9
01/12/1999	ıtage 3	for Interval 3 Ou	on Pla	nspect	inservice I			
COMMENTS	CAL BLOCKS	AT/SCH DIA/THK	REQ	INSP	PROC	S ISO/DWG NUMBERS		ITEM NUMBER
Reference Section 7 of the ISI Plan, Volume 1. HPI Nozzle 3B2. Perform UT on weld 3RC-213-27 (at valve 3HP-152). Perform UT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.	Component .	0.375	e to Ive 3HF		NDE-960	A 3RC-213 OFD-100A-3.1 OM-201-597	RC-213-27 51A	G02.001.010D Class A
Reference Section 7 of the ISI Plan, Volume 1. Make UP Nozzle 3A1. Perform RT between the nozzle to safe end and safe end to pipe weld in the thermal sleeve expansion area as described in procedure NDE-105. Perform RT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.		3.500 0.750	S	RT	NDE-105	A ISI OCN3-011 OFD-100A-3.1 OM-201-597	A1-THERM SLEEVE 51A	G02.001.011A Class A
Reference Section 7 of the ISI Plan, Volume 1. Make UP Nozzle 3A2. Perform RT between the nozzle to safe end and safe end to pipe weld in the thermal sleeve expansion area as described in procedure NDE-105. Perform RT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.		3.500 0.750	S	ŖТ	NDE-105	N ISI OCN3-012 OFD-100A-3.1 OM-201-597	A2-THERM SLEEVE 51A	G02.001.011B Class A
Reference Section 7 of the ISI Plan, Volume 1. HPI Nozzle 3B1. Perform RT between the nozzle to safe end and safe end to pipe weld in the thermal sleeve expansion area as described in procedure NDE-105. Perform RT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.		3.500 0.750	S	RT	NDE-105	ISI OCN3-013 OFD-100A-3.1 OM-201-597		G02.001.011C Class A
Reference Section 7 of the ISI Plan, Volume 1. HPI Nozzle 3B2. Perform RT between the nozzle to safe end and safe end to pipe weld in the thermal sleeve expansion area as described in procedure NDE-105. Perform RT examination during outages 17, 19 & 21 for the third interval. This schedule cannot be changed. Check with Engineering prior to scheduling the fourth interval.)	3.500 0.750	S	RT	NDE-105	ISI OCN3-014 OFD-100A-3.1 OM-201-597		G02.001.011D Class A

ITEM NUMBER

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ID NUMBER

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High Pressure Injection Nozzle Safe End

Inservice Inspection Plan for Interval 3 Outage 3

SYS ISO/DWG NUMBERS INSP REQ MAT/SCH DIA/THK CAL BLOCKS **PROC** COMMENTS

Total G02.001 Items: 25 Total G02 Items:

25

G09.001.017

Class B

G09.001.033

Class B

CATEGORY AUG, Augmented Inspections

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

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Circumferential Pipe Welds With A Nom. Wall Oconee 3 Page 68 Thk. < 3/8" and > NPS 4" Inservice Inspection Plan for Interval 3 Outage 3 01/12/1999 ITEM NUMBER **ID NUMBER** SYS ISO/DWG NUMBERS **PROC** INSP REQ MAT/SCH DIA/THK CAL BLOCKS COMMENTS G09.001.002 3-51A-50-61 NDE-35 51A 3-51A-50 PT SS 6.000 Circumferential OFD-101A-3.3 0.280 Class B Elbow to Pipe G09.001.012 3-53B-38-25 53B 3-53B-38 NDE-35 PT SS 8.000 Circumferential OFD-102A-3.2 0.250 Class B Term end Reducer to Flange

Reducer to

Elbow to Valve 3SF-60

SS

SS

Nozzle LPI Cooler 3B Outlet Noz

16.000

0.312

8.000

0.250

NDE-35

NDE-35

PT

PT

Total G09.001 Items: 4
Total G09 Items: 4

3-53B-LPB-2

Circumferential

3-56-14-61

Circumferential

Term end

53B 3-53B-47

56 3-56-14

OFD-102A-3.2

OFD-104A-3.1

OM-201-286

CATEGORY AUG, Augmented Inspections

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

Class 1 RTE Mounting Bosses

Oconee 3

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			Inservice	Inspection P	lan for Inter	val 3 Outage 3	01/12/1999
ITEM NUMBI	ER ID NUMBER	SYS ISO/DWG NUMBERS		INSP REQ		DIA/THK CAL BLOCKS	COMMENTS
G10.001.001	3-PHA-13	50 ISI-OCN3-005	NDE-35	PT	CS-Inconel	9.000	Reference Section 7 Paragraph 7.1.10 of the ISI Plan
	Branch	OFD-100A-3.1				2.875	- Volume1 The diameter of hole that penetrates
Class A				Nozzie I	RTE Nozzle to		through the nozzle into the hot leg = .613
	Dissimilar			Pipe A H	Hot Leg X-axis	3	
G10.001.002	3-PHA-14	50 ISI-OCN3-005	NDE-35	PT	CS-Inconel	9.000	Reference Section 7 Paragraph 7.1.10 of the ISI Plan
	Branch	OFD-100A-3.1				2.875	- Volume1 The diameter of hole that penetrates
Class A				Nozzle i	RTE Nozzle to		through the nozzle into the hot leg = .613
	Dissimilar		•	Pipe A F	Hot Leg Y Z-ax	kis	-
G10.001.003	3-PHA-15	50 ISI-OCN3-005	NDE-35	PT	CS-Inconel	9.000	Reference Section 7 Paragraph 7.1.10 of the ISI Plan
	Branch	OFD-100A-3.1				2.875	- Volume1 The diameter of hole that penetrates
Class A				Nozzle f	RTE Nozzie to		through the nozzle into the hot leg = .613
	Dissimilar			Pipe A F	Hot Leg ZW-a	xis	
Total G10.0	001 Items: 3						

Total G10 Items:

3

CATEGORY AUG, Augmented Inspections

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

R	eactor	Co	olant	Pump	3A2	and	3B1	Alterna	te
_									

Oconee 3

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rage /u				,,,,,,	-		OD AILCITIALE	TE GIIG O	CIGITE I WITE OFTE O	
01/12/199		je 3	nterval 3 Outage	Plan fo	Inspection F	Inservice			<u>n</u>	Examinatio
<u>3</u>	COMMENTS		CH DIA/THK CAL		INSP REQ	PROC	SYS ISO/DWG NUMBERS	ER SY	ID NUMBER	ITEM NUMBER
oint,Studs and Adj. area Per Req. for 11. Ref. Section 7 Paragraph 7.1.11 o			0.000 0.000	SS	VT-1	QAL-13	OM-1201-1217 OFD-100A-3.1	50	3RCP-3A2	G11.001.001
Volume 1. in Flange; Each refueling outage the nd surrounding area will be inspected ation of boron or stud degredation. Se equest for relief ONS-010.(Note: whe 0.002 is inspected then this inspection	the ISI Plan - Volu RCP 3A2 Main Flange joint and suany accumulation 2nd interval reque									Class A
in Flange; Each refueling outage the nd surrounding area will be inspected ation of boron or stud degredation. Se equest for relief ONS-010.(Note: whe 0.003 is inspected then this inspection	Relief ONS-011. F the ISI Plan - Volu RCP 3B1 Main Fla flange joint and su any accumulation 2nd interval reque		0.000 0.000	SS	VT-1	QAL-13	OM-1201-1217 OFD-100A-3.1	50	BRCP-3B1	G11.001.002

Total G11.001 Items:

2

Total G11 Items:

^

CATEGORY AUG, Augmented Inspections

DUKE ENERGY CORPORATION QUALITY ASSURANCE TECHNICAL SERVICES Inservice Inspection Database Management System

HPI System Upgrade Occ

Oconee 3

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		01/12/1999						
ITEM NUMBE	R ID NUMBER	SYS ISO/DWG NUMBERS	PROC	INSP REQ		erval 3 Outage 3 I DIA/THK CAL BLOCKS	COMMENTS	
G12.001.003	3-51B-30-28	51B 3-51B-30	NDE-35	PT	SS	0.000		
	Circumferential	OFD-101A-3.2	, NDL-05	ГІ	33	3.000 0.120		
Class B				Pipe to . Valve 3H				
G12.001.008	3-51B-32-52	51B 3-51B-32	NDE-35	PT	SS	2.500	<u> </u>	
Class B	Circumferential	OFD-101A-3.2		Tee to		0.120		
				Pipe Car	0			
G12.001.009	3-51B-32-77	51B 3-51B-32	NDE-35	PT	SS	3.000		
	Circumferential	OFD-101A-3.2				0.120		
Class B				Pipe to Elbow				
G12.001.015	3-51B-57-14	51B 3-51B-57	NDE-35	PT	SS	4.000		
	Circumferential	OFD-101A-3.1				0.120	1	
Class B				Expansio Valve 3H	on Joint to P-71		, .	

Total G12.001 Items:

4

Total G12 Items:

1

5.0 Results Of Inspections Performed During Outage 17

The results of each examination shown in the final ISI Plan (Section 4.0 of this report) are included in this section. The completion date and status for each examination are shown. Limited examinations are described in further detail in Section 5.2. All examinations revealing reportable indications are described in further detail in Section 6.

5.1 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), IWF-2500-1 (Class 1 and Class 2),

Augmented Requirements

ID Number = Unique Identification Number

System = System examined

Insp Date = Date of Examination

Insp Status = CLR Clear

REC Recordable REP Reportable

Insp Limited = Indicates inspection was limited.

Coverage obtained is listed

Geo. Ref. $= \underline{Y} \text{ Yes}$

(Geometric Reflector, applies only to UT)

RFR = Request for Relief Required

Comments = General and/or Detail Description

DUKE ENERGY RPORATION QUALITY ASSURANCE CHNICAL SERVICES

In-Service Inspection Database Management System Oconee 3 Inservice Inspection Listing Interval 3 Outage 3

EOC 17

Plant: Oconee 3

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				lt .	nterval 3 Outage	3			02/
ITEM NUMBER	ID NUMBER		INSP DATE		S INSP LIMITED	GEO REF	RFR	COMMENTS	
B02.031.001	3-SGA-WG172	50	11/06/1998	CLR		N	N		
B02.040.002	3-SGA-WG58-2	50	10/27/1998	CLR		N	N		
B02.060.002	3-LDCA-OUT-V6	51A	11/03/1998	CLR		N	N		
B03.110.001	3-PZR-WP15	50	10/29/1998	CLR	68.39%	N	Υ	Request for Relief # 98-01	
B03.110.006	3-PZR-WP26-4	50	10/16/1998	CLR	28.77%	Ņ	Υ	Request for Relief # 98-03	
B03.110.007	3-PZR-WP26-5	50	10/16/1998	CLR	28.77%	N	Υ	Request for Relief # 98-03	
B03.110.008	3-PZR-WP26-6	50	10/16/1998	CLR	28.77%	Ν	Υ	Request for Relief # 98-03	
B03.120.001	3-PZR-WP15	50	10/29/1998	CLR		N	Ν		
B03.120.006	3-PZR-WP26-4	50	10/16/1998	CLR	78.06%	N	Υ	Request for Relief # 98-03	
B03.120.007	3-PZR-WP26-5	50	10/16/1998	CLR	78.06%	N	Υ	Request for Relief # 98-03	
B03.120.008	3-PZR-WP26-6	50	10/16/1998	CLR	78.06%	N	Υ	Request for Relief # 98-03	
B03.130.003	3-SGB-WG50-2	50	11/07/1998	CLR	39.46%	N	Υ	Request for Relief # 99-01	
B03.130.004	3-SGB-WG50-1	50	11/07/1998	CLR	39.46%	N	Υ	Request for Relief # 99-01	
B03.140.003	3-SGB-WG50-2	50	11/07/1998	CLR	44.10%	N	Υ	Request for Relief # 99-01	
B03.140.004	3-SGB-WG50-1	50	11/07/1998	CLR	44.10%	N	Υ	Request for Relief # 99-01	
B03.150.001	3-LDCA-IN-V2	51A	11/03/1998	REC	36.50%	Υ	Υ	Request for Relief # 98-01	
B03.150.002	3-LDCA-OUT-V5	51A	11/03/1998	REC	36.50%	Υ	Υ	Request for Relief # 98-01	
B03.160.001	3-LDCA-IN-V2	51A	11			N	N	Request for Relief # ONS-009	
B03.160.002	3-LDCA-OUT-V5	51A	11			N	N	Request for Relief # ONS-009	
B05.050.001	3-PZR-WP91-1	₂ 50	11/06/1998	CLR		N	N		
B05.050.002	3-PZR-WP91-2	50	11/06/1998	CLR		N	N		
B05.050.003	3-PZR-WP91-3	50	11/06/1998	CLR		N	N		
B05.130.009	3-PDA2-2	50	10/20/1998	CLR		N	N	UT from elbow side.	
B05.130.009A	3-PDA2-2	50	10/20/1998	CLR		N	N	UT from safe end side.	
B05.130.009B	3-PDA2-2	50	10/20/1998	CLR	·	Ν.	N		
B05.140.006	3-PDA2-11	50	10/19/1998	CLR		N	N		
B06.190.003	3RCP-3B1-FLANGE	50	10/29/1998	CLR		N	N		
B07.030.006	3SGA-LHIC-BOLTS	50	11/14/1998	CLR		N	N	Light boron between locknuts and nut.(2 places) No degredation.	
B07.070.014	3-51A-HP126	51A	10/15/1998	CLR		N	N	Inspection performed with the bolting in place.	
B07.080.001	3-RPV-CRD-BOLTS	50	11/05/1998	CLR		N	N	CRD Nos. 24 and 57 bolting.	
B07.080.002	3-RPV-CRD-RINGS	50	11/05/1998	CLR	*	N	N	CRD Nos. 24 and 57 bolting. CRD Nos. 24 and 57 nut rings (2 sets).	
B09.011.011	3-PIB1-1	50	11/07/1998	CLR		N	N	CIND Nos. 24 and 57 hut lings (2 sets).	
B09.011.011A	3-PIB1-1	50	11/07/1998	CLR		N	N		
B09.011.016	3-PIB2-8	50	10/21/1998	CLR		N	N		
B09.011.016A	3-PIB2-8	50	10/21/1998	REC		N	N	There were 2 recordable indications	
						14	1 1	There were 2 recordable indications. Indication # 1 is a pin hole visible with the eye.	
								maleation # 1 is a pill hole visible with the eye.	

DUKE ENERGY RPORATION QUALITY ASSURANCE CHNICAL SERVICES

In-Service Inspection Database Management System Oconee 3 Inservice Inspection Listing

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02/01/1999		∍ 3	nterval 3 Outage	In				Tidrit.
COMMENTS	RFR		S INSP LIMITED		INSP DATE	SYSTEM	ID NUMBER	ITEM NUMBER
	N	N		CLR	10/19/1998	50	3-PDB1-1	B09.011.021
	Ν	N		CLR	10/19/1998	50	3-PDB1-1	B09.011.021A
	Ν	N		CLR	10/29/1998	50	3-PSL-9	B09.011.033
	Ν	. N		CLR	10/29/1998	50	3-PSL-9	B09.011.033A
Indication # 1-60 is counterbore on the pipe side of the weld. This was verified with a 70 degree shear wave, a bi-model transducer and review of the RT film.	N	Υ .		REC	10/28/1998	53A	3-53A-15-55	B09.011.043
	Ν	N		CLR	10/28/1998	53A	3-53A-15-55	B09.011.043A
Indication # 1-60 is counterbore on the pipe side of the weld. This was verified with a 70 degree shear wave, a bi-model transducer and review of the RT film.	N	Y		REC	10/28/1998	53A	3-53A-15-57	B09.011.044
	Ν	N		CLR	10/28/1998	53A	3-53A-15-57	B09.011.044A
	Ν	N		CLR	10/16/1998	50	3-PSP-12	B09.021.009
Hanger 3-50-2481A-H7 covers weld.Only 8.25" out of 9" inspected for a total of 91.7%.	N	N	91.70%	CLR	10/16/1998	50	3-PSP-15	B09.021.011
	N.	N		CLR	10/29/1998	51A	3-51A-142-21	B09.021.022
	N	N		CLR	10/29/1998	51A	3-51A-142-25	B09.021.023
	N	N		CLR	10/19/1998	51A	3RC-212-45	B09.021.032
	Ν	N		CLR	10/19/1998	51A	3RC-212-44A	B09.021.033
	Ν	N		CLR	11/06/1998	50	3-PIA2-10	B09.032.002
	Ν	N		CLR	10/17/1998	50	3-50-152-15	B09.040.002
Code Case N-481 was invoked for item number B12.010.003. An evaluation of Unit 3 RCP-3B1 was performed by Structural Integrity Associates, INC. in lieu of RT inspection of the pump casing weld. This evaluation was reviewed by the resident ANII at Oconee.	N	N		CLR	11/24/1998	50	3RCP-3B1	B12.010.003
In accordance with Code Case N-481 a VT-1 Visual examination of the external surfaces of the 3B1 RC Pump Casing weld was performed by D. L. Osborne on 10-27-98. This was done in addition to the VT-3 of the casing internal surfaces.	N	N		CLR	10/27/1998	50	3RCP-3B1-CASING	B12.020.003
and the transfer and the country internal currence.	N	N		CLR	10/30/1998	50	3RPV-CRD-54WH9	B14.010.009
	N	N		CLR	10/29/1998	50	3RPV-CRD-54WH60	B14.010.010
	N	N		CLR	10/29/1998	50	3RPV-CRD-54	B14.010.011
	N	N		CLR	10/29/1998	50	3RPV-CRD-54W61	B14.010.012
	N '	N		CLR	11/03/1998		3SGB-WG59	C01.030.002
	N	N	***	CLR	10/21/1998	03	3SGB-WG84-ZW	C03.010.007
	N	N		CLR	10/21/1998	03	3SGB-WG84-WZ	C03.010.008

In-Service Inspection Database Management System
Oconee 3 Inservice Inspection Listing

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Plant: Oconee 3

Interval 3 Outage 3

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ITEM NUMBER	ID NUMBER	SYSTEM	INSP DATE	INSP STATUS	INSPLIMITED	GEO REE	RFR	COMMENTS .
C03.020.010	3-01A-H9A	01A	11/20/1998	CLR		N	N	COMMENTS
C03.020.045	3SGB-WG87-ZW	03	10/21/1998	CLR		N	N	
C03.020.046	3SGB-WG87-WZ	03	10/21/1998	CLR		N	N	
C03.020.050	3-01A-R7	01A	11/02/1998	CLR		N	N	
C03.020.052	3-01A-H13	01A	11/02/1998	CLR		N	N	
C03.020.053	3-01A-H14	01A	11/11/1998	CLR		N	N	•
C03.020.054	3-01A-H18	01A	11/11/1998	CLR	91.00%	N	N	
C04.030.002	3-HPI-PUMP-3B	51A	09/30/1997	CLR		N	N	
C05.011.006	3LP-132-11	53A	10/06/1998	REC		Y	N	
C05.011.006A	3LP-132-11	53A	10/06/1998	CLR		N	N	
C05.011.007	3LP-132-5	53A	10/06/1998	CLR		N	N	
C05.011.007A	3LP-132-5	53A	10/06/1998	CLR		N	N	
C05.021.006	3-51A-118-13	51A	10/20/1998	CLR		N	N	
C05.021.006A	3-51A-118-13	51A	10/20/1998	CLR		N	N	
C05.021.014	3-51A-119-40	51A	10/07/1998	CLR		N	N	
C05.021.014A	3-51A-119-40	51A	10/06/1998	CLR		N	N	
C05.021.023	3-51A-121-20	51A	10/08/1998	CLR		N	N	
C05.021.023A	3-51A-121-20	51A	10/08/1998	CLR		N	N	
C05.021.039	3-51A-52-44	51A	10/12/1998	CLR		N	N	
C05.021.039A	3-51A-52-44	51A	10/08/1998	CLR		N	N	•
C05.021.042	3-51A-59-90	51A	10/07/1998	CLR		N	N	
C05.021.042A	3-51A-59-90	51A	10/06/1998	CLR	***	N	N	
C05.021.053	3-51A-67-10	51A	11/07/1998	CLR		N	N	
C05.021.053A	3-51À-67-10	51A	11/07/1998	CLR		N	N	
C05.021.063	3-51A-87-44A	51A	11/09/1998	REC		Y	N	Indication # 1 60 is a geometric reflector due to countain as
					•	•		Indication # 1-60 is a geometric reflector due to counterbore. Indication 2-60 is beam redirection at the weld grain boundry.
				•				This was verified with a 70 degree angle and review of the RT
	•							film.
C05.021.063A	3-51A-87-44A	51A	11/09/1998	CLR		N	N	
C05.021.073	3-51A-118-8	51A	10/20/1998	CLR		N	N	
C05.021.073A	3-51A-118-8	51A	10/20/1998	CLR		N	N	
C05.021.083	3-51A-50-48	51A	10/01/1998	CLR		N	N	·
C05.021.083A	3-51A-50-48	51A	10/01/1998	CLR		N	N	
C05.021.088	3HP-312-20	51A	10/07/1998	CLR		N	·N	
C05.021.088A	3HP-312-20	51A	10/06/1998	CLR		N	N	
C05.030.002	3-51A-77-15	51A	09/24/1998	CLR		N	N	
C05.041.001	3-53B-52-3	53B	09/23/1998	CLR		N	N	
							- •	

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Oconee 3 Inservice Inspection Listing
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ITEM NUMBER	ID NUMBER	SYSTEM	INSP DATE	INSP STATUS	S INSP LIMITED	GEO REF	RFR	COMMENTS
C05.051.001	3-01A-10-1	01A	11/04/1998	REC		Y	N	Indication # 1-60 and indication # 2-60 were both determined to be backing ring. RT film confirms determination.
C05.051.001A	3-01A-10-1	01A	11/04/1998	CLR		N	N	a solution.
C05.051.002	3-01A-10-19	01A	11/05/1998	REC		Y	N	Indication # 1-60 is a geometric reflector due to counterbore. Indication # 2-60 is a geometric reflector from a backing ring. This was verified with a 70 degree angle, bi-model transducer and review of the RT film.
C05.051.002A	3-01A-10-19	01A	11/05/1998	CLR		N	Ν	
C05.051.016	3FWD-74-A	03	10/20/1998	REC		Υ	N	Indication # 1-60 is an id geometric reflector due to weld root to backing ring configuration. This was verified after plotting and review of the RT film.
C05.051.016A	3FWD- 74- A	03	10/17/1998	CLR		N	Ν	
C05.051.024	3-03A-15-8	03A	10/21/1998	CLR		N	Ν	
C05.051.024A	3-03A-15-8	03A	10/21/1998	CLR		N	N	
C05.051.029	3-14B-116-42	14B	09/30/1998	CLR		N	Ν	
C05.051.029A	3-14B-116-42	14B	09/30/1998	CLR		N	N	
C05.051.037	3LPS-478-40A	14B	09/30/1998	REC	 '	Y	N	Indication # 1-60 is a geometric reflector from the corner of a backing ring. This was verified with a 70 degree angle, and a 60 degree and 70 degree angle from the opposite side of the weld. RT film was not available but the weld ticket indicated a backing ring.
C05.051.037A	3LPS-478-40A	14B	09/30/1998	CLR		N	Ν	
C05.081.004	3MS-12B-J	01A	10/28/1998	CLR		N	N	
D02.020.001	3-01A-HTT-2300	01A	07/30/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
D02.020.005	3-01A-R5	01A	10/21/1998	CLR		N	Ν	,
D02.020.007	3-01A-R13A	01A	10/21/1998	REC		N	. N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
D02.020.037	3-03A-H7	03A	08/19/1998	CLR		N	Ν	,
D02.020.042	3-03A-SR166	03A	10/30/1998	REC	•••	N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
D02.020.044	3-03A-SR179	03A	08/19/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
D02.020.056	3-03A-H6	03A	08/20/1998	CLR		N	Ν	·
D02.020.074	3-03A-SR150	03A .	07/22/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
D02.020.077	3-03A-SR181	03A	08/19/1998	CLR		N	Ν	,

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ITEM NUMBER	ID NUMBER	SYSTEM	INSP DATE		INSP LIMITED		RFR	COMMENTS
D02.020.078	3-03A-SR183	03A	08/20/1998	REC	*	N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
D02.020.084	3-03A-SR46	03A	07/30/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
D02.020.085	3-03A-SR5	03A	10/21/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order 98103480 was written to correct problems.
D02.020.097	3-07A-SR18	07A	07/22/1998	CLR		N	Ν	
D02.020.101	3-07A-SR7	07A	07/22/1998	CLR		N	Ν	
D02.020.140	3-14B-WM-7001	14B	08/13/1998	CLR		N	N	
D02.020.145	1-WL-100A-K0005	WL	08/24/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order # 98109247 was written to correct problems.
D02.040.008	3-03A-H157	03A	11/10/1998	CLR		N	N	'
D02.040.009	3-03A-H165	03A	10/30/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.012.001	3-50-H1A	50	10/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.012.002	3-50-H6	50	10/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Indications 1 & 2 will be resolved with minor modification # ONOE-11686.
F01.012.005	3-51A-H2A	51A	10/14/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.012.008	3-50-RCPM-3A1-SS2	50	10/14/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.020.023	3-53B-H118	53B	08/06/1998	CLR		N	Ν	1
F01.020.026	3-53B-H20	53B	08/06/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.020.028	3-53B-H43	53B	08/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.020.036	3-54A-SR20	54A	08/19/1998	CLR		N	N	and the support was reality to be acceptable for service.
F01.020.038 .	3-55-SR1	55	09/15/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.020.041	3-01A-H13	01A	10/30/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.020.042	3-01A-H14	01A	11/11/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering

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	ITEM NUMBER	ID NUMBER	SYSTEM	INSP DATE		INSP LIMITED		RFR	
			0.0.20	THOI DITTE	11401 01A100	INGI LIMITED	GEO KEF	KFK	COMMENTS
	F01.020.046	13-51B-H14	51B	08/11/1998	REC		N	N	and the support was found to be acceptable for service.
							••	.,	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work
									Order 98103394 was written to correct problems.
	F01.021.029	3-55-DE002	55	08/19/1998	CLR		N	N	
	F01.021.033	3-51B-DE014	51B	10/30/1998	CLR		N	Ν	
	F01.022.002	3-01A-H9A	01A	10/14/1998	CLR		N	N	
	F01.022.018	3-55-H33	55	08/19/1998	CLR		N	Ν	
	F01.022.019	3-56-H10	56	10/31/1998	CLR		N	N	
	F01.022.023	3-01A-R7	01A	10/30/1998	REC		N	Ν	Discrepancies that were found were reviewed by civil engineering
	5 04.000.004								and the support was found to be acceptable for service.
	F01.022.024	3-01A-H18	01A	11/11/1998	REC		N	Ν	Discrepancies that were found were reviewed by civil engineering
	E04 024 000	2 004 110	224						and the support was found to be acceptable for service.
	F01.031.008	3-03A-H6	03A	08/20/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering
									and the support was found to be acceptable for service. Work
	F01.031.013	3-07A-SR7	07A	07/22/1998	REC		N.I.		Order 98103389 was written to correct problems.
		o orreorer	017	0112211990	REC		N	N	Discrepancies that were found were reviewed by civil engineering
	F01.031.020	3-14B-WM-7001	14B	08/13/1998	CLR		N	NI.	and the support was found to be acceptable for service.
	F01.040.009	3-EFDW-TD-PU		07/22/1998	REC		N	N N	Dispressoration that were found were at 11 at 11
					1123		14	14	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
	F01.040.010	3-EFDW-MD-PU-A	03A	07/22/1998	CLR	***	N	N	and the support was found to be acceptable for service.
	F01.040.022	1-GOV-OIL-PUMP-A	WL	08/24/1998	CLR		N	N	
	F01.040.025	3-RCSR-COOLER-3A	51A	08/12/1998	CLR		N	N	Surface rust on bolting. No degradation noted.
	F01.050.001	3-03-SR3	03	07/22/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering
	-								and the support was found to be acceptable for service.
	F01.050.002	3-NPS-03-H28	03A	10/14/1998	CLR		N	Ν	.,
	F01.050.003	3-53-H3	53A ୍	10/14/1998	CLR		N	Ν	
	F01.050.004	3-56-H10	56	10/31/1998	CLR		N	Ν	
	F01.050.005	3-50-H12	50	10/13/1998	REC		N	Ν	Discrepancies that were found were reviewed by civil engineering
									and the support was found to be acceptable for service. Work
	F01 050 000	0.50.144							Order 98096060 was written to correct problems.
	F01.050.006	3-50-H1A	50	10/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering
									and the support was found to be acceptable for service. Work
	F01.050.007	3-50-H2A	50	10/13/1998	REC		· Al		Order 98052419 and 98014449 were written to correct problems.
		O OUTIZA	30	10/13/1996	KEC		N	N	Discrepancies that were found were reviewed by civil engineering
									and the support was found to be acceptable for service. Work

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ITEM NUMBER	ID NUMBER	SYSTEM	INSP DATE	INSP STATUS	INSP LIMITED	GEO REF	RFR	COMMENTS
								Order 98052416 was written to correct problems.
F01.050.008	3-50-H3A	50	10/25/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.009	3-51A-H2A	51A	10/14/1998	CLR		N	N	and the support that learns to be associable for service.
F01.050.010	3-03-H6B	03	10/14/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order 98103388 was written to correct problems.
F01.050.011	3-03-H7A	03	10/13/1998	CLR		N	Ν	
F01.050.012	3-50-H10	50	10/13/1998	CLR		N	Ν	
F01.050.013	3-50-H11	50	10/13/1998	CLR	***	N	Ν	
F01.050.014	3-50-H8	50	10/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.015	3-50-H9	50	10/13/1998	CLR		N	Ν	·
F01.050.016	3-50-H1	50	10/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.017	3-50-H3	50	10/13/1998	CLR		N	Ν	•
F01.050.018	3-57-H13A	57	10/13/1998	CLR		N	Ν	
F01.050.019	3-57-H15	57	10/13/1998	CLR		N	Ν	
F01.050.020	3-57-H16	57	10/13/1998	CLR		N	Ν	
F01.050.021	3-57-H17	57	10/13/1998	CLR		N	Ν	
F01.050.022	3-57-H20	57	10/13/1998	CLR		N	Ν	
F01.050.023	3-57-H21	57	10/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.024	3-57-H23	57	10/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.025	3-57-H25	57	10/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.026	3-57-H7	57	10/13/1998	CLR		N	Ν	and the capper has really to be asseptable for continue.
F01.050.027	3-57-H9	57	10/13/1998	CLR		N	N	
F01.050.028	3-01A-H2A	01A	10/14/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order 98052422 was written to correct problems.
F01.050.029	3-01A-H2B	01A	10/14/1998	CLR		N	Ν	·
F01.050.030	3-01A-H8A	01A	10/14/1998	CLR		N	Ν	
F01.050.031	3-01A-H8B	01A	10/14/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.032	3-03A-SR103PO	03A	07/22/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering

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ITEM NUMBER	ID NUMBER	SYSTEM	INSP DATE	INSP STATUS	INSP LIMITED	GEO REF	RFR	COMMENTS
F01.050.033	3-03A-SR104PO	03A	07/22/1998	REC		N	N	and the support was found to be acceptable for service. Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work
F01.050.034	3-03A-SR100PO	03A	07/30/1998	CLR		N	N	Order 98052411 was written to correct problems.
F01.050.035	3-03A-SR101PO	03A	07/30/1998	CLR		N	N	Piston setting acceptable per sect. 9.2 of spec.
F01.050.036	3-03A-SR102PO	03A	07/30/1998	CLR		N	N	ristori setting acceptable per sect. 9.2 or spec.
F01.050.037	3-56-SR107	56	08/13/1998	REC	'	Ν	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.038	3-56-SR109	56	08/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order 98052425 was written to correct problems.
F01.050.039	3-56-SR112	56	08/13/1998	CLR		N	N	The state of the s
F01.050.040	3-56-SR116	56	08/13/1998	CLR		N	N	
F01.050.041	3-56-SR119	56	08/13/1998	CLR		N	N	
F01.050.042	3-51A-SR14	51A	10/31/1998	REC	***	N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.043	3-01A-R10	01A	07/29/1998	CLR		N	N	1,
F01.050.044	3-01A-R12	01A	07/30/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order 98052412 was written to correct problems.
F01.050.045	3-01A-R9	01A	07/29/1998	CLR		N	Ν	·
F01.050.046	3-53B-SR22	53B	08/06/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.047	3-54A-SR22	54A	08/06/1998	REC		N	N .	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order # 98052432 was written to correct problems.
F01.050.048	3-54A-SR7	54A	08/06/1998	REC	~~-	N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.049	3-54A-SR14	54A	08/19/1998	CLR		N	N	to be supplied to the description of the section.
F01.050.050	3-01A-R4	01A	07/30/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.051	3-01A-R8	01A	07/30/1998	CLR		N	N	pp and the second to the secon
F01.050.052	3-01A-R12	01A	07/30/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order # 98050358 was written to correct problems.
F01.050.053	3-01A-R11	01A	07/29/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering

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				In	terval 3 Outag	e 3		02/01/1999
ITEM NUMBER	ID NUMBER	SYSTEM	INSP DATE	INSP STATUS	INSP LIMITED	GEO REF	RFR	COMMENTS
F01.050.054	3-01A-R4	01A	07/30/1998	REC		N	N	and the support was found to be acceptable for service. Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order 98103481 was written to correct problems.
F01.050.055	3-53B-SR32	53B	10/31/1998	CLR		N ·	- N	order do too for was written to correct problems.
F01.050.056	3-53B-SR33	53B	10/31/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.057	3-53B-SR38	53B	08/06/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order # 98052426 was written to correct problems.
F01.050.058	3-53B-SR39	53B	08/06/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order # 98052431 was written to correct problems.
F01.050.059	3-13-SR1	13	07/29/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.060	3-13-SR3	. 13	07/29/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.061	3-13-SR4	13	07/30/1998	REC		N	N	Discrepancies that were found to be acceptable for service. Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order # 98019185 was written to correct problems.
F01.050.062	3-07A-DE027	07A	07/22/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.063	3-03-DE001	03	07/29/1998	CLR		N	N	and a support was really to be described for ectivities.
F01.050.064	3-03-SR1	03	07/22/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work Order 98103870 was written to correct problems.
F01.050.065	3-03-SR10	03	07/30/1998	CLR		N	N	The second secon
F01.050.066	3-03-SR11	03	07/30/1998	CLR		N	Ν	
F01.050.067	3-03-SR2	03	07/22/1998	CLR	,	N	Ν	Piston setting acceptable per sect. 9.2 of OS-0027.00-00-0002.
F01.050.068	3-03A-DE054	03A	07/30/1998	CLR		N	N	3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
F01.050.069	3-02A-DE016	01A	07/22/1998	CLR		N	N	
F01.050.070	3-03A-DE053	03A	07/22/1998	REC		. N	N	Unit in operation. System was not in operation. Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.071	3-53B-DE013	53B	08/06/1998	CLR		N	Ν	·
F01.050.072	3-56-DE005	56	08/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.

In-Service Inspection Database Management System Oconee 3 Inservice Inspection Listing

EOC 17

Plant: Oconee:	3			Inservice Inspe	ction Listing		Page 10	
ITEM NUMBER	ID NUMBER	0.4075.			nterval 3 Outag			02/01/1999
F01.050:073	3-56-DE007	SYSTEM	INSP DATE		S INSP LIMITED		RFR	COMMENTS
F01.050.074	3-53B-DE008	56 53B	08/13/1998	CLR		N	N	
F01.050.075	3-56-DE008	56	08/19/1998	CLR		N	N	
F01.050.076	3-03-H6034	03A	10/31/1998	CLR		N	N	
F01.050.077	3-03-H6036	03A 03A	10/14/1998	CLR		N ·	N	
F01.050.077	3-03-H6038		10/14/1998	CLR		N	N	
F01.050.079	3-03-H6187	03A	10/13/1998	CLR		N	N	•
F01.050.079	3-57-NWIZ	03A	10/13/1998	CLR		N	N	•
F01.050.080		57	10/13/1998	CLR		N	N	
F01.050.081	3-50-H7	50	10/13/1998	CLR		N	N	
	3-03A-H204	03A	07/22/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.
F01.050.083	3-03A-SR33	03A	07/30/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Work
F01.050.084	3-51A-H308	51A	08/19/1998	CLR		N	N	Order 98050369 was written to correct problems.
F01.050.085	3-51A-H309	51A	08/19/1998	CLR		N	N	
F01.050.086	3-51A-H294	51A	08/19/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering
				-			•••	and the support was found to be acceptable for service.
F01.050.087	3-51A-H304	51A	08/19/1998	CLR		N	N	and the support was found to be acceptable for service.
F01.050.088	3-51A-H318	51A	10/31/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering
								and the support was found to be acceptable for service.
F01.050.089	3-01A-R13	01A	07/30/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering
								and the support was found to be acceptable for service.
F01.050.090	3-53B-SR46	53B	08/13/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering
								and the support was found to be acceptable for service.
F01.050.091	3-54A-R1000	54A	08/13/1998	CLR		N	N	11
F01.050.092	3-54A-R1001	54A	08/06/1998	CLR		N	N	
F01.050.093	3-54A-SR23	54A	08/13/1998	REC		N	Ν	Discrepancies that were found were reviewed by civil engineering
								and the support was found to be acceptable for service. Work Order # 98052427 was written to correct problems.
F01.050.094	3-51B-H62	51B	10/30/1998	CLR		N	N	order is occoped was written to correct problems.
F01.050.095	3-54A-SR12	54A	08/19/1998	CLR		N	N	
F01.050.096	3-01A-R10	01A	07/30/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering
						,	• •	and the support was found to be acceptable for service.
F01.050.097	3-01A-R6	01A	07/30/1998	REC		N	N	Discrepancies that were found were reviewed by civil engineering
							•	and the support was found to be acceptable for service.
F01.050.098	3-01A-R9	01A	07/30/1998	CLR		N	N	and dapport mad found to be acceptable for service.

In-Service Inspection Database Management System Oconee 3 Inservice Inspection Listing

EOC 17

Plant: Oconee 3

02/01/1999		ge 3	nterval 3 Outag	ir				T WITE
COMMENTS	RFR	D GEO REF	S INSP LIMITE	INSP STATU	INSP DATE		ID NUMBER	ITEM NUMBER
Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service. Piston setting acceptable by Section 9.2 of spec OS-0027.00-00-0002	N	N		REC	07/22/1998	01A	3-01A-R3	F01.050.099
Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.	N	N		REC	07/22/1998	07A	3-07A-H70	F01.050.100
Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.	N	N		REC	07/22/1998	07A	3-07A-H71	F01.050.101
Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.	N	N		REC	07/22/1998	07A	3-07A-H72	F01.050.102
Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.	N	N		REC	07/22/1998	07A	3-07A-H74	F01.050.103
and the support was found to be acceptable for service.	N	N		CLR	07/22/1998	07A	3-07A-DE031	F01.050.104
	N	N		CLR	07/22/1998	13	3-13-DE002	F01.050.105
Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.	N	N		REC	08/06/1998	53B	3-53B-SR31	F01.050.106
3	N	N		CLR	10/14/1998	50	3-50-RCPM-3A1-SS1	F01.050.107
	N	N		CLR	10/14/1998	50	3-50-RCPM-3A1-SS2	F01.050.108
	N	N		CLR	10/14/1998	50	3-50-RCPM-3A1-SS3	F01.050.109
	N	N		CLR	10/25/1998	50	3-50-RCPM-3A2-SS1	F01.050.110
	N	N		CLR	10/14/1998	50	3-50-RCPM-3A2-SS2	F01.050.111
	Ν	N		CLR	10/14/1998	50	3-50-RCPM-3A2-SS3	F01.050.112
	N	N		CLR	10/13/1998	50	3-50-RCPM-3B1-SS1	F01.050.113
Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.	N	N		REC	10/13/1998	50	3-50-RCPM-3B1-SS2	F01.050.114
Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.	N	N		REC	10/13/1998	50	3-50-RCPM-3B1-SS3	F01.050.115
and the support was found to be acceptable for service.	N	N		CLR	10/13/1998	50	3-50-RCPM-3B2-SS1	F01.050.116
	N	N		CLR	10/13/1998	50	3-50-RCPM-3B2-SS2	F01.050.117
Discrepancies that were found were reviewed by civil engineering and the support was found to be acceptable for service.	N	N		REC	10/13/1998	50	3-50-RCPM-3B2-SS3	F01.050.118
and the support was found to be acceptable for service.	N	N		CLR	11/12/1998	50	3-RCP-3A1	G01.001.001
	N	N		CLR	11/12/1998	50	3-RCP-3A2	G01.001.002
	N	N		CLR	11/19/1998	50	3-RCP-3B1	G01.001.003
	Ń	N		CLR	10/23/1998	50	3-RCP-3B2	G01.001.004
Sizing was performed on indication # 3 from previous inspection reports. This was an area that showed up as a PT indication on	N	N		REC	10/25/1998	51A	3-PDA1-46	G02.001.005A

In-Service Inspection Database Management System Oconee 3 Inservice Inspection Listing

EOC 17

Plant: Oconee 3

Interval 3 Outage 3

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				02/01/1999				
ITEM NUMBER	ID NUMBER	SYSTEM	INSP DATE	INSP STATUS	INSP LIMITE	D GEO REF	RFR	COMMENTS
								the nozzle bore. There was no change on the thru-wall depth reported on the previous inspection.
G02.001.005B	3-PDA2-46	51A	10/25/1998	CLR		N	N.	reported on the previous inspection.
G02.001.005C	3-PDB1-46	51A	10/25/1998	CLR		N	N	
G02.001.005D	3-PDB2-46	51A	10/25/1998	CLR		N	N	
G02.001.006A	3-PDA1-11	51A	10/23/1998	CLR		N	N	
G02.001.006B	3-PDA2-11	51A	10/23/1998	CLR		N	N	
G02.001.006C	3-PDB1-11	51A	10/23/1998	CLR		N	N	
G02.001.006D	3-PDB2-11	51A	10/23/1998	CLR		N	Ν	
G02.001.007A	3-PDA1-47	51A	10/23/1998	CLR		N	N	•
G02.001.007B	3-PDA2-47	51A	10/23/1998	CLR		N	Ν	
G02.001.007C	3-PDB1-47	51A	10/23/1998	CLR		N	Ν	
G02.001.007D	3-PDB2-47	51A	10/23/1998	CLR		N	Ν	
G02.001.008A	3RC-211-56	51A	10/24/1998	CLR		N	N	
G02.001.008B	3RC-210-24A	51A	10/24/1998	CLR		N	Ν	
G02.001.008C	3RC-212-44A	51A	10/23/1998	CLR		N	N	
G02.001.008D	3RC-213-26	51A	10/23/1998	CLR		N	Ν	
G02.001.009B	3RC-212-43C	51A	10/23/1998	CLR		N	Ν	
G02.001.010A	3RC-211-54	51A	10/24/1998	CLR		N	N	
G02.001.010B	3RC-210-31	51A	10/24/1998	CLR		N	Ν	
G02.001.010C	3RC-212-45	51A	10/23/1998	CLR		N	Ν	
G02.001.010D	3RC-213-27	51A	10/23/1998	CLR		N	Ν	
G02.001.011A	3A1-THERM SLEEVE	51A	10/25/1998	CLR		N	N	Film ID with permanent markers. "0" placed at 0 degrees, "1" placed at 90 degrees. 0 interval shot with (2) Fuji 50.
G02.001.011B	3A2-THERM SLEEVE	51A	10/25/1998	CLR		N	N	Film ID with permanent markers. "0" placed at 0 degrees, "1" placed at 90 degrees.
G02.001.011C	3B1-THERM SLEEVE	51A	10/24/1998	REC		N	N	ID's marked with permanent marker. Top view has 1/4" gap on nozzle side. Side view has 3/4" gap on nozzle side. The # 1 is at 270 degrees on the pipe side. The # 0 is at 0 degrees on the pipe side.
G02.001.011D	3B2-THERM SLEEVE	51A	10/24/1998	REC		N	N	PIP# 3-0-98-5073 ID's marked with permanent marker. Top view has 9/16" gap on nozzle side. Side view has 1/4" gap on nozzle side. The # 1 is at 90 degrees. The # 0 is at 0 degrees. PIP # 3-0-98-5073
G09.001.002	3-51A-50-61	51A	09/24/1998	CLR		N	N	
G09.001.012	3-53B-38-25	53B	10/01/1998	CLR		. N	N	

In-Service Inspection Database Management System
Oconee 3 Inservice Inspection Listing

EOC 17

Plant: Oconee 3

Interval 3 Outage 3

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							-		
	ITEM NUMBER	ID NUMBER	SYSTEM	INSP DATE	INSP STATUS	INSP LIMITED	GEO REF	RFR	COMMENTS
	G09.001.017	3-53B-LPB-2	53B	10/01/1998	CLR		N	N	
ı	G09.001.033	3-56-14-61	56	09/23/1998	CLR		N	N	
	G10.001.001	3-PHA-13	50	11/03/1998	CLR		Ň	N	Area next to weld ground out where pipe experienced boric acid
									attack as per W/O # 98098108.
ŀ	G10.001.002	3-PHA-14	50	10/31/1998	CLR		N	N	,
	G10.001.003	3-PHA-15	50	10/31/1998	CLR		N	Ν	
ŀ	G11.001.001	3RCP-3A2	50	10/20/1998	CLR		. N	Ν	
l	G11.001.002	3RCP-3B1	50	10/29/1998	CLR		N	N	
	G12.001.003	3-51B-30-28	51B	11/02/1998	CLR		N	N	
	G12.001.008	3-51B-32-52	51B	11/02/1998	CLR		N	Ν	
	G12.001.009	3-51B-32-77	51B	11/02/1998	CLR		N	N	
ŀ	G12.001.015	3-51B-57-14	51B	09/24/1998	CLR		N	N	

5.2 Limited examinations (i.e., less than or equal to 90% of the required examination coverage obtained) identified during Outage 17 are shown below. A copy of the Requests for Relief are contained in Section 9.0 of this report

Request for Relief Serial Number
98-01
98-03
98-03
98-03
98-03
98-03
98-03
99-01
99-01
99-01
99-01
98-01
98-01
ONS-009
ONS-009

6.0 Reportable Indications

Outage 17 had no reportable indications.



7.0 Personnel, Equipment and Material Certifications

All personnel who performed or evaluated the results of inservice inspections from March 15, 1997 to December 19, 1998 at Oconee Nuclear Station, Unit 3, were certified in accordance with the requirements of 1989 Edition of ASME Section XI with no addenda. The appropriate certification records for each inspector are on file at Oconee Nuclear Station or copies can be obtained by contacting the Duke Energy's Corporate Office in Charlotte, North Carolina.

Records of periodic calibration of inspection equipment are on file at Oconee Nuclear Station or copies can be obtained by contacting the Duke Energy's Corporate Office in Charlotte, North Carolina.

Records of materials used, (i.e., NDE consumables) are on file at Oconee Nuclear Station or copies can be obtained by contacting the Duke Energy's Corporate Office in Charlotte, North Carolina.

8.0 Corrective Action

PIP 3-O98-5073 was written to document recordable indications identified during RT examination of item numbers G02.001.011C and G02.001.011D. A copy of PIP 3-O98-5073 is located in Section 9 of this report.

PIP 3-O98-5083 was written to document a problem found with weld locations identified on isometric 3RC-211. The problem was identified during the ISI preparation and inspection of a couple of welds that are on isometric 3RC-211. A copy of PIP 3-O98-5083 is located in Section 9 of this report.

9.0 Reference Documents

The following reference documents apply to the inservice inspection performed during Outage 17 at Oconee 3.

Letter dated February 11, 1999 to inform the NRC of our intent to use Code Case N-481

Code Case N-481

Evaluation of Reactor Coolant Pump 3B1 performed by Structural Integrity Associates, Inc.

Duke Power Company Request for Relief # 99-01

Duke Power Company Request for Relief # 98-01

Duke Power Company Request for Relief # 98-03

Duke Power Company Request for Relief # ONS-009

Duke Power Company Problem Investigation Process Report 3-098-5073

Duke Power Company Problem Investigation Process Report 3-O98-5083



W. R. McCollum, Jr.

Vice President

February 11, 1999

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

Subject: Duke Power Company

Oconee Nuclear Station, Unit 3

Docket No. 50-287

Third Ten-Year Inservice Inspection Interval

Unit 3 EOC 17 Inservice Inspection

Use of NRC Approved Code Case

This is to inform you that Duke Energy Corporation has elected to apply ASME Code Case N-481 to Reactor Coolant Pump 3B1 during Oconee Unit 3 End of Cycle 17 Refueling Outage, in lieu of inservice inspection requirements of pressure retaining welds of pump casings (Category B-L-1) as delineated in Table IWB-2500-1 of ASME Boiler and Pressure Vessel Code, Section XI.

ASME Code Case N-481 has been listed in Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability ASME Section XI Division 1" as being approved by the NRC for use in Inservice Inspections.

This code case was previously used during the Unit 2 End of Cycle 16 Refueling Outage, as reported in a letter dated June 1, 1998, and in the Inservice Inspection Report, dated August 19, 1998, for that outage.

It is our expectation that this code case may be invoked in future outages on any of our Oconee Units. In accordance with the provisions of ASME Code Case N-481, an evaluation to demonstrate the safety and serviceability of the pump casing must be performed whenever this code case is used. The details of such evaluations for future outages will be included in the applicable Refueling Outage Inservice Inspection Report, when it is submitted to the NRC.

U. S. Nuclear Regulatory Commission
February 11, 1999
Page 3

A report containing the details of the latest inspection and evaluation will be included in the Oconee Unit 3, End of Cycle 17 Refueling Outage, Inservice Inspection Report when it is submitted to the NRC.

If there are any questions or further information is needed you may contact R. P. Todd at (864) 885-3418.

Very truly yours,

W. R. McCollum, Or

Site Vice President

XC:

Mr. D. E. LaBarge, Project Manager Office of Nuclear Reactor Regulation U. S. Nuclear Regulatory Commission Washington, DC 20555

Mr. L. A. Reyes Regional Administrator, Region II U. S. Nuclear Regulatory Commission

Mr. M. A. Scott Senior NRC Resident Inspector Oconee Nuclear Station

Virgil R. Autry, Director Division of Radioactive Waste Management Bureau of Land and Waste Management Department of Health & Environmental Control 2600 Bull Street Columbia, SC 29201 U. S. Nuclear Regulatory Commission February 11, 1999 Page 3

bxc:

T. J. Coleman

R. G. Rouse

L. C. Keith

T. D. Brown

R. P. Todd

D. E. DeMart

J. S. Warren

J. O. Barbour

R. L. Gill EC12R

ELL ECOSO

M. B. Chapman

J. C. Shropshire

CASES OF ASME BOILER AND PRESSURE VESSEL CODE

Approval Date: March 5, 1990

See Numerical Index for expiration and any reaffirmation dates.

Case N-481
Alternative Examination Requirements for Cast
Austenitic Pump Casings
Section XI, Division 1

Inquiry: When conducting examination of cast austenitic pump casings in accordance with Section XI, Division 1, what examinations may be performed in lieu of the volumetric examinations specified in Table IWB-2500-1, Examination Category B-L-1, Item B12.10?

Reply: It is the opinion of the Committee that the following requirements shall be met in lieu of performing the volumetric examination specified in Table IWB-2500-1, Examination Category B-L-1, Item B12.10:

- (a) Perform a VT-2 visual examination of the exterior of all pumps during the hydrostatic pressure test required by Table IWB-2500-1, Category B-P.
- (b) Perform a VT-1 visual examination of the external surfaces of the weld of one pump casing.

- (c) Perform a VT-3 visual examination of the internal surfaces whenever a pump is disassembled for maintenance.
- (d) Perform an evaluation to demonstrate the safety and serviceability of the pump casing. The evaluation shall include the following:
- (1) evaluating material properties, including fracture toughness values:
- (2) performing a stress analysis of the pump casing;
 - (3) reviewing the operating history of the pump:
 - (4) selecting locations for postulating flaws;
- (5) postulating one-quarter thickness reference flaw with a length six times its depth;
- (6) establishing the stability of the selected flaw under the governing stress conditions;
- (7) considering thermal aging embrittlement and any other processes that may degrade the properties of the pump casing during service.
- (e) A report of this evaluation shall be submitted to the regulatory and enforcement authorities having jurisdiction at the plant site for review.

Subject: ISI Item Number B12.010.003 and Code Case N-481

In lieu of conducting the volumetric examination specified by Section XI in Table IWB-2500-1, Examination Category B-L-1, Item B12.10, Oconee Nuclear Station choose to invoke Code Case N-481 for 3B1 Reactor Coolant Pump. This letter is to document using the evaluation furnished by Structural Integrity Associates, Inc. as a means to clear Item Number B12.010.003, I.D. Number 3-RCP-3B1, from the Unit #3 EOC 17 refueling outage.

Reviewed by: _	T.G. laman	Date:
ANII Raviour	SUBC	Data: 12.9-98

Report No.: SIR-98-077

Revision No.: 0

Project No.: DUKE-20Q File No.: DUKE-20Q-402

November 1998

ASME Code Case N-481 Evaluation of Oconee Unit 3 Reactor Coolant Pump 3B1

Prepared for: Duke Energy

Prepared by:
Structural Integrity Associates, Inc.
San Jose, California

Reviewed by:

Reviewed by:

Reviewed by:

A. J. Giannuzzi

Approved by: N. G. Cofie

Date: 11/24/98

Date: 11/24/98

Date: ///24198

Date: 11/24/98

REVISION CONTROL SHEET

Document Number: SIR-98-077

Title: ASME Code Case N-481 Evaluation of Oconee Unit 3 Reactor Coolant Pump 3B1

Client: Duke Energy

SI Project Number: DUKE-20Q

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			i	
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4.0	4-1 - 4-40			
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1.0 INTRODUCTION

1.1 Background

ASME Boiler and Pressure Vessel Code, Section XI requires periodic inservice inspection of various nuclear power plant components. Specifically, inservice inspection requirements of pressure retaining welds of pump casings (Category B-L-1) are delineated in Table IWB-2500-1 of the Code. The requirements call for periodic visual and volumetric examinations of the weldments using radiography or ultrasonic inspection (UT). However, inservice inspection of cast stainless steel pump casings using radiography or UT has proved to be a very difficult challenge in the nuclear industry. In recognition of this difficulty, alternate examination requirements have been provided in Code Case N-481 [1], shown in Appendix A of this document. These alternate requirements consist of visual inspections and an analytical evaluation to demonstrate the safety and serviceability of the pump casings in the presence of an assumed flaw. Duke Energy has opted to use Code Case N-481 in application to the reactor coolant pump (RCP) 3B1 at Oconee Unit 3. This document addresses the analytical aspects of Code Case N-481 as it applies to the RCP 3B1 at Oconee Unit 3.

1.2 Description of Reactor Coolant Pump Casing 3B1 at Oconee Unit 3

The four reactor coolant pumps at Oconee Unit 3, including RCP 3B1, were manufactured by Bingham Pump Company. All four pumps are identical and consists of vertical, single-stage bottom suction, horizontal-discharge centrifugal-diffuser casing units currently classified as Type F in ASME Code Section III, Subarticle NB-3400. As shown in Figure 1-1, the pump casing is a shell with a suction nozzle at the bottom and a bolted flange at the other end. The axis of symmetry of the suction nozzle is aligned with the axis of rotation of the pump shaft. All four pump casings were fabricated from ASTM A351, Grades CF8 and CF8M cast austenitic stainless steel and consisted of several components which were cast separately and welded together. The main components of the pump casing are

- a) lower case half
- b) upper case half

- c) suction piece
- d) quad volute and the lower case half. The upper case half are Grade CF8M while the suction piece and the quad volute are Grade CF8.

1.3 Objective and Organization

The objective of this document is to address the safety and serviceability requirements of ASME Code Case N-481 for RCP 3B1 at Oconee Unit 3 to assure that postulated flaws in the pump casing at critical locations will be stable, considering the operating stresses and material properties of the pump casings. Section 2 of this report discusses previous inspections that have been performed on the pump casing, and the inspection results. Section 3 discusses the background of Code Case N-481, the items covered by the ASME Code Case, and the safety factors used with this Code Case. Section 4 provides the specific evaluation performed using this Code Case. Section 5 presents the conclusions of the evaluation, and Section 6 provides the references used in the evaluation.

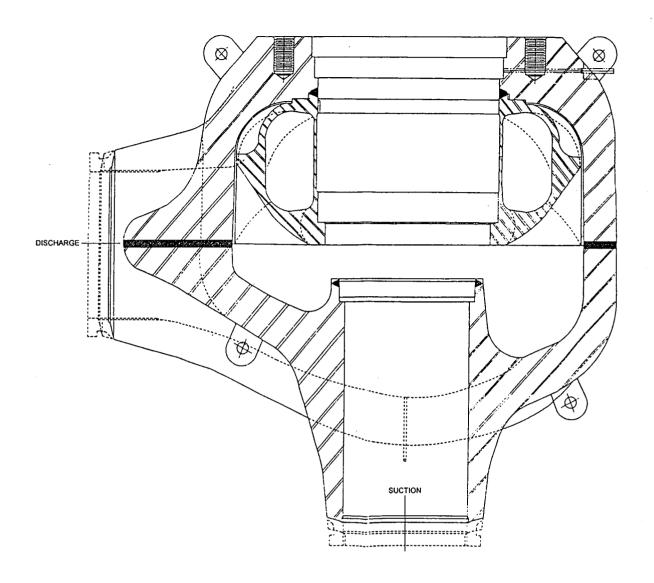


Figure 1-1. Oconee Unit 3 Reactor Coolant Pump Assembly

2.0 PREVIOUS INSPECTIONS

Pre-service inspections were performed on RC Pump 3B1 casing after fabrication. All relevant indications identified during the inspections which exceeded the acceptance standards were repaired. The pump casing was solution heat treated after the repairs to ensure that local weld residual stresses resulting from the repairs were minimized.

The casing was for RCP 3B1 inspected during end-of-cycle 9 (EOC-9) at Oconee Unit 3. The inspections were performed using radiographic techniques (RT). In addition, the internal surfaces received a visual examination. No indications were observed during these inspections.

3.0 BACKGROUND ON ASME CODE CASE N-481

A review of data collected in EPRI's "Cast Austenitic Stainless Steel Sourcebook" [2] shows that fabrication-related defects, such as slag inclusions and porosity, are not uncommon during the manufacturing process of stainless steel castings. However, whenever such defects are identified by surface or volumetric inspection during fabrication, they are usually excavated and weld repaired. Examinations and repairs during the fabrication process are accomplished with relative ease, since they are performed in a shop environment.

Ultrasonic examination and radiography of pump casings, once in service, are very difficult and time consuming. As noted by the NRR in response to a previous Relief Request, and the subsequent Safety Evaluation [3], the disassembly of a reactor coolant pump for the sole purpose of performing a volumetric examination of the pump casing welds is not practical. There is considerable personnel radiation exposure and significant outage time associated with removal of the pump shaft. Industry operating experience with cast stainless steel pressure components has been good. Furthermore, no detrimental service induced degradation of pump casing welds, detected with various inspection techniques, has been reported.

Because of the difficulties associated with the examination of pump casing welds after being placed in service, ASME Code Case N-481 (shown in Appendix A) addresses alternate examinations and evaluations that may be performed in lieu of the volumetric examinations specified in Table IWB-2500-1 of Section XI, Division 1 of the ASME Code for Examination Category B-L-1. Examination Category B-L-1 relates to pressure retaining welds in pump casings; hence, the application of this code case is limited to the pump casing welds, and the adjacent base metal. The internal diffuser vanes, their attachment welds, and other attachment welds, which are not pressure retaining, are, therefore, excluded from this evaluation.

In addition to performing visual examinations (VT-1, VT-2 and VT-3), the code case outlines a seven-step evaluation procedure to demonstrate the safety and serviceability of the pump casings. Key to this procedure is the demonstration that an assumed quarter-thickness flaw, with length six times its depth, will remain stable, considering the stresses and material properties (base and weld materials) of the pump casings.

The ASME Code Case N-481 evaluation procedure is very similar to that in Appendix G of Sections III and XI of the ASME Code, which provides fracture toughness criteria for protection against failure of reactor pressure vessels, in that a similar postulated flaw is assumed for the analysis in both cases. The Code Case does not provide any guidance on safety factors to be used in the evaluation. Therefore, for the evaluation presented herein, safety factors consistent with Appendix G for similar evaluations of pressure vessels have been used.

Although Code Case N-481 does not require that a fatigue crack growth evaluation be performed, and such analyses are not part of an Appendix G evaluation of the stability of a quarter-thickness deep flaw, calculations are done in this study to demonstrate that a small initial assumed flaw will not reach the quarter-thickness flaw during plant life.

4.0 ASME CODE CASE N-481 EVALUATION

In this section, the seven items listed in the Code Case are addressed in relation to Oconee Unit 3 in order to demonstrate the safety and serviceability of the pump casing 3B1.

4.1 Evaluation of Material Properties, Including Fracture Toughness

The pump casing material conforms to ASTM A351, Grades CF8 and CF8M, which is an austenitic stainless steel casting specification. A review of the fabrication records [18] indicates that during the fabrication process, the pump casing welds were made using either the shielded metal arc welding (SMAW) or submerged arc welding (SAW) process. The records also show that several weld repairs were performed during fabrication. After welding, the casings were solution heat treated at 1900-2050°F for ten hours, followed by rapid cooling (agitated quenching in water to a temperature at or below 700°F within five minutes).

The most important material property pertinent to this evaluation is the fracture toughness. The fracture toughness of the base material and the weld metal are addressed separately since they are affected by different mechanisms.

4.1.1 Fracture Toughness of ASTM A351, Grades CF8 and CF8M

The fracture toughness of cast austenitic stainless steels has been the subject of significant research in the U.S. and elsewhere in recent years. Three grades of cast austenitic stainless steel frequently used in nuclear power plant applications (CF3, CF8 and CF8M) have all been studied extensively to determine the kinetics and material parameters that control the toughness of these materials. The major conclusion drawn from most of the work done on these castings is that unaged cast austenitic stainless steels have relatively high toughness values. However, during service at LWR operating temperatures, they become embrittled with time, which results in a loss of toughness as shown in Figure 4-1.

The microstructure of stainless steel castings is significantly different from that of wrought products. Wrought products consist of a single phase, austenite (γ), as shown in Figure 4-2.

Castings, on the other hand, exhibit a two-phase, or "duplex," microstructure of austenite (γ) and delta ferrite (δ), as shown in Figure 4-3. The ferrite phase in the duplex structure in these castings increases the tensile strength, improves the weldability and soundness of the casting, and increases the resistance to stress corrosion cracking. However, various carbide phases, intermetallic compounds such as sigma and chi phases, and a chromium rich bcc phase (α) can precipitate in the ferrite phase during service and lead to substantial degradation in toughness properties. Research performed at the Argonne National Laboratory (ANL) and elsewhere [4 through 15] has shown that thermal embrittlement of cast stainless steel components will occur during the reactor design lifetime of 40 years.

As a result of such thermal aging embrittlement, the Charpy transition curve shifts to higher temperatures as shown in Figure 4-4. For cast stainless steel of all grades, the extent of thermal embrittlement increases with an increase in ferrite content. The low-carbon CF3 grades are the most resistant and the molybdenum-bearing high carbon CF8M grades are the least resistant to thermal embrittlement.

The embrittlement of cast stainless steels results in brittle fracture associated with either the cleavage of the ferrite or separation of the ferrite/austenite phase boundaries. The degree of embrittlement is controlled by the amount of delta ferrite and the extent of ferrite/austenite phase boundaries. Brittle failure occurs either when the ferrite phase is continuous, as is the case with high-ferrite cast material, or when the ferrite/austenite phase boundaries provide an easy path for crack propagation. Hence, the amount, size and distribution of the ferrite phase in the duplex microstructure and the presence of phase boundary carbides are important parameters in controlling the extent of thermal embrittlement.

The kinetics of thermal embrittlement have been explained in detail by Chopra, et al, [4 through 8]. The kinetics are controlled by several mechanisms that depend on material parameters and aging temperatures. During long term exposure at elevated temperature, additional phases are

precipitated in the ferrite matrix. These include the formation of a chromium (Cr) - rich α' phase by spinodal decomposition; nucleation and growth of α; precipitation of nickel (Ni) - and silicon (Si) -rich G phase, M₂₃C₆ carbide and γ₂ (austenite); and additional precipitation and/or growth of existing carbides at the ferrite/austenite phase boundaries.

The chemical composition of the casting and the ferrite morphology are important parameters that influence embrittlement. A procedure and correlations for predicting the fracture toughness of aged, cast stainless steels from known material information is provided by Chopra [16]. The methodology for determining the fracture toughness of cast stainless steels, considering embrittlement, is summarized in the flow chart of Figure 4-5 (from Reference 16). The approach consists of determining the ferrite content of the cast stainless steel from known chemical composition as stated on CMTRs. From the ferrite content, the minimum impact energy is calculated, and the material resistance J-R curve is determined. An estimate of the fracture toughness, J_{Ic}, is then obtained from the J-R curve.

The only information required in these correlations is the chemical composition from the certified material test report (CMTR). A correlation for the extent of thermal embrittlement at "saturation" (the minimum impact energy that would be achieved for the material after long term aging at a given operating temperature) is given in terms of the chemical composition. The extent of thermal embrittlement as a function of time and temperature of reactor service is then estimated from the extent of embrittlement at saturation and from the correlations describing the kinetics of embrittlement, which are also given in terms of the chemical composition. In this evaluation, the fracture toughness associated with the minimum impact energy assuming aging at LWR operating temperature (524 - 608°F) will be conservatively used.

Using the methodology of Reference 16, the chromium equivalent (Creq) and nickel equivalent (Ni_{eq}) are determined from the chemical composition, based on Hull's equivalent factors [17]:

$$Cr_{eq} = (Cr) + 1.21 \text{ (Mo)} + 0.48 \text{ (Si)} - 4.99$$
 (4-1)

$$Ni_{eq} = (Ni) + 0.11 (Mn) - 0.0086 (Mn)^2 + 18.4 (N) + 24.5 (C) + 2.77$$
 (4-2)

where the chemical composition is in wt%. Per Reference 16, the value of N is assumed to be 0.04 if it is not available on the CMTR.

The ferrite content (δ_c) is then estimated from the relationship:

$$\delta_c = 100.3 (Cr_{eq}/Ni_{eq})^2 - 170.72 (Cr_{eq}/Ni_{eq}) + 74.22$$
 (4-3)

For CF8M cast stainless steel, the saturation (minimum) impact energy (Cv_{sat}) considering thermal embrittlement can be determined by two methods:

In the first method, the material parameter Φ is calculated from which Cv_{sat} is determined as follows:

$$\Phi = \delta_c (Ni + Si + Mn)^2 (C + 0.4N) / 5.$$
 (4-4)

The saturation value of RT impact energy, Cv_{sat}, for steels with < 10% Ni is given by

$$Log_{10} Cv_{sat} = 1.10 + 2.12exp(-0.041 \Phi).$$
 (4-5)

And for steels with >10% Ni by

$$Log_{10} Cv_{sat} = 1.10 + 2.64 exp(-0.064 \Phi).$$
 (4-6)

In the second method, Cv_{sat} is estimated directly from the chemical compositions of the steel and is given by:

$$Log_{10} Cv_{sat} = 7.28 - 0.011 (\delta_c) - 0.185 (Cr) - 0.369 (Mo) - 0.451 (Si)$$

$$- 0.007 (Ni) - 4.71 (C + 0.4N)$$
(4-7)

The saturation impact energy is determined using both methods given in Equations 4-5/4-6 and 4-7 and the lower value is used for estimating the fracture toughness.

The material resistance J-R curve can be estimated from Cv_{sat} using a power law relationship:

$$J_{d} = C \left[C v_{sat} \right]^{m} \left[\Delta a \right]^{n} \tag{4-8}$$

where:

J_d is the deformation J-Integral (kJ/m²) per ASTM Specification E813-85

 Δa is the crack extension (mm)

C is a constant

m, n are power law exponents

The saturation fracture toughness J-R curve at room temperature for static-cast CF8M stainless steel is given by [16]:

$$J_{d} = 16[Cv_{sat}]^{0.67}[\Delta a]^{n}$$
 (4-9)

In English units, the J-R curve (units of J in in-kips/in² and Δa in inches) is given by:

$$J_{d} = 91[25.4]^{n} [Cv_{sat}]^{0.67} [\Delta a]^{n}$$
(4-10)

The value of n at room temperature is given by:

$$n = 0.25 + 0.077 \log_{10} Cv_{sat}$$
 (4-11)

Corresponding equations for the J-R curve at temperatures between 290°C and 320°C (554°F and 608°F) are given by:

$$J_d = 49[Cv_{sat}]^{0.41} [\Delta a]^n (SI units)$$
 (4-12)

$$J_d = 280[25.4]^n [Cv_{sat}]^{0.41} [\Delta a]^n$$
 (English units) (4-13)

$$n = 0.23 + 0.057 \log_{10} Cv_{sat}$$
 (4-14)

The corresponding equations for CF8 cast stainless steel is given by

$$\Phi = \delta_c (Cr + Si)(C + 0.4N). \tag{4-4a}$$

$$Log_{10} Cv_{sat} = 1.15 + 1.36exp(-0.035 \Phi).$$
 (4-5a)

$$Log_{10} Cv_{sat} = 1.15 + 1.36exp(-0.035 \Phi).$$
 (4-6a)

$$Log_{10} Cv_{sat} = 5.64 - 0.006 (\delta_c) - 0.185 (Cr) + 0.273 (Mo) - 0.204 (Si)$$

$$+ 0.044 (Ni) - 2.12 (C + 0.4N)$$
(4-7a)

$$J_{d} = C \left[Cv_{sat} \right]^{m} \left[\Delta a \right]^{n} \tag{4-8a}$$

$$J_{d} = 49[Cv_{sat}]^{0.52}[\Delta a]^{n}$$
 (4-9a)

$$J_{d} = 280[25.4]^{n} [Cv_{sat}]^{0.52} [\Delta a]^{n}$$
 (4-10a)

$$n = 0.22 + 0.139 \log_{10} Cv_{sat}$$
 (4-11a)

$$J_d = 102[Cv_{sat}]^{0.28} [\Delta a]^n (SI units)$$
 (4-12a)

$$J_{d} = 582[25.4]^{n} [Cv_{sat}]^{0.28} [\Delta a]^{n}$$
 (English units) (4-13a)

Equations for 4-13 and 4-13a the J-R curve can be expressed in simple terms as:

$$J_{d} = C \left[\Delta a\right]^{n} \tag{4-15}$$

The calculation of all the above parameters, including C and n for the RCP casing 3B1 at Oconee Unit 3, are shown in Tables 4-1. The calculation was performed using information contained in the certified material test reports (CMTRs) for the various components of the pump casing [18].

The above correlations (Equations 4-1 through 4-15) account for degradation of toughness due to thermal aging, but do not explicitly consider the initial fracture properties of the original unaged material. Fracture toughness data in Reference 16 indicate that the J-R curve for some heats of unaged cast stainless steel may be lower than those for wrought stainless steel. To take into account the possibility of a relatively low initial unaged toughness, the methodology outlined in Figure 4-5 requires that the saturation J-R curves be compared to the lower bound J-R curve for the unaged cast stainless steel. The lower of the two curves is then used. For static cast stainless steel, the lower bound unaged J-R curve is given by:

$$J_d = 400 [\Delta a]^{0.40}$$
 (SI units) (4-16)

$$J_d = 8330 [\Delta a]^{0.40}$$
 (English units) (4-17)

The value of the fracture toughness, J_{Ic}, can be estimated from the J-R curve using the method outlined in ASTM Specification E813-85 [18]. This ASTM methodology is illustrated in Figure 4-6. In this figure, the line emanating from the origin, or the blunting line, is given by J = $2\sigma_f \Delta a$, where σ_f is the flow stress (the average of the 0.2% offset yield strength and the ultimate tensile strength). Two exclusion lines are constructed parallel to the blunting line but offset by 0.15mm (0.006 in.) and 1.5 mm (0.06 in.). In the ASTM method where the J-R curve is determined by test, a straight line is fit to the test data between the 0.15mm and 1.5mm exclusion lines. This line is extrapolated back to the blunting line and the intersection is termed J_Q. J_{Ic} equals J_Q if various validity criteria are satisfied. In this study, where the J-R curve is established based on material properties and not on test data, a modified form of the ASTM E813 method

suggested by Hiser [9] for thermally-aged cast stainless steels is used. In this modified procedure, J_{Ic} is defined as the intersection of the power law J-R curve with the 0.15mm exclusion line. Comparison of this methodology with the ASTM E813 methodology in [9] for aged cast stainless steels has shown that both methods yield nearly identical J_{Ic} values.

Determination of J_{lc} values for Pump 3B1 is shown in Figures 4-7. In constructing the blunting lines in Figures 4-7, the values of the yield and ultimate tensile strengths are required in order to determine the flow stress. The yield and ultimate tensile strength values are provided at room temperature in the CMTRs and shown in Tables 4-1. The yield and ultimate tensile strength values at 550°F were estimated by ratioing the room temperature CMTR values to the same ratio found in the ASME Code [20] for the decrease in strength between room temperature and operating temperature taken approximately at 550°F. Furthermore, it has been shown that thermal aging leads to an increase in yield and ultimate tensile strength, and a slight decrease in ductility [16], which results in an increased flow stress. For CF8M cast stainless steels, this increase in flow stress at room temperature and 550°F is 19% and 24%, respectively, as shown in Figures 4-8 and 4-9. The corresponding increase in flow stress for CF8 are 16% and 14%, respectively, as shown in Figures 4-8 and 4-9. To accurately determine the blunting line for J_{lc} determination, the flow stress values were, therefore, increased accordingly.

The lower bound value of K_{Ic} used for linear elastic fracture mechanics analysis is determined from J_{Ic} using the relationship:

$$K_{Ic} = \sqrt{\frac{E J_{Ic}}{(1 - v^2)}}$$
 (4-18)

where E is the elastic modulus (equals 25.5 x 10^6 psi [20]), and v is Poisson's ratio (equals 0.3).

A summary of the results presented in Table 4-1 shows that for the cast stainless steel pump casing 3B1 at Oconee Unit 3, the range of J_{Ic} (including long-term aging effects (embrittlement) is 1592.7 - 1043.4 in-lb/in². This minimum value of 1043.4 in-lb/in² translates into a K_{Ic} value of 171.0 ksi $\sqrt{\text{in}}$ at operating conditions.

4.1.2 Fracture Toughness of Pump Casing Weldments

As indicated earlier, the fabrication records indicate that the pump casing weldments were made using flux welding, either by submerged arc welding (SAW) or shielded metal arc welding (SMAW). Extensive work done in References 21 and 22 on the toughness of austenitic stainless steel weldments has shown that the toughness for SAW and SMAW weldments in the unaged condition is lower than for the base material. On the other hand, tungsten inert gas (TIG or GTAW) weldments have toughness more typical of the base metal. The lower toughness of SAW and SMAW weldments is due to nonmetallic inclusions in the weld metal that result from the flux welding process. Because of the low initial values, the fracture toughness of SMAW and SAW weld metals are only slightly affected by long-term aging. Limited data from Reference 21 suggests that J_{Ic} values of 1168 and 973 in-lb/in² may be used for SMAW and SAW weldment fracture assessments, respectively, in the as-welded condition. Corresponding values for solution-annealed weldments are 963 and 1260 in-lb/in². Values of 990 and 650 in-lb/in² are suggested in Reference 23 for SMAW and SAW, respectively, based on the work done in Reference 22.

The methodology used to determine the lower bound fracture toughness for the base metal was also employed for the weld metal and the results presented in Table 4-2. As can be seen from this table, the saturation fracture toughness values for the weld metals is in the range of values discussed above. The minimum fracture toughness of the welds considering embrittlement is $140.7 \text{ ksi } \sqrt{\text{in}}$. This value is conservatively used in this evaluation.

4.2 Stresses and Stress Evaluation

In performing the evaluations, the possibility of using previous stress analyses in the existing Stress Report [24,25] for the pump casing was explored. It was observed that detailed throughwall stress information was not available to perform flow evaluation of critical locations for all load cases. As such, an axisymmetric finite element model was developed for the purpose of determining the operating stresses in the pump casing.

The finite element model of the pump casing was developed using the ANSYS computer software [26]. The dimensions used for the model obtained from Reference 27 are shown in Figure 4-10. The finite element model is shown in Figure 4-11. It was generated using isoparametric finite elements for the casing. Three stress cases were run using this model to determine the stress response.

4.2.1 Pressure

A pressure of 2500 psig was applied to the inside surface of the model. This pressure corresponds to the design pressure but the stresses due to operating pressure can be determined by ratio of the pressures. The resulting stress intensity distribution for the design pressure case is shown in Figure 4-12. Summary of the axial and hoop pressure stresses for the six critical paths of the model are presented in Table 4-3.

4.2.2 Heatup Thermal Transient

The definition of the heatup transient for Oconee Unit 3 is taken from the Technical Specification Heatup Limitation [28]. The transient involves ramping the inside temperature from 70°F to 280°F in 4.2 hours followed by ramping the temperature to 555°F for the next 2.75 hours for a total duration of 6.95 hours. In the thermal analysis, the outside surface was initially kept at 70°F. A film coefficient of 1000 Btu/hr-ft²-°F was used on the inside surface consistent with the reactor coolant flow inside the pump. The outside surface was assumed to be insulated and therefore a conservative heat transfer coefficient of 1 Btu/hr-ft²-°F was used. The temperature distribution at the most critical time during heatup is shown in Figure 4-13. The

resulting temperature distribution was used to perform a stress analysis. The stress intensity plots at the most critical time is shown in Figure 4-14. Hoop and axial stresses for the six critical paths of the model are shown in Table 4-3.

4.2.3 Cooldown Thermal Transient

For the cooldown transient, the definition provided in Reference 29 was used. It involves multiple ramps of RCS temperature from 557°F to 70°F consistent with an initial average cooldown rate of 60°F/hr., and pressurizer pressure from 2185 psi to 0 psi in 10 hours. Figure 4-15 shows the temperature distribution at the most critical time (9692 seconds into the transient). The resulting stress distribution is shown in Figure 4-16. Summary of the hoop and axial stresses for the cooldown transient are presented in Table 4-3.

4.3 Review of Operating History of the Pumps

Oconee Unit 3 has been in commercial operation since July 19, 1974. The plant has undergone no more than eighty-two (82) heatups/cooldowns as of this date. At this point in time, these numbers are well below the expected number of heatup/cooldown cycles, based upon the design number of heatup/cooldown cycles (360 for a 40-year plant life). The normal operating pressure and temperature for the RCPs are 2185 psig and 550°F, respectively [29]. For this evaluation, a conservative operating pressure of 2250 psig is used.

4.4 Selection of Locations for Postulating Flaws

The following selection criteria was used for the determination of locations for postulating flaws:

- Areas of low fracture toughness
- Highly stressed locations
- Areas of geometric discontinuity
- Locations where flaws have been identified in previous inspections.

Since the lower bound fracture toughness is used in the evaluation and no flaws have been found in previous inspections, the most highly stressed locations (which correspond to areas of geometric discontinuities) were chosen as the location for potential flaws. Six highly stressed locations shown in Figure 4-11 are used in the evaluation.

4.5 Postulated Flaw

As required by the Code Case, the postulated flaw is a quarter-thickness semi-elliptical flaw with length six times the depth. The thickness of the pump casing at the six critical locations and the associated flaw sizes are shown in Table 4-4.

4.6 Determination of Stability of Postulated Flaw

To determine the stability of the postulated flaw, fracture mechanics evaluations are performed at the critical weld location to address the following:

- 1) Determination of applied stress intensity factors
- 2) Allowable stress intensity factor
- 3) Fatigue crack growth
- 4) Stress corrosion crack growth.

4.6.1 Determination of Applied Stress Intensity Factors

Even though austenitic stainless steels have been shown to be relatively ductile materials, linear elastic fracture mechanics (LEFM) techniques were conservatively used in lieu of elastic-plastic fracture mechanics (EPFM) techniques.

The stress intensity factors (K_I) associated with the applied stresses were conservatively determined using the flat plate model of ASME Code, Section XI, Appendix A [30]. The expression for K_I is given by:

$$K_{I} = \sigma_{m} M_{m} \sqrt{\pi} \sqrt{a/Q} + \sigma_{b} M_{b} \sqrt{\pi} \sqrt{a/Q}$$

where:

 σ_m , σ_b = membrane and bending stresses, respectively

a = minor half-diameter of embedded flaw; flaw depth for surface flaw

Q = flaw shape parameter

 M_m = correction factor for membrane stress

 M_b = correction factor for bending stress

The above model is contained in the library of Structural Integrity Associates' computer software **pc-CRACK** [31]. This software was, therefore, used to determine the stress intensity factors at the various locations, using the stress information contained in Table 4-3.

4.6.2 Allowable Stress Intensity Factor

Stress intensity factors, for comparison to an allowable value, were calculated consistent with the safety factors provided in Appendix G of Section XI of the ASME Code. Paragraph G-2222 requires a safety factor of 2.0 on primary stresses and a safety factor of 1.0 on secondary stresses for Service Levels A and B.

The evaluation is performed for normal operating and upset conditions (Service Levels A and B) since no specific requirements are required for emergency and faulted conditions (Levels C and D) in Appendix G of ASME Section XI. The terms whose sum must be less than the allowable reference stress intensity factor (K_{IR}) for Service Levels A and B are:

- 1) 2K_{Im} for primary membrane stress
- 2) $2K_{lb}$ for primary bending stress
- K_{Im} for secondary membrane stress
- 4) K_{Ib} for secondary bending stress.

Table 4-5 presents the stress intensity factors with the appropriate safety factors at the critical location for normal/upset conditions, and their comparison to the allowable K_{IR} value of 140.6 ksi $\sqrt{\text{in}}$. In this evaluation, the conservative operating pressure of 2250 psig was used. The stress intensity factors associated with this pressure were conservatively added to either the heatup or cooldown transient stress intensity factors to determine the final value to compare with the



allowables. The analysis was performed using the postulated quarter-thickness flaw depth, assuming the flaw is either in the axial or hoop directions. It can be seen from Table 4-5 that at all locations, both in the axial and hoop directions, the stress intensity factors are below the allowable values.

4.6.3 Fatigue Crack Growth

Fatigue crack growth analyses were performed to assure that crack growth for a small initial assumed flaw will not grow beyond the quarter-thickness flaw considered in the Code Case. Since the previous inspections performed during the second ISI interval did not identify any flaws in the pump casing welds, an initial flaw corresponding to the acceptance standards of ASME Code, Section XI, Subarticle IWB-3500 was assumed. For the pump casing welds, this corresponds to an initial depth of 10% of wall thickness. All six critical locations identified in Table 4-3 were considered in this evaluation assuming both axial and circumferential flaws. The flaws were conservatively postulated on the inside surface of the pump casing, which would require consideration of the PWR water environment at 550 F. A fatigue crack growth law for a water environment is not currently in the ASME Code Section XI; however, a crack growth law for austenitic stainless steel in an air environment is provided in ASME Code, Section XI, Appendix C [30]. Per the recommendation of ASME Code, Section XI Task Group for Piping Flaw Evaluation [32], a factor of 2 was applied to the air environment law to account for the PWR water environment. The ASME Code, Section XI fatigue crack growth law for air is given as:

$$\frac{\mathrm{da}}{\mathrm{dN}} = \mathrm{C_o}(\Delta \mathrm{K_I})^{\mathrm{n}}$$

where n equals 3.3, and

$$C_{o} = C(S)$$

where C is a scaling parameter to account for temperature, and is given by:

$$C = 10 \left[-10.009 + 8.12 \times 10^{-4} \text{ T} - 1.13 \times 10^{-6} \text{ T}^2 + 1.02 \times 10^{-9} \text{ T}^3 \right]$$

T is the metal temperature in °F (T \leq 800°F). S is a scaling parameter to account for the R ratio (K_{min}/K_{max}) , and is given by:

$$S = 1.0$$
 when $R \le 0$
= 1.0 + 1.8R when $0 < R \le 0.79$
= -43.35 + 57.97R when $0.79 < R < 1.0$

At a temperature of 550°F, and for $R \le 0$ as in this case, C_0 was calculated as 1.84 x 10^{-10} for an air environment. A value of C_0 of 3.68 x 10^{-10} was, therefore, used for the PWR water environment to determine crack growth for flaws on the inside surface.

Fatigue crack growth analysis requires cyclic loading information. Cyclic information for Oconee Unit 3 RCP casing design transients provided in Reference 29 was reviewed to determine the transients to be considered in the fatigue analysis. The only significant transients determined from Reference 29 are heatup/cooldowns, since these are associated with very high pressure and temperature changes. The total number of cycles associated with these transients is 360. All other transients are judged to contribute insignificantly to crack growth. The analysis was performed using **pc-CRACK** for Windows and using the stress information shown in Table 4-3..

The results of the fatigue crack growth analysis are presented in Table 4-6. The results show that at all locations, fatigue crack growth is relatively small (maximum of 0.31 in. for an axial flaw at Path No. 6) during the 40-year plant life (360 cycles). In fact, it takes at least 1100 cycles for the initial assumed axial flaw at Path No. 6 to reach the quarter-thickness flaw, indicating that the quarter-thickness flaw bounds any flaw that may be identified during service. The crack growth that results for an axial flaw at Path No. 6 is shown in Figure 4-17. Considering the fact that Oconee Unit 3 has gone through no more than 82 heatups/cooldowns, it is predicted that the quarter-thickness flaw will not be reached during the lifetime of the plant.

4.6.4 Stress Corrosion Crack Growth

Stress corrosion cracking (SCC) in pressurized water reactor plants is not generally of concern, since the environment is not usually conducive to SCC due to its reducing nature. Moreover, stainless steel castings have been shown to have superior resistance to SCC when compared to wrought products. A wrought material consists of a single phase austenite (γ). When such a material is welded, the thermal cycles cause chromium carbides to precipitate from solution preferentially at austenite-austenite (γ - γ) grain boundaries. The diffusion of chromium from the austenite matrix results in a chromium-depleted zone at the grain boundary, resulting in sensitization. On the other hand, when a stainless steel casting (a two-phase duplex microstructure) is exposed to the same thermal cycle, carbon and chromium also combine to form grain boundary carbides; however, these carbides form exclusively at the austenite-ferrite (γ - δ) boundaries, with the majority of the chromium diffusing from the delta ferrite side of the boundary (diffusion of chromium in the ferrite is approximately 1000 times faster than that in austenite at a temperature of 1100°F). Thus, the chromium content of the austenite is not reduced significantly, and corrosion resistance, even near the γ - δ grain boundary, is maintained. Crack growth due to SCC will, therefore, not be considered in this evaluation.

4.7 Effect of Thermal Embrittlement and Other Degradation Mechanisms that May Degrade Properties of the Pump Casing

Structural material degradation mechanisms for various components in light water reactors have been discussed extensively in Reference 33. Of all the degradation mechanisms addressed in the Reference 33 EPRI report, only thermal and irradiation embrittlement could potentially degrade the fracture toughness properties of the cast stainless steel pump casings. Thermal embrittlement effects have been included in the consideration of crack growth and fracture toughness ($K_{\rm IR}$) properties in this study. Irradiation embrittlement is not of concern since the RCPs are far removed from the reactor core.

Table 4-1 Determination of Lower Bound Fracture Toughness of Casing for RCP 3B1 at 290°C – 320°C Considering Thermal Embrittlement

	Lower Case Half, Ht# 21795-1	Upper Case Half, Ht# 24245-1	Suction Piece, Ht# 16728-3	Quad Volute Ht# 19801-1
Material	A351	A351	A351	A351
	Gr. CF8M	Gr. CF8M	Gr. CF8	Gr. CF8
Mechanical Properties				
Yield Strength (psi)	37000	39600	37500	34400
Ultimate Tensile Str. (psi)	87500	83200	80000	76200
Elongation (%)	58	52	52	61
Reduction in Area (%)	73	71	67	71
Chemical Properties				
Cr	19.05	19.4	19.99	19.1
Si	1.41	1.21	1.48	1.25
Мо	2.16	2.36	0	0
Ni	9.57	9.96	9.36	9.3
С	0.05	0.04	0.06	0.06
Mn	0.85	0.64	0.85	0.85
N (assumed)	0.04	0.04	0.04	0.04
Cr_{eq}	17.4	17.8	15.7	14.7
Ni _{eq}	14.4	14.5	14.4	14.4
Ferrite (δ_c)	14.2	16.0	7.3	4.6
Φ	26.2	24.9	11.9	7.1
Cv _{sat} (J/cm ²) [Polynomial]	61.5	58.3	70.3	118.1
Cv _{sat} (J/cm ²) [Φ]	66.5	73.0	111.7	162.7
Minimum Cv _{sat} (J/cm ²)	61.5	58.3	70.3	118.1
C (J-R Curve Constant)	4434.9	4320.0	6069.9	7406.0
N (J-R Curve Exponent)	0.332	0.331	0.357	0.373
J _{1c} (in-lb/in ²)	1070.1	1043.4	1338.3	1592.7
K _{1c} (ksi-in ^½)	173.2	171.0	193.7	211.3

Table 4-2 Determination of Lower Bound Fracture Toughness of Casing Welds for RCP 3B1 at 280°C – 320°C

	<u> </u>	1	I	I	i	
	5/32; X-4979; Lot# 03003	3/16; X-4979; Lot# 03036	3/16; X-4979; Lot# 03036A	3/16; X-4979; Lot# 03027	1/8; 316; Lot# D9697F316	3/16; X-4979; Lot# 03036B
Chemical Properties						
Cr	19.11	19.01	18.69	18.54	19.35	20.43
Si	0.44	0.47	0.47	0.42	0.4	0.55
Mo	2.48	2.81	2.84	2.79	2.39	2.85
Ni	9.89	9.7	9.89	9.7	12.6	10.29
С	0.04	0.032	0.038	0.038	0.023	0.036
Mn	1.54	1.53	1.52	1.53	1.95	1.7
N (assumed)	0.04	0.04	0.04	0.04	0.04	0.04
Cr_{eq}	17.3	17.6	17.4	17.1	17.4	19.2
Ni _{eq}	14.5	14.1	14.5	14.3	16.9	14.8
Ferrite (δ_c)	13.3	17.4	13.8	13.7	5.0	21.0
Φ	21.0	22.8	21.0	20.1	8.7	34.3
Cv _{sat} (J/cm ²) [Polynomial]	141.8	106.9	122.3	143.9	204.8	45.0
Cv _{sat} (J/cm ²) [Φ]	99.0	85.3	99.4	107.1	412.5	24.8
Minimum Cv _{sat} (J/cm ²)	99.0	85.3	99.4	107.1	204.8	24.8
C (J-R Curve Constant)	5600.2	5206.1	5613.3	5820.7	7998.2	2842.6
N (J-R Curve Exponent)	0.344	0.340	0.344	0.346	0.362	0.309
J _{1c} (in-lb/in ²)	1347.3	1252.3	1350.4	1401.0	1954.1	706.2
K _{1c} (ksi-in ^½)	194.3	187.3	194.5	198.1	234.0	140.7

Table 4-2 (Continued)

Determination of Lower Bound Fracture Toughness of Casing Welds for RCP 3B1 at 280°C – 320°C

	1/8; 316; Lot# D9525F316	3/32; 316- ELC, X-4997 Lot# 02914	3/32; X-4997; Lot# 02915	3/32; X-4997; Lot# 03052	3/32; 316; Lot# 03054	3/16; X-4979; Lot# 03063
Chemical Properties						
Cr	19.09	19.34	19.05	19.72	18.44	19.89
Si	0.36	0.48	0.43	0.41	0.46	0.53
Mo	2.33	2.44	2.87	2.88	2.38	2.81
Ni	12.42	12.42	9.39	9.45	13.35	10.29
C	0.02	0.023	0.02	0.02	0.036	0.036
Mn	1.97	1.59	1.67	1.7	1.52	1.7
N (assumed)	0.035	0.04	0.04	0.04	0.04	0.04
Cr _{eq}	17.1	17.5	17.7	18.4	16.6	18.6
Ni _{eq}	16.5	16.6	13.5	13.6	17.9	14.8
Ferrite (δ_c)	5.0	5.7	22.7	26.8	2.1	17.6
Φ	7.4	9.3	21.5	25.8	5.2	28.6
Cv _{sat} (J/cm ²) [Polynomial]	265.7	178.7	104.3	71.3	263.7	65.2
Cv_{sat} (J/cm ²) [Φ]	558.2	358.8	94.7	68.4	982.4	33.3
Minimum Cv _{sat} (J/cm ²)	265.7	178.7	94.7	68.4	263.7	33.3
C (J-R Curve Constant)	9085.9	7481.1	5481.7	4673.9	9053.3	3284.1
N (J-R Curve Exponent)	0.368	0.358	0.343	0.335	0.368	0.317
J _{1c} (in-lb/in²)	2246.8	1818.7	1318.6	1126.1	2237.9	805.8
K _{1c} (ksi-in ^{1/2})	250.9	225.8	192.2	177.6	250.4	150.3

Table 4-2 (Continued)

Determination of Lower Bound Fracture Toughness of Casing Welds for RCP 3B1 at $280^{\circ}\text{C} - 320^{\circ}\text{C}$

	5/32; X-4979; Lot# 03063-A	3/16; X-4979; Lot# 02953	5/32; X-4979; Lot# 01830-B	5/32; X-4979; Lot# 01749-A	5/32; X-4979; Lot# 01734
Chemical Properties					
Cr	20.19	18.7	19.2	18.72	18.76
Si	0.54	0.47	0.44	0.44	0.52
Мо	2.79	2.84	2.87	2.84	3
Ni	9.92	9.78	10	9.85	9.66
C	0.038	0.038	0.052	0.062	0.071
Mn	1.64	1.5	1.5	1.45	1.57
N (assumed)	0.04	0.04	0.04	0.04	0.04
Cr _{eq}	18.8	17.4	17.9	17.4	17.6
Ni _{eq}	14.5	14.4	14.9	15.0	15.1
Ferrite (δ_c)	21.6	14.5	13.7	11.0	11.9
Φ	34.1	21.6	26.6	23.6	28.6
Cv _{sat} (J/cm ²) [Polynomial]	51.4	119.9	85.0	103.1	72.3
Cv _{sat} (J/cm ²) [Φ]	42.0	94.5	38.2	80.4	56.9
Minimum Cv _{sat} (J/cm ²)	42.0	94.5	38.2	80.4	56.9
C (J-R Curve Constant)	3679.1	5476.1	3511.1	5059.2	4271.2
N (J-R Curve Exponent)	0.323	0.343	0.320	0.339	0.330
J _{1c} (in-lb/in ²)	895.7	1317.2	857.3	1217.2	1032.0
K _{1c} (ksi-in ^{1/2})	158.4	192.1	155.0	184.7	170.1

Table 4-3

Summary of Stresses

			Axial Stre	ss (ksi)					Hoop Stres	s (ksi)		
Path	Press	ure	Heat	up	Coold	Cooldown		sure	Heat	tup	Cooldown	
Number	Membrane	Bending	Membrane	Bending	Membrane	Bending	Membrane	Bending	Membrane	Bending	Membrane	Bending
1	3.857	0.69	-0.437	10.44	0.342	8.176	8.794	1.426	0.456	10.19	-0.17	8.039
2	1.727	7.443	-1.005	13.87	0.173	8.455	13.57	0.157	0.079	21.89	0.779	14.17
3	5.623	4.929	-0.076	22.23	-0.699	11.98	5.88	4.638	2.732	29.83	-1.43	17.85
4	7.397	13.16	-1.234	30.19	0.725	18.99	2.456	3.555	1.579	28.31	-0.323	17.21
5	6.127	6.467	-0.862	31.26	0.54	19.56	7.936	1.217	1.614	26.7	-1.033	16.97
6	4.626	8.507	1.417	18.13	-1.256	10.15	3.939	2.835	-1.189	32.47	1.859	18.03

Thickness and Postulated Flaw Dimensions at Postulated Flaw Locations

Table 4-4

Path Number	Wall Thickness	Flaw Depth (in)	Flaw Length (in)
1	4.0000	1.0000	6.0000
2	6.9120	1.7280	10.3680
3	8.4280	2.1070	12.6420
4	7.1307	1.7827	10.6961
5	7.0000	1.7500	10.5000
6	9.2343	2.3086	13.8515

Table 4-5 Comparison of Calculated and Allowable Stress Intensity Factors

	Pressure + Heatup Axial Stress Case										
Stress Intensity Factor (ksi $\sqrt{\text{in}}$)											
Path	2 x Pre	2 x Pressure Heatup									
Number	Membrane	Bending	Membrane ⁽¹⁾	Bending	Total	Allowable					
1	15.05	1.78	0.00	13.49	30.32	140.7					
2	8.86	25.28	0.00	23.56	57.70	140.7					
3	31.84	18.49	0.00	41.70	92.03	140.7					
4	38.53	45.41	0.00	52.09	136.03	140.7					
5	31.62	22.11	0.00	53.44	107.17	140.7					
6	27.42	33.40	4.20	35.60	100.62	140.7					

	Pressure + Heatup Hoop Stress Case										
Stress Intensity Factor (ksi √in)											
Path	2 x Pre	essure	Heat	tup							
Number	Number Membrane	Bending	Membrane ⁽¹⁾	Bending	Total	Allowable					
1	34.31	3.69	0.89	13.17	52.05	140.7					
2	69.59	0.53	0.20	37.18	107.51	140.7					
3	33.30	17.40	7.74	55.95	114.39	140.7					
4	12.79	12.27	4.11	48.84	78.02	140.7					
5	40.96	4.16	4.16	45.64	94.93	140.7					
6	23.35	11.13	0.00	63.75	98.23	140.7					

	Pressure + Cooldown Axial Stress Case										
Stress Intensity Factor (ksi √in)											
Path	2 x Pre	essure	Coold	lown		[
Number	Membrane	Bending	Membrane ⁽¹⁾	Bending	Total	Allowable					
1	15.05	1.78	0.67	10.57	28.06	140.7					
2	8.86	25.28	0.44	14.36	48.95	140.7					
3	31.84	18.49	0.00	22.47	72.81	140.7					
4	38.53	45.41	1.89	32.76	118.59	140.7					
5	31.62	22.11	1.39	33.44	88.56	140.7					
6	27.42	33.40	0.00	19.93	80.75	140.7					

	Pressure + Cooldown Hoop Stress Case										
Stress Intensity Factor (ksi √in)											
Path	2 x Pro	essure	Coold	lown							
Number	Number Membrane	Bending	Membrane ⁽¹⁾	Bending	Total	Allowable					
1	34.31	3.69	0.00	10.39	48.38	140.7					
2	69.59	0.53	2.00	24.07	96.19	140.7					
3	33.30	17.40	0.00	33.48	84.18	140.7					
4	12.79	12.27	0.00	29.69	54.75	140.7					
5	40.96	4.16	0.00	29.01	74.13	140.7					
6	23.35	11.13	5.51	35.40	75.39	140.7					

⁽¹⁾ Negative membrane stress intensity factors are conservatively assumed to be zero.



Table 4-6 Fatigue Crack Growth Evaluation Results

		Axia	ıl Flaw			Circumfere	ntial Flaw		
Path No.	. Initial Flaw Size		Final Fl	aw Size	Initial F	law Size	Final Flaw Size		
	Depth (a) (in)	a/t	Depth (a) (in)	a/t	Depth (a) (in)	a/t	Depth (a) (in)	a/t	
1	0.4000	0.1000	0.4016	0.1004	0.4000	0.1000	0.4023	0.1006	
2	0.6912	0.1000	0.7383	0.1068	0.6912	0.1000	0.7028	0.1017	
3	0.8428	0.1000	0.9531	0.1131	0.8428	0.1000	0.8899	0.1056	
4	0.7131	0.1000	0.7998	0.1122	0.7131	0.1000	0.8756	0.1228	
5	0.7000	0.1000	0.7668	0.1095	0.7000	0.1000	0.8691	0.1242	
6	0.9234	0.1000	1.2330	0.1335	0.9234	0.1000	0.9444	0.1023	

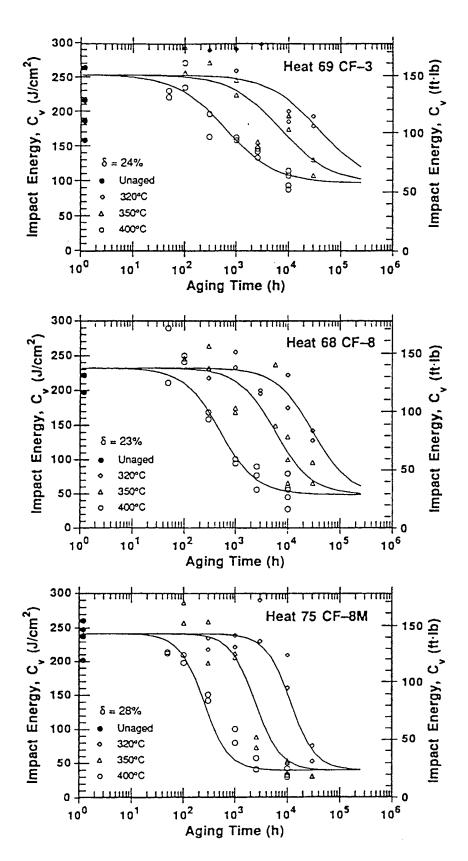
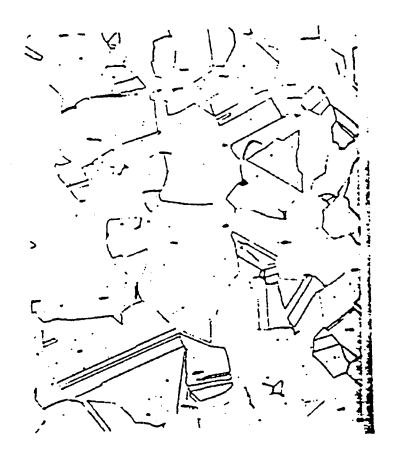


Figure 4-1. Effect of Thermal Aging on Room Temperature Impact Energy of CF3, CF8 and CF8M Cast Stainless Steel [10]



Microstructure of Solution Heat Treated Wrought Type 316 Stainless Steel Figure 4-2.

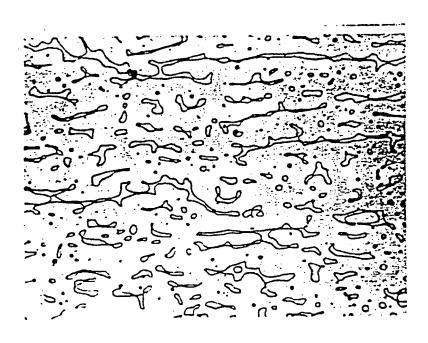


Figure 4-3. Microstructure of Solution Heat Treated Grade CF8 Stainless Steel Casting (Showing Ferrite Phase in Austenitic Matrix)

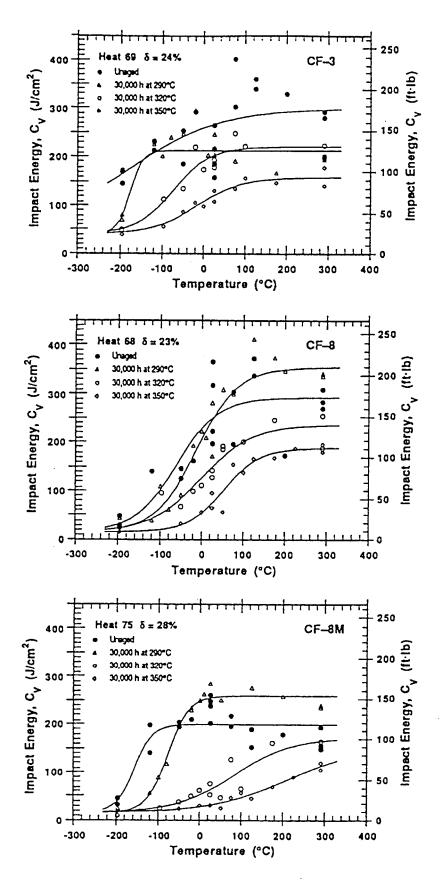


Figure 4-4. Effect of Temperature on Charpy Transition Curves of CF3, CF8 and CF8M Steels Aged for 30,000 hours [10]

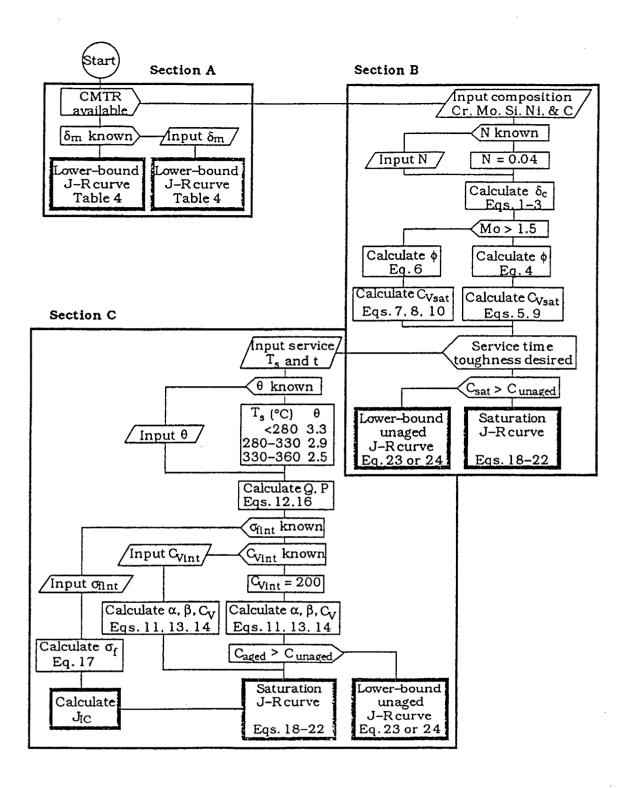


Figure 4-5. Flow Diagram for Estimating Mechanical Properties of Aged Cast Stainless Steels in LWR Systems [16]

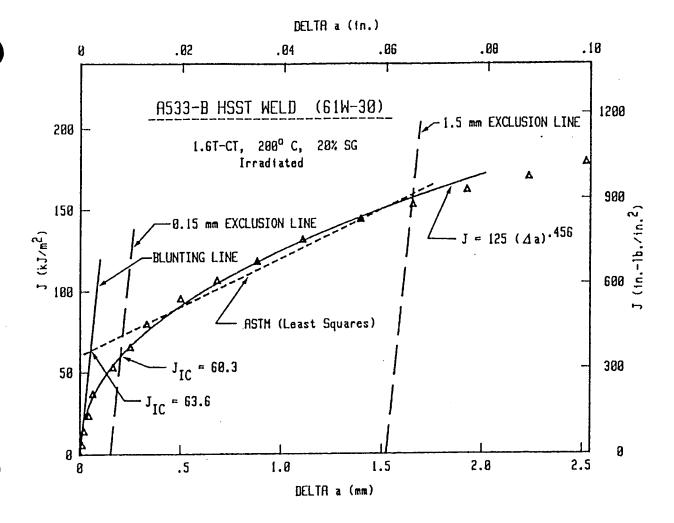


Figure 4-6. Example of a Typical J-R Curve and Determination of J_{Ic} Using the ASTM E 813-81 Methodology [9]

Reactor Coolant Pump 3B1 for Oconee Unit 3

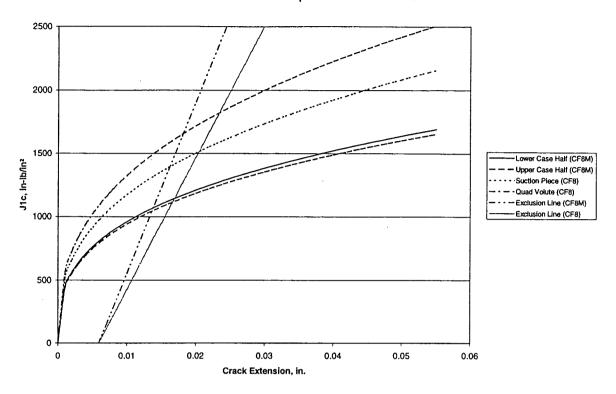


Figure 4-7. Determination of J_{Ic} for Oconee Unit 3 Reactor Coolant Pump 3B1 Casing

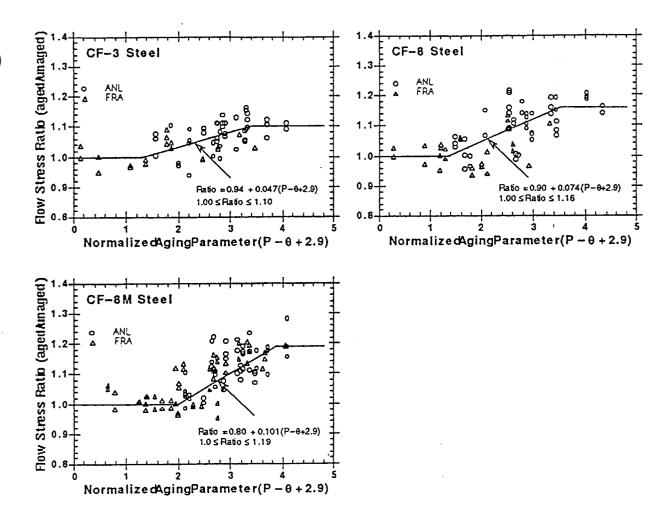


Figure 4-8. Flow Stress Ratio of Aged Cast Stainless Steels at Room Temperature as a Function of Normalized Aging Parameter [16]

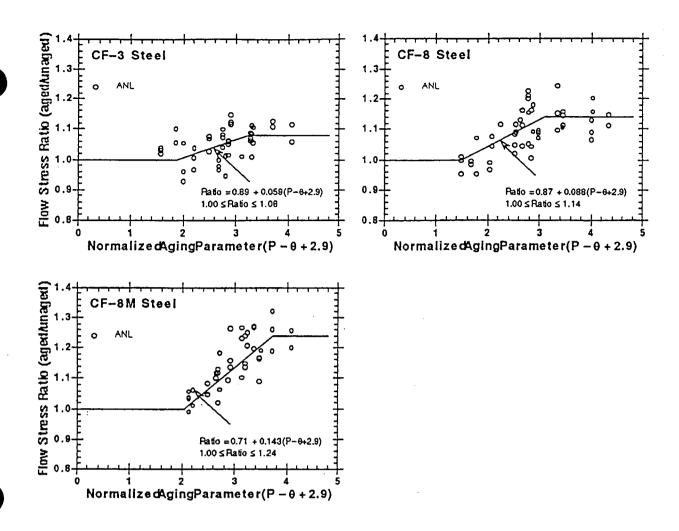


Figure 4-9. Flow Stress Ratio of Aged Cast Stainless Steels at 290°C as a Function of Normalized Aging Parameter [16]

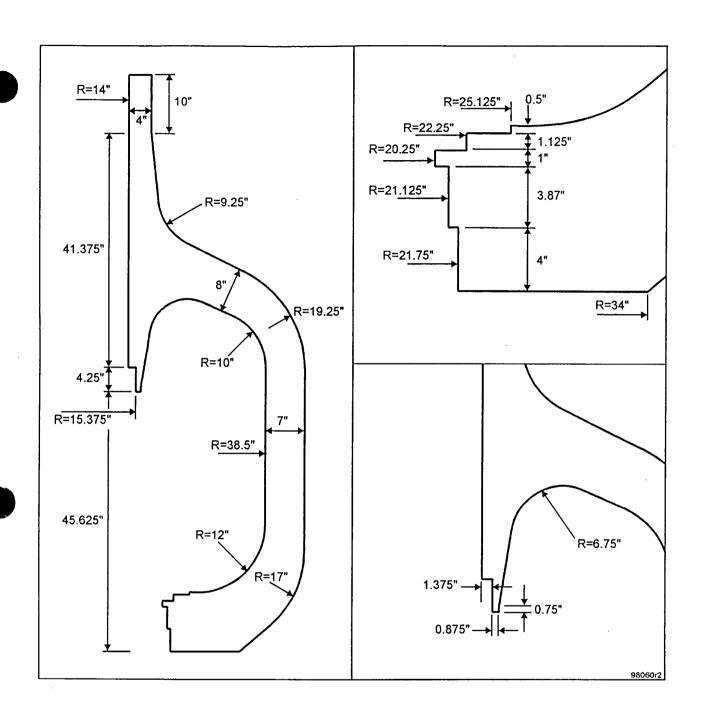


Figure 4-10. Dimensions Used for Finite Element Model for Oconee Unit 3 Pump Casing 3B1

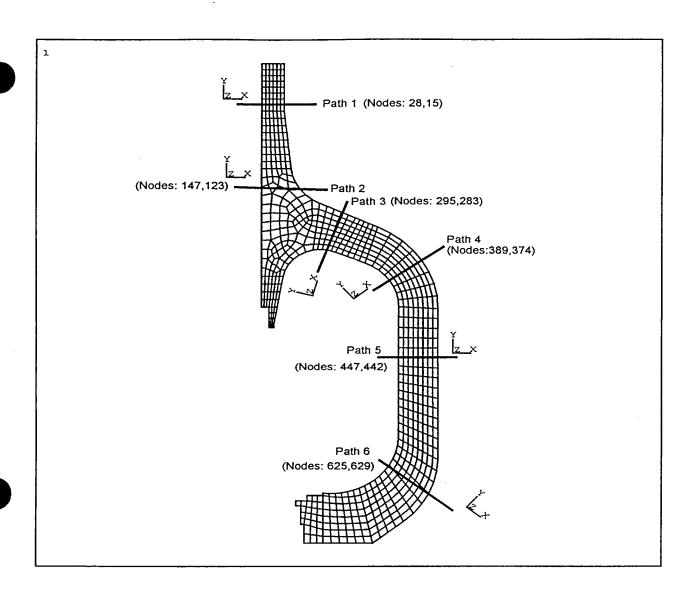


Figure 4-11. Overall Finite Element Model for Oconee Unit 3 Pump Casing 3B1

ANSYS 5.3 MAR 25 1998 14:31:29

NODAL SOLUTION

DMX = .038287 SMN = 479.987

SMN =479.987 SMNB=40.916 SMX =25975 SMXB=27943 479.987 3313 6146 8978 11811 14644 17477 20310 23142 25975

2

(AVG)

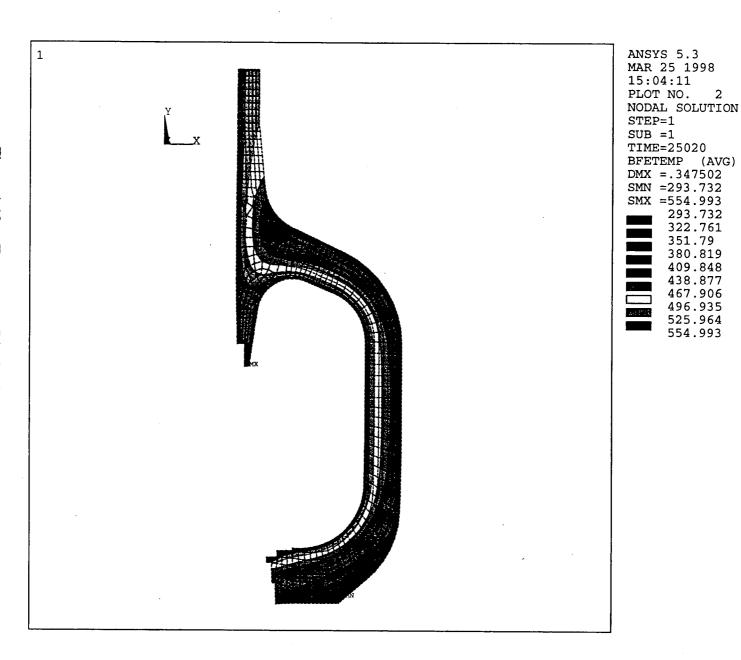
PLOT NO.

STEP=1 SUB =1 TIME=1 SINT

SIR-98-077, Rev. 0

Figure 4-12.

Stress Distribution Due to Internal Pressure of 2500 psig



554.993 293.732 322.761 351.79 380.819 409.848 438.877 467.906 496.935 525.964 554.993

Figure 4-13. Temperature Distribution at End of Heatup

ANSYS 5.3
MAR 25 1998
15:03:59
PLOT NO. 1
NODAL SOLUTION
STEP=1
SUB =1
TIME=25020
SINT (AVG)
DMX =.347502
SMN =660.564
SMX =63479
SMXB=69218
660.564
7640
14620
21600
28580
35560
42539
49519
56499
63479

Figure 4-14. Stress Distribution at the End of Heatup



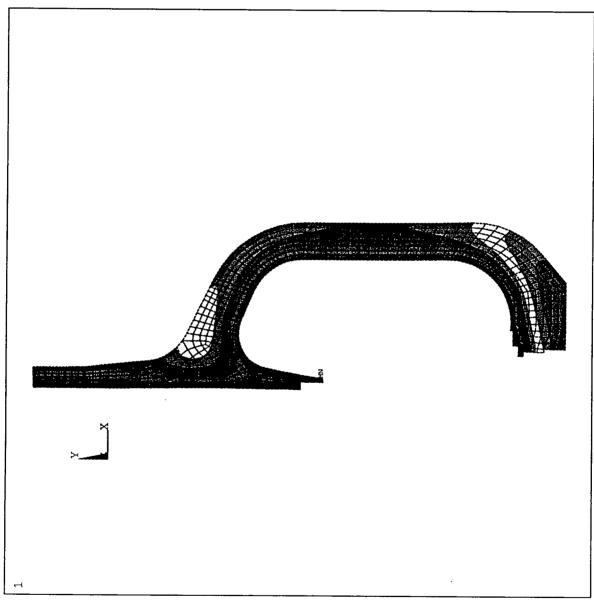
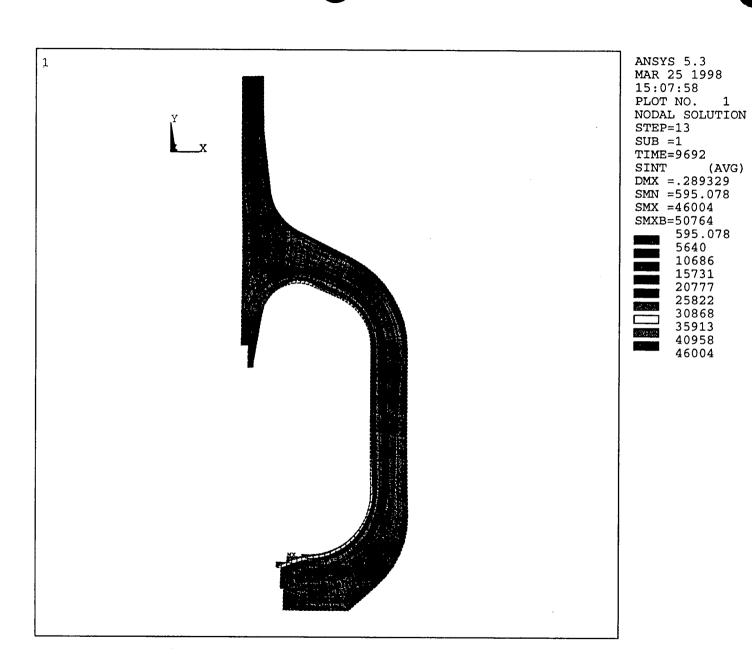
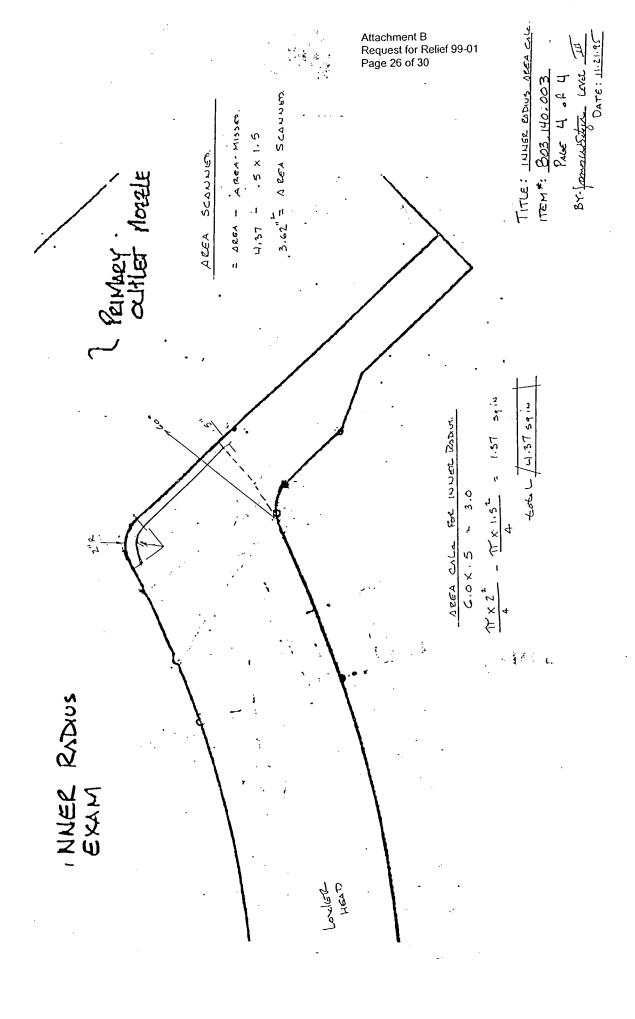


Figure 4-15. Temperature Distribution at Time = 9692 Seconds of Cooldown



(AVG)

Figure 4-16. Stress Distribution Time = 9692 Seconds of Cooldown



		DUI	KE POWER	COMP	ANY				NDE-91-1	
			xamination C	overage \	Works	heet			Revision 0	
THE U.S. OF THE PARTY OF THE PARTY.	A STATE OF THE PARTY OF THE PAR	COLOR OF BUILDING AND	Examin	ation Volu	ıme/A	rea Defined				
☐ Ba	se Meta	ı 🗆	Weld	□ Ne	ear Surface 🔲 Bolting 🖾 Inner Rad					
		Area Cal	culation		Volume Calculation					
Area =	4.37" sq.	in.			Volume = 124" x 4.37 sq. in. = 542 cu. in.					
			С	overage (Calcul	ations				
Scan #	Angle	Beam Direction	Area Examineo (sq.in.)	Leng I Exam (in	ined	Volume Examined (cu.in.)	Volui Requi (cu.i	red	Percent Coverage	
1	60°	cw & ccw	3.62	66		239	54:	2	44.10	

Prepared By: Jay A Eaton

Level: II

Date: 11/16/98

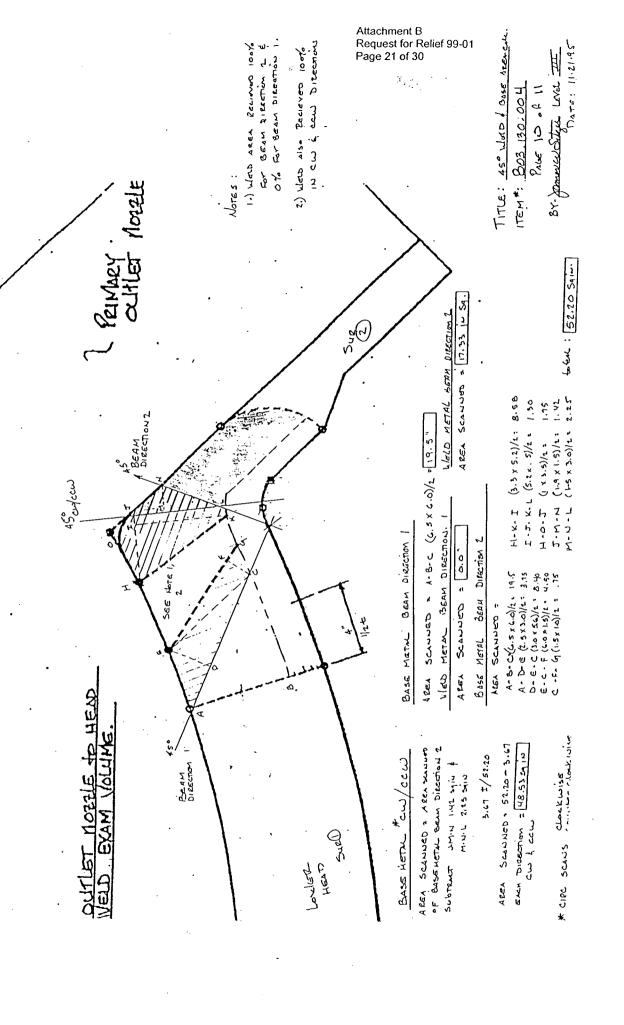
Reviewed By: Gary Moss

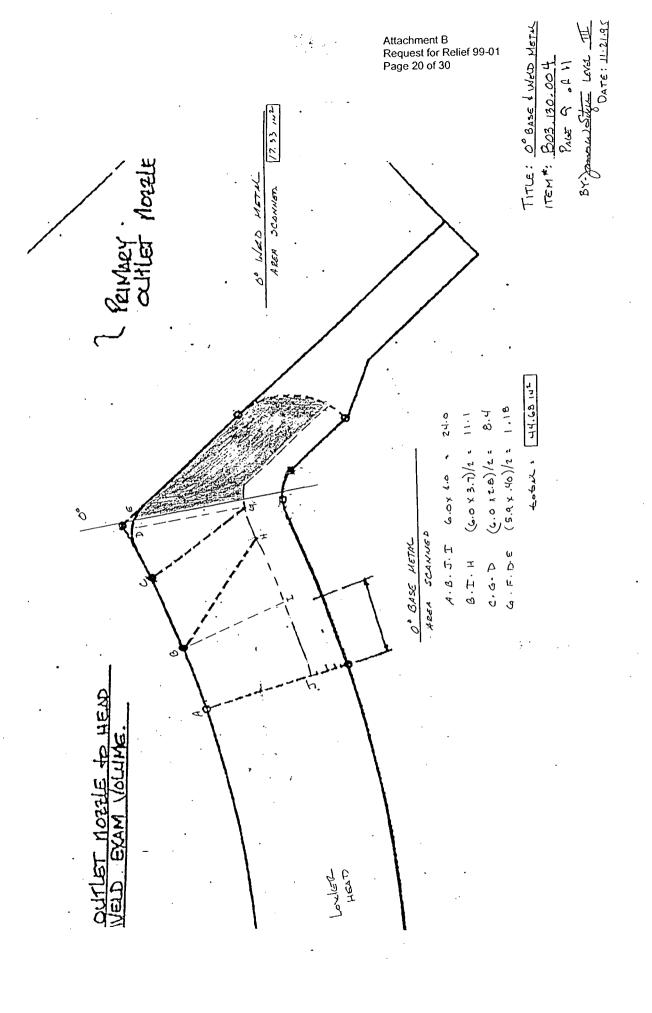
Date: 11-/6-98

SHEET 3 OF 4

D	DUKE POWER COMPANY ISI LIMITATION REPORT	COMPANY N REPORT		FORM NDE-UT-4 Revision 1
Component/Weld ID: 3-SGB-WG50-2		Item No: B03.140.003	Remarks:	
NO SCAN	SURFACE	BEAM DIRECTION	Due to Nozzle Configuration	onfiguration
LIMITED SCAN	1 🖂 2	⊠ 1 □ 2 ⊠ cw ⊠ ccw		
FROM L	INCHES FROM WO	M WO to Beyond		Υ
ANGLE: 🛭 0 🖾 45 🖾 60 🗍 Other		OEG to		
NO SCAN	SURFACE	BEAM DIRECTION	Due to Support Skirt	Skirt
SCAN	□ 1 □ 2	1		
FROM L 96" to L 24"	INCHES FROM WO	M WO		
ANGLE: ⋈ 0 ⋈ 45 ⋈ 60 □ Other		B I		
NO SO A C	SURFACE	BEAM DIRECTION		
LIMITED SCAN	1 0 2	1 2 Cw Ccw		
FROM L	INCHES FROM WO	M WO		
ANGLE: 0 0 45 0 60 0 Other		FROM DEG to DEG		
NA OS ON	SURFACE	BEAM DIRECTION		
CAN	1 0 2	□ 1 □ 2 □ cw □ ccw		
FROM L	INCHES FROM WO	M WO		
ANGLE: 0 0 45 0 60 Other		FROM DEG to		
Prepared By: Larry Mauldin Lung Mauld	My Level: III [Date: 11/7/98 Sketch(s) attached	⊠ yes □ no	Sheet 2 of 4
Reviewed By: Jay A Eaton		S Authorized Inspector: MRC		Date: //35:4
	•			81-8-11

	-	
Page 23 of 30	Request for Relief 99-0	Attachment B





Attachment B Request for Relief 99-01 Page 19 of 30 ITEM #: B03, 130,00 TITLE: ILLED METER 2-D-4 (c.ox 2.2)/2 = (...co D-6-B — (1.7 x.5)/2 - ...42 8-8-6-F-5.4 x 1.7 = 9.18 F-6-4 (1.7 x.c)/2 = A-C-D (2.5 x , 5)/2 = もot 大 AREA COLC.

Attachment B Request for Relief 99-01 Page 18 of 30 TITLE: BASE METAL ALGA CUL ITEM#: BOS. 130.00 4 73.27 0-N-P (3.0×3.9)/2 4(0.8 x 08.) (3.0 × 5.0)/2 (1.4 × 1.0)/L I-M.F.J 1.4 x 5.3 > B-D-E (6.0 x 4.2/2 x (4.0 × 2.0)/2 1 K- L.ON 2.4 x 3.0 ζ. κ 4-6-c- D HIM G-F-H

		DUK			NDE-91-1							
		Limited E	xamination Co	verage Wo	orksheet			Revision 0				
The special section is not a second to	AND THE PERSON OF THE PERSON O	<u> </u>	Examinat	ion Volum	e/Area Define	ed						
⊠ Ba	se Meta	ı 🗆	Weld	☐ Near	Surface	☐ Bolting	g Inner Radius					
	'	Area Calc	ulation		\	√olume Ca	culati	on				
Area = 73.27 sq. in. Volume = 124" x 73.27 = 9085 cu. in.												
			Cov	/erage Cal	lculations							
			•	_								
Scan #	Angle	Beam Direction	Area Examined (sq.in.)	Length Examine (in.)		Volur Requi (cu.i	red	Percent Coverage				
N/A	0	N/A	44.68	94	4199	908	5	46.22				
AXIAL	45	S1	19.5	94	1833	908	5	20.18				
AXIAL	45	\$2	52.20	94	4906	908	5	54.00				
AXIAL	60	S1	4.84	66	319	908	5	3.51				
AXIAL	60	S2	52.92	6 6	3492	908	5	38.44				
CIRC	45	CW	48.53	94	4561	908	5	50.20				
CIRC	45	CCW	48.53	94	4561	908	5	50.20				
CIRC	60	CW	46.02	66	3037	908	5	33.43				
CIRC	60	CCW	46.02	66	3037	908	5	33.43				

Prepared By: Jay A Eaton

Level: II

Date: 11/16/98

Reviewed By: Gary Moss

Level: II

Date: 1/-17-98

SHEET 6 6F11

		DUK			NDE-91-1				
		Limited Ex	camination Co	verage \	Work	sheet		. ,	Revision 0
7	CA STREET, STREET, ST.	and the second s	Examinati	ion Volι	ıme//	Area Defined			
□ Ва	se Meta	ı 🖾 <i>\</i>	Weld	☐ Ne	ar Su	rface l	☐ Bolting	l	☐ Inner Radius
		Area Calcu	ulation			Vo	olume Cal	lcula	tion
Area =	17.33 sq.	. in.			Volu	me = 124" x 1	7.33 = 214	9 cu.	. in.
			Cov	erage C	Calcu	lations			
Scan #	Angle	Beam Direction	Area Examined (sq.in.)	Leng Exami (in.	ned	Volume Examined (cu.in.)	Volur Requi (cu.i	ired	Percent Coverage
N/A	0	N/A	17.33	94		1629.02	214	9	75.80
AXIAL	45	S1	0.0	66		0	214	9	0.00
AXIAL	45	S2	17.33	66		1629.02	214	9	75.80
AXIAL	60	S1	0.0	6 6		0	214	9	0.00
AXIAL	60	S2	17.33	66		1143.78	214	9	53.22
CIRC	IRC 60 S1 17.33 6					1143.78	214	9	53.22
CIRC	60	S2	17.33	66		1143.78	214	9	53.22
CIRC	45	S1	17.33	94		1629.02	214	9	75.80
CIRC	45	S2	17.33	94		1629.02	214	9	75.80

Prepared By: Jay A Eaton

Level: II

Date: 11/16/98

Reviewed By: Gary Moss

Reviewed By: Gary Moss

Level: II

Date: 11-17-98

SHEET 5 OF 11

		DU	KE POWER	COMP	ANY	<u>′</u>			NDE-91-1
		Limited E	Examination Co	verage \	Vork	sheet			Revision 0
	The same of the sa	A 2 (4)	Examinat	ion Volu	ıme/ <i>F</i>	Area Define			
⊠ Ba	se Metal	\boxtimes	Weld	□Nea	☐ Near Surface ☐ Bolting				☐ Inner Radius
		Area Cal	culation			V	olume Ca	Icula	tion
SEE AT	TACHED	SHEET		SEE	ATTACHED	SHEET			
						•			
[
-			Cov	erage C	Calcu	lations			
			Area	Leng	jth .	Volume	Volu	me	
Scan#	Angle	Beam	Examined	Exami	ined	Examined	Requ		Percent Coverage
Ocan #	7 tilgic	Direction	1 (sq.in.)	(in	.)	(cu.in.)	(cu.i		
BM						29945	817		36.62
WELD						9947.42	193		51.43
		TOTAL	AGGREGATE	COVER	AGE	39892.42	1011	106	39.46

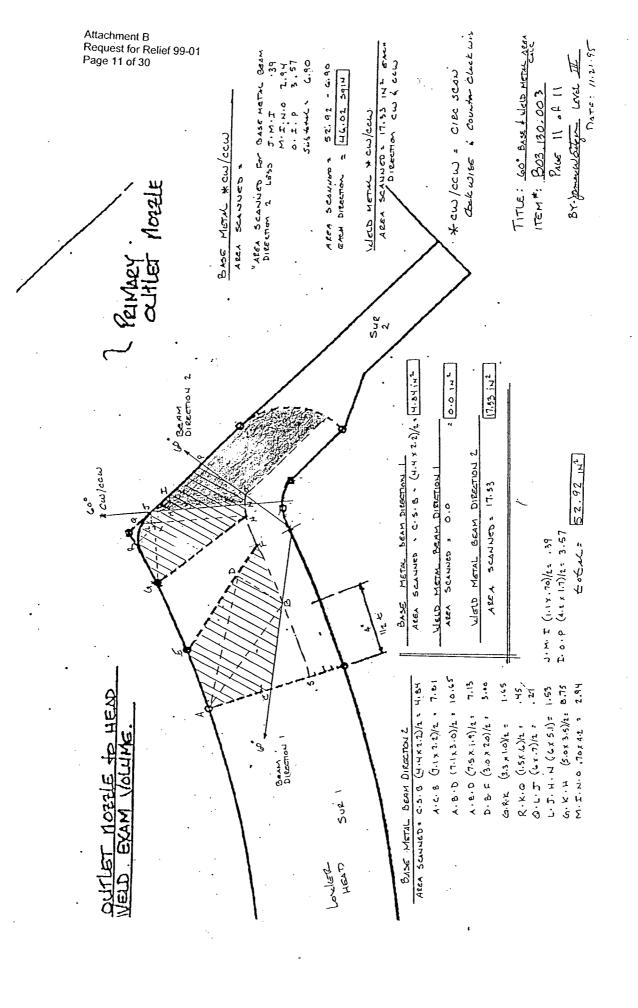
SHEET 4 OF11

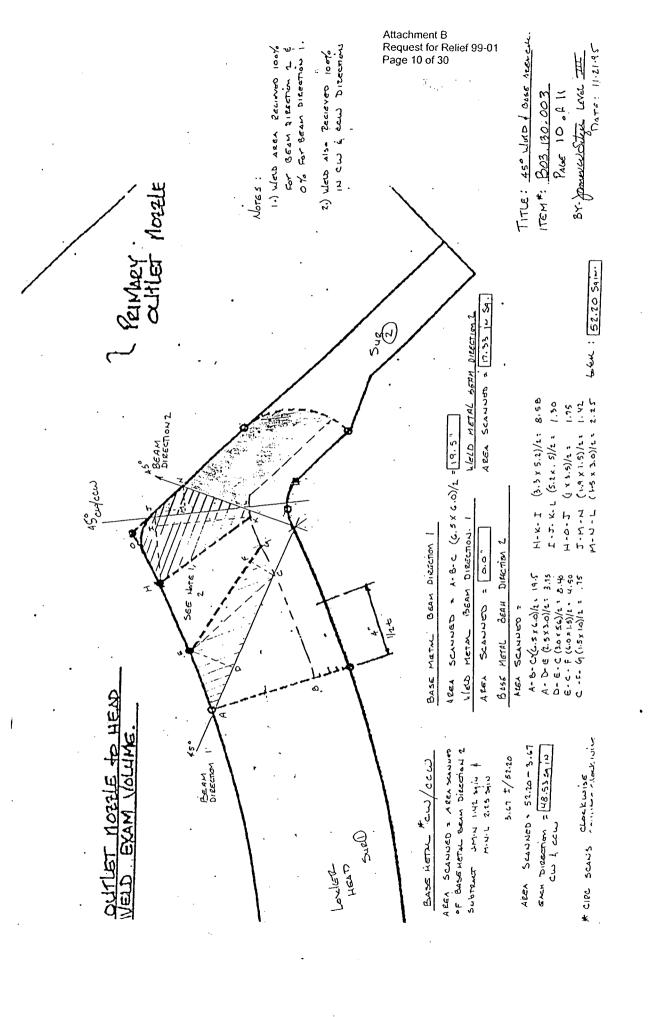
•	DUKE POWER	COMPANY	FORM NDE-UT-4
	ISI LIMITATION	NREPORT	Revision 1
Component/Weld ID: 3-SGB-WG50-1	!	Item No: B03.130.004	Remarks:
NO SCAN LIMITED SCAN ■ Control Control	SURFACE ☐ 1	BEAM DIRECTION ☑ 1 ☐ 2 ☑ cw ☑ ccw	Due to Nozzle Configuration
FROM L to L ANGLE: ⊠ 0 ⊠ 45 ⊠ 60 ☐ Other		M WO to	
□ NO SCAN	SURFACE	BEAM DIRECTION ☐ 1 ☑ 2 ☑ cw ☑ ccw	Due to Support Skirt
FROM L 96" to L 24" ANGLE: ⊠ 0 ⊠ 45 ⊠ 60 ☐ Other			
□ NO SCAN □ LIMITED SCAN		BEAM DIRECTION 1	
FROM L to L ANGLE: 0 45 60 Other		M WO to DEG to DEG	
☐ LIMITED SCAN	INCHES FRO	BEAM DIRECTION 1 2 cw ccw M WO to FROM DEG to	
Prepared By: Larry Mauldin	uldus Level: III [Date: 11/7/98 Sketch(s) attached 🖂	 yes
Reviewed By: Jay A Eaton	Date: ון ו	Authorized Inspector: MB	Date: //-05-98

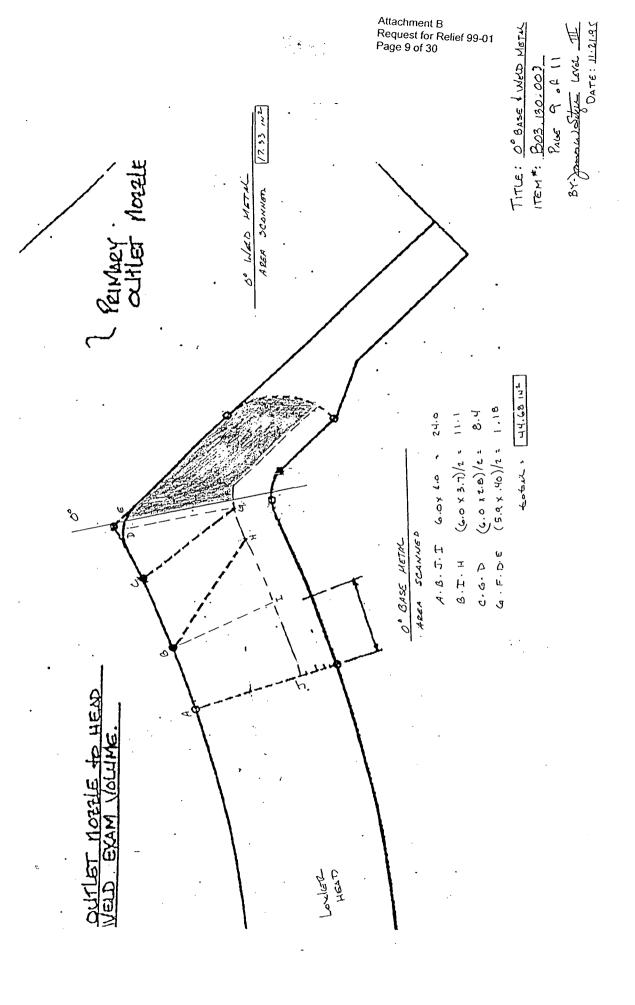
DUKE POV	WER CO	MPAN	1Y			Exam Sta	art: 09	943	Form	NDE-UT	-2A
ULTRASONIC EXAMINATION DA	TAISHEET	T FOR	PLANAR	REFLEC	TORS	Exam Fir	nish: 10	016	Re	evision 4	
Station: Oconee I	Unit: 3	Con	nponent/M	/eld ID: 3-	SGB-WG	50-1		[Date:	11/7/9	8
Weld Length (in.): 120.51	Surface Co	ndition:	As	Ground	Lo:	9.2.3	Surface T	emperat	ure:	75 °	F
1	Level: 1		cans:				Pyromete			DE 2701	7
Examiner: Larry Mauldin Laux Mauld	Li-Level: 1	11 4	5 🗆	dB	70 🗆	dB	Cal Due: Configura			o to Uoo	4
Procedure: NDE-620 Rev: 5	FC:	45	т 🗆	dB 7	о́т 🗆 _	dB			Flow		
	N/A	60	o ⊠ <u>69</u>	dB				Head		Nozzle	
Calibration Sheet No:		60	T ⊠69	<u>)</u> dB					Surface: o NDE-6		
9803091			Other:		d	В	Skew An			N/A	
IND# Max Mp W Max Max Ref	L Max	L1	L2	W1	Mp1	W2	Mp2	Beam Dir.	Exam Surf.	Scan	Damps
DO NOT WRITE IN THIS SPACE	50	0%dac HMA 0%dac 00%dac	20%dac HMA 50%dac 100%dac		20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	D(IN	1	WRITI	
NRI 60°											

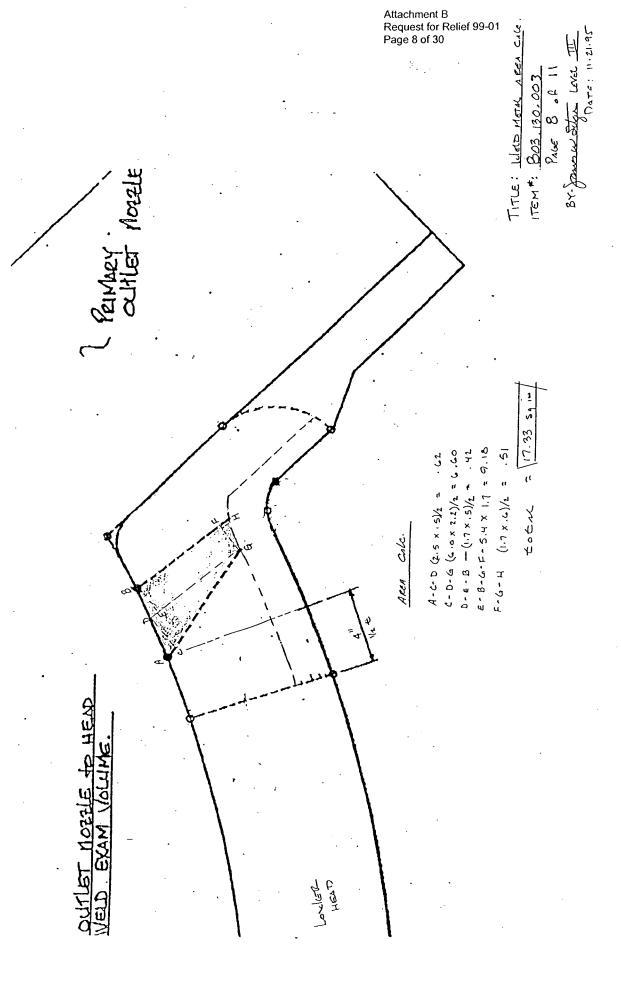
Remarks:										
Limitations: (see	Sheet Z of 11									
Reviewed By:		Level:	Date:	Authorized Inspector:	Date:	Item No:				
Jay A Eaton	945	11	11/17/98	MBC	11-25-98	B03.130.004				
						_/				

	DUKE POWER COMPANY									Exam Sta	art: 09	915	Form NDE-UT-2A		
ULTF	RASO	NIC E	XAMINA	TION DA	ATA SHE	ET FC	OR PLANA	REFLEC	TORS	Exam Fir	nish: 09	59	Re	evision 4	
Station	:	(Oconee		Unit:	3 (Component/\	Veld ID: 3-	SGB-WG	50-1			Date:	11/7/9	98
Weld L	ength	(in.):	120.5	51	Surface	Conditi	ion: As	Ground	Lo:	9.2.3	Surface T	empera	ture:	75°	F
Examir	ner: G	ayle E.	Houser 🗸	E House	ر Level:	Ħ	Scans:		•		Pyromete			DE 2701	7
1							45 🛛5	6dB	70 🗆 _	dB	Cal Due:				,
Proced	lure: I	VDE-6	20	Rev: 5	FC:		45T ⊠5	6 dB 7	от 🗆 _	dB	Configura		Flow _		
		NDE-6	40	1	N/	Ά	60 🗆	dB				 Head		Nozzle	
Calibra			o :		95-18	3&19	60T 🗆	dB					Surface:	OD	
980308	9, 9803	090	<u>.</u>		<u>.</u>			:0°-2	<u>0.5</u> d	В	Skew Ang		o NDE-6	80 only N/A	
IND#	4	Max % Ref	Mp Max	W Max	L Max	L1	L2	W1	Mp1	W2	Mp2	Beam Dir.	Exam Surf.	Scan	Damps
			NOT WI			20%da HMA 50%da 100%d	HMA 50%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac		O NOT		1 1
NRI	0°				·								 		
NRI	45°													,	
Remar Limitat Reviev	ions: (DE-UT-4)	N 90%	% or great		erage obtaine	ed: yes [Date:	Sheet	<u>√</u> (0:	of
Jay A	Eaton		4	+	11	1	ulales		MARI		,,,		ŀ	30 004	ļ









Attachment B Request for Relief 99-01 Page 7 of 30 TEM#: B03.130.003 TITLE: BASE METAL 2.4 × 3.0 -1.80x50) · 1/(01 × h.1) (3.0 × 5.0)/2 I-M.F.J 1.4 x 5.3 . (6.0 x 2.0)/2 1 d. N.O 4-6-C-D HITM G-F- H Λ. κ.

		DUKE			NDE-91-1							
		Limited Exa	mination Cov	verage V	Vork	sheet			Revision 0			
Marie 10 10 10 10 10 10 10 10 10 10 10 10 10	4-44	ACCORDANCE AND PARTY OF	Examinati	on Volu	me//	rea Defined	- DEMONSTRAÇÃO					
⊠ Ba	se Meta	ı 🗆 w	/eld	☐ Nea	r Su	rface [Bolting	g				
		Area Calcul	ation			Vo	lume Ca	Icula	tion			
Area = 73.27 sq. in. Volume = 124" x 73.27 = 9085 cu. in.												
,		,										
				ļ								
	.,		Cov	erage C	alcu	lations						
			Area	Leng	th	Volume	Volu	me				
		Beam	Examined	Examir		Examined	Requ		Daniel Causes			
Scan #	Angle	Direction	(sq.in.)	(in.))	(cu.in.)	(cu.i	n.)	Percent Coverage			
N/A	0	N/A	44.68	94		4199	908	35	46.22			
AXIAL	45	S1	19.5	94		1833	908	15	20.18			
AXIAL	45	S2	52.20	94		4906	908	5	54.00			
AXIAL	60	S1	4.84	66		319	908	5	3.51			
AXIAL	60	S2	52.92	66		3492	908	5	38.44			
CIRC	45	CW	48.53	94		4561	908	5	50.20			
CIRC	45	CCW	48.53	94		4561	908	5	50.20			
CIRC	60	CW	46.02	66		3037	908	5	33.43			
CIRC	60	CCW	46.02	66		3037	908	5	33,43			

Prepared By: Jay A Eaton

Level: II

Date: 11/16/98

Reviewed By: Gary Moss

Moss

Level: II

Date: //-17-98

-		DUKE			NDE-91-1							
		Limited Exa	mination Cov	verage V	Vork:	sheet			Revision 0			
- Marie Company of Control of		The rest Wilderstein was the Appendix . See See	Examinati	on Volu	me/A	rea Defined						
☐ Ba:	se Metal	ı 🛭 v	/eld	☐ Nea			☐ Bolting	}	☐ Inner Radius			
		Area Calcul	ation			Vo	lume Ca	lcula	tion			
Area = 17.33 sq. in. Volume = 124" x 17.33 = 2149 cu. in.									in.			
			Cov	rerage C	alcu	lations		·				
Scan #	Angle	Beam Direction	Area Examined (sq.in.)	Leng Examir (in.)	ned	Volume Examined (cu.in.)	Volu Requ (cu.	ired	Percent Coverage			
N/A	0	N/A	17.33	94		1629.02	214		75.80			
AXIAL	45	Ş1	0.0	66		0	214		0.00			
AXIAL	45	S2	17.33	66		1629.02	214	19	75.80			
AXIAL	60	S1	0.0	66		0	214	19	0.00			
AXIAL	60	S2	17.33	66		1143.78	214	19	53.22			
CIRC	60	S1	17.33	66		1143.78	214	19	53.22			
CIRC	60	S2	17.33	66		1143.78	214	19	53.22			
CIRC	45	S1	17.33	94		1629.02	214	9	75.80			
CIRC	45	S 2	17.33	94		1629.02	214	9	75.80			

Prepared By: Jay A Eaton

Level: II

Date: 11/16/98

Reviewed By: Gary Moss

Moss

Level: II

Date: 11-17-98

SHEET SOFIL

	DUKE POWER COMPANY									
	Limited	Examination Co	verage \	Nork	sheet			Revision 0		
1		Examinati	on Volu	me/ <i>F</i>	\rea Defined					
⊠ Base M	etal 🛛	Weld	☐ Nea	ar Sui	rface (☐ Bolting	3	☐ Inner Radius		
	Area Ca	lculation	Volume Calculation							
SEE ATTAC	HED SHEET			SEE	ATTACHED S	HEET				
					٠					
								·		
		Cov	erage C	Calcu	lations					
	5	Área	Leng	jth	Volume	Volu				
Scan # Ang	Beam le Direction	Examined (cg.in.)	Exami		Examined (cu.in.)	Requ (cu.i		Percent Coverage		
BM		n (sq.in.)	(in.	.,	29945	817		36.62		
WELD					9947.42	193		51.43		
	TOTAL	AGGREGATE	COVER	AGE	39892.42	1011	06	39.46		

Prepared By: Jay A Eaton

Level: II

Date: 11/16/98

Reviewed By: Gary Moss

Moss

Level: II

Date: 11-17-98

SHEET 4 OF11

	DUKE POWER COMPANY ISI LIMITATION REPORT	MPANY		FORM NDE-UT-4 Revision 1
Component/Weld ID: 3-SGB-WG50-2	Item No.	lo: B03.130.003	Remarks:	
NO SCAN	SURFACE	BEAM DIRECTION	Due to Nozzle Configuration	nfiguration
☐ LIMITED SCAN	□ 1 ⊠ 2 ⊠	1 1 2 2 cw 2 ccw		
FROM L	INCHES FROM WO	C/L to Beyond		
ANGLE: \$\times 0 \times 45 \times 60 Other	FRC	DEG to		
NO SCAN	SURFACE	BEAM DIRECTION	Due to Support Skirt	ii
CAN	□ 2	1 ⊠ 2 ⊠ cw ⊠ ccw		
FROM L96" to L24"	INCHES FROM WO	C/L to11"		
ANGLE: N 0 N 45 N 60 Other	FR(FROM DEG to DEG		
NO SCAN	SURFACE	BEAM DIRECTION		
☐ LIMITED SCAN	0 1 0 2	1 2 cw ccw		
FROM L to L	INCHES FROM WO	t t		
ANGLE: 0 0 45 0 60 0 Other	FR	FROM DEG to DEG		
NO SCAN	SURFACE	BEAM DIRECTION		
☐ LIMITED SCAN	0 1 0 2	1 2 cw cow		
FROM L to L	INCHES FROM WO	to		
ANGLE: 0 0 45 0 60 Other	FR	FROM DEG to		
Prepared By: Larry Mauldin Ague	ude Level: III Date:	11/7/98 Sketch(s) attached	⊠ yes □ no	Sheet 3 of 11
Reviewed By: Jay A Eaton	Date: 11/17/58	Authorized Inspector. MISC	4.	Date: //معرير 98

DUKE POWER COMPANY Exam Start: 0943 ULTRASONIC EXAMINATION DATA SHEET FOR PLANAR REFLECTORS Exam Finish: 1016 Station: Oconee Unit: 3 Component/Meld ID: 3-SGB-WG50-2 Exam Finish: 1016 Weld Length (in.): 120.51 Surface Condition: As Ground Lo: 9.2.3 Surface Tempe Callous: Examiner: Unit: 3 Component/Meld ID: 3-SGB-WG50-2 Scans: Calloud: Callous: Prometer S/N: Promete		Form NDE-LIT-20
Cocone		C4-10-101101
Component/Weld ID: 3-SGB-WG50-2		Revision 4
Length (in.): 120.51 Surface Condition: As Ground Lo: 9.2.3 Surface Condition: Winfred C. Leeper (Linguistic Condition) Level: III Scans: AB ToT AB Configuration Sheet No: Shew Ar AB AB AB AB AB AB AB		Date: 11/7/98
iner: Winfred C. Leeper William Level: III Scans: As	.2.3 Surface Temperature:	ature: 75 ° F
dure:	Pyrometer S/N:	MCNDE 27017
dure: NDE-620		2/12/99
ation Sheet No: Max Max Max Max Max L1 L2 W1 Mp1 W2 Mp2 BO NOT WRITE HMA		zzle to H
ation Sheet No: Max Max		FIOW SZ
191 Max Mp W L L2 W1 Mp1 W2 Mp2	Sca	Scan Surface: OD
Max Mp W L L1 L2 W1 Mp1 W2 Mp2 Ref Max Max L1 L2 W1 Mp1 W2 Mp2 DO NOT WRITE 100%dac 20%dac 20%dac 20%dac 20%dac IN THIS SPACE 100%dac 50%dac 50%dac 50%dac 50%dac 100%dac 100%dac 100%dac 100%dac 100%dac 100%dac	Applies Skew Angle:	Applies to NDE-680 only ngle: N/A
DO NOT WRITE 20%dac HMA	Mp2	Exam Scan Damps
-	20%dac HMA 50%dac 100%dac	DO NOT WRITE IN THIS SPACE
Remarks:		
Limitations: (see NDE-UT-4) 国 90% or greater coverage obtained: yes 口 no 図		Sheet 2 of 11
Reviewed By: Level: Date: Authorized Inspector: Date:	Date:	Item No:
Jay A Eaton (1-35-98)	86-50-11	B03.130.003

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-			Dl	JKE PC	WER C	COMF	'NA	Y			Exam Sta	art: 09	915	Form	NDE-UT	-2A
ULTF	RASO	NIC E	XAMINA	TION DA	ATA SHE	ET F	OR P	LANAR	REFLEC	TORS	Exam Fir	nish: 09	959	Re	evision 4	
Station	:		Oconee		Unit:	3	Comp	onent/V	/eld ID: 3-	SGB-WG	50-2			Date:	11/7/9	98
Weld L	ength	(in.):	120.	51	Surface	Condi	tion:	As	Ground	Lo	9.2.3	Surface 7	empera	ture:	75 °	F
Examir	er: G	ayle E.	Houser	E House	Level:	11	Sca	ıns:				Pyromete	er S/N:	MCN	DE 2701	
			nmerman				1	⊠ 56	dB	70 🗆	dB	Cal Due:	2	2/12/99		·
			20	•	FC:		1				dB	Configura				
	ı	NDE-6	40	1	i N	/A	60		dB			1	1 Head	Flow _ to		
Calibra	tion Si	neet N	0:	•	95-1	8&19	60T		dB			-	Scan	Surface:	OD	_
980308	9, 9803	090			33-1	30.13	Ap				opplies t	ies to NDE-680 only N/A				
							<u></u>	Other:	0°-2	0.5 c	B	Skew An	gie:		N/A	
IND#	4	Max % Ref	Mp Max	W Max	L Max	L1		L2	W1	Mp1	W2	Mp2	Beam Dir.	Exam Surf.	Scan	Damps
		1	NOT W	1		20%d HMA 50%d 100%d	A lac 5	20%dac HMA 50%dac 00%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac		O NOT		ı
NRI	45°															
NRI	0°							 								
		<u> </u>			<u> </u>	L			<u></u>	<u></u>		<u>l</u>		<u></u>	<u> </u>	L

Remarks:					
Limitations: (see NDE-UT-4)	90% or greater	coverage obta	ined: yes □ no ☒		Sheet of
Reviewed By:	Level:	Date:	Authorized Inspector:	Date:	Item No:
Jay A Eaton		11/17/90	MBC	11-25-98	B03.130.003

					,		- v. ma.em.			
	IDENT NO.	PIECE NO.	DIAM.	тніск	PC.	QTY	DESCRIPTION	MATL.	WG178,	wG25
	WG8-1	1 TO 2	138"1.0.	4.188 MIN.	1	ı	SHELL SECTION	SA 516 GR.70	\	
	WG8-2	2 703	138' 1.D.	4.188 MIN.	2	2	SHELL SECTION	\$A 516 GR-70		WG58-I
	WG8-3	3002	138" I.D.	4.18 8 WIN.	3	ı	SHELL SECTION	SA 516 GR.70		WG23-21
	WG6-4	5 TO 6	136" 1.0.	4.186 WIN.	4	1	SHELL SECTION	3A 516 GR.70	wg23-1/	(51)
<u> </u>	WG23-1	14703	29.004	6.625 NIN.	5	1	SHELL SECTION	SA 516 GR.70	400	X WG178
99-01	WG23-2	14703	29.00"	6.625 MIN.	6	1	SHELL SECTION	\$A516 GR.70	W	
ğ	WGZS	70 TO 8	48.63	8.000 UIN.	7	ī	LOWER HEAD	SA302 GR-B		
<u>e</u>	WG50-1	65707	38.38"	8-000 MIN.	8	1	UPPER HEAD	SA302 GR.8		WC8-1-
A Relief	WG 50-2	65TO 7	38.38	8.000 MIN.	9	1	SUPPORT SKIRT FORGIN	SA508		wcs-z (2)
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र्ट्स इ	WG 58+1	8 TO 51	119" I.D.	8.000 MIN.	50	1	LOWER TUBE SHEET	SASOB	Ž	
th es	WG58-2	9 TO 50	119' 1.D.	8.000 NIN.	51.	1	UPPER TUBE SHEET	SAS08	SECTION A-A	
Attachment A Request for Re Page 1 of 1	WG 59	6 TQ 50	138'1.0.	6.625 MIN.	65	z	28" PRIMARY OUTLET- NOZZLE	1 CL2		B (3)
Pa Re	WG 60	1 TO 51	138° I.D.	6.625 NIN.	70	+-	36" PRIMARY INLET NOZZLE	SA508 CL I	WG172,	7 WG23-1(W-X)
	WG 61	9 TO 96	135' I.D.	1.750	96	+	SUPPORT SKIRT	5 A 5 3 3		Z WG 23-2(X-Y)
٠.	WG 172	7109	102.75 LD.	8.000 UIN.	300		AUX. FEEDWATER NOZZ	GR.B SASOB CL I	3 SECTION	<u> </u>
1. 3	WG 178	J TO 300	14.25	4.188 UIN.	-	 	AUGUST ELEMATER MOZE	- CL 1		wco-3
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VII.	Implementation Schedule:
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Unit 3, Refueling Outage 17

Unit 1, Refueling Outage 19

Unit 2, Refueling Outage 17

Evaluated By:	RCACUSE	Date	2/1/99
Reviewed By:	Larry C. Kith	Date	2-2-99
Reviewed By NDE Level III:	James Mc Chille 111	Date	2-11-99
Approved By:	L. Levin thine	Date	z/11/99
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property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility."

Part 2 Examination Category B-D, Item B3.140, Steam Generator Outlet Nozzle Inside Radius Sections

The Code requires 100% volumetric examination of all Steam Generator Outlet Nozzle Inside Radius Sections. However, single-sided access and the support skirt restricts scanning and prevents complete volumetric coverage of the Steam Generator Outlet Nozzle Inside Radius Sections 3-SGB-WG50-2 and 3-SGB-WG50-1. Therefore, the 100% volumetric examination is impractical for these nozzle inside radius sections. To meet Code examination requirements, modifications to the Steam Generator support skirt would be necessary to allow complete volumetric coverage of the weld. Modifications to this portion of the Steam Generator would create a considerable burden on Duke Energy.

Duke Energy obtained 44.10% coverage of the Steam Generator Outlet Nozzle Inside Radius Sections 3-SGB-WG50-2 and 3-SGB-WG50-1. It is recognized that this represents a small part of the required Code examination volume. However, Duke Energy believes this provides reasonable assurance of the continued structural integrity of the subject nozzle-to-vessel welds.

Pursuant to 10 CFR 50.55a(g)(6)(i), granting this relief for the Steam Generator Outlet Nozzle Inside Radius Sections will provide reasonable assurance of weld/component integrity, ... "is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility."

have been achieved, and public health and safety will not be endangered by allowing relief from the aforementioned Code requirements.

Part 2 Examination Category B-D, Item B3.140, Steam Generator Outlet Nozzle Inside Radius Sections

The use of radiography as an alternate volumetric examination of the Steam Generator Outlet Nozzle Inside Radius Sections referenced in this request is not a viable option. Restrictions to performing radiography are primarily due to inability to access the inside of the Steam Generator to place film or to position a radiographic source.

Duke Energy has examined the welds referenced in this request to the maximum extent possible utilizing the latest in examination techniques and equipment. Duke Energy will continue to perform ultrasonic examination of all welds identified in Section I of this request (for all units) to the maximum extent practical, within the limits of original design and construction, in accordance with the requirements of ASME Section V, Article 4, and ASME Section XI, Appendix 1, 1989 Edition, and Code Case N-460. This will provide reasonable assurance of weld/component integrity. Thus, an acceptable level of quality and safety will have been achieved, and public health and safety will not be endangered by allowing relief from the aforementioned Code requirements.

VI. Justification for the Granting of Relief:

Part 1 Examination Category B-D, Item B3.130, Steam Generator Outlet Nozzle-to-Vessel Welds

The Code requires 100% volumetric examination of all Steam Generator Outlet Nozzle-to-Vessel Welds. However, single-sided access and the support skirt restricts scanning and prevents complete volumetric coverage of the Steam Generator Outlet Nozzle-to-Vessel Welds 3-SGB-WG50-2 and 3-SGB-WG50-1. Therefore, the 100% volumetric examination is impractical for these nozzle-to-vessel welds. To meet Code examination requirements, modifications to the Steam Generator support skirt would be necessary to allow complete volumetric coverage of the weld. Modifications to this portion of the Steam Generator would create a considerable burden on Duke Energy.

Duke Energy obtained 39.46% coverage of the Steam Generator Outlet Nozzle-to-Vessel Welds 3-SGB-WG50-2 and 3-SGB-WG50-1. It is recognized that this represents a small part of the required Code examination volume. However, Duke Energy believes this provides reasonable assurance of the continued structural integrity of the subject nozzle-to-vessel welds.

Pursuant to 10 CFR 50.55a(g)(6)(i), granting this relief for the Steam Generator Outlet Nozzle-to-Vessel Welds will provide reasonable assurance of weld/component integrity, ... "is authorized by law and will not endanger life or

IV. Basis for Relief:

Part 1 Examination Category B-D, Item B3.130, Steam Generator Outlet Nozzle-to-Vessel Welds

Steam Generator Outlet Nozzle-to-Lower Head Welds 3-SGB-WG50-2 and 3-SGB-WG50-1 (Item Numbers B03.130.003 and B03.130.004) were examined to the maximum extent practical using ultrasonic techniques in accordance with the requirements of ASME Section V, Article 4, and ASME Section XI, Appendix 1, 1989 Edition. Reference Attachment A for drawing.

Because of geometric conditions, (i.e. single-sided access and support skirt location) only 39.46% coverage of the required volume was examined. In order to achieve more coverage the support skirt would have to be cut away from the nozzle. Reference Attachment B for inspection results.

Part 2 Examination Category B-D, Item B3.140, Steam Generator Outlet Nozzle Inside Radius Sections

Steam Generator Outlet Nozzle-to-Lower Head Inside Radius Sections 3-SGB-WG50-2 and 3-SGB-WG50-1 (Item Numbers B03.140.003 and B03.140.004) were examined to the maximum extent practical using ultrasonic techniques in accordance with the requirements of ASME Section V, Article 4, and ASME Section XI, Appendix 1, 1989 Edition. Reference Attachment A for drawing.

Because of geometric conditions, (i.e. single-sided access and support skirt location) only 44.10% coverage of the required volume was examined. In order to achieve more coverage the support skirt would have to be cut away from the nozzle. Reference Attachment B for inspection results.

V. Alternate Examinations or Testing:

Part 1 Examination Category B-D, Item B3.130, Steam Generator Outlet Nozzle-to-Vessel Welds

The use of radiography as an alternate volumetric examination of the Steam Generator Outlet Nozzle-to-Lower Head Welds referenced in this request is not a viable option. Restrictions to performing radiography are primarily due to inability to access the inside of the Steam Generator to place film or to position a radiographic source.

Duke Energy has examined the welds referenced in this request to the maximum extent possible utilizing the latest in examination techniques and equipment. Duke Energy will continue to perform ultrasonic examination of all welds identified in Section I of this request (for all units) to the maximum extent practical, within the limits of original design and construction, in accordance with the requirements of ASME Section V, Article 4, and ASME Section XI, Appendix 1, 1989 Edition, and Code Case N-460. This will provide reasonable assurance of weld/component integrity. Thus, an acceptable level of quality and safety will

as described in NRC Inspection Report No. 50-269/95, 50-270/95, 50-287 dated May 5, 1995.

While the examinations have been completed only for Unit 3 at this time, relief is also being sought for Units 1 and 2 for the same welds. If, for some reason, the actual examination coverages of the welds referenced in this Request for Relief for Units 1 and 2 are less than those listed for Unit 3 in Section IV of this request, additional Requests for Relief will be submitted on a case by case basis.

II. Code Requirement:

ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition with no Addenda, Examination Category B-D, Items B3.130 and B3.140 requires, 100% volumetric examination of all Steam Generator Outlet Nozzle-to-Vessel Welds and Inside Radiuses as defined by Figure IWB-2500-7. ASME Section XI 1989 Edition with no Addenda, Appendix 1, including Supplement 9 as clarified by Code Inquiry 95-11 requires scanning using two different angles when scanning from the outside surface of the component. When scanning for reflectors parallel to the weld, the angle beams shall be aimed at right angles to the weld axis, with the search unit(s) manipulated so that the ultrasonic beams pass through the entire volume of weld metal. The adjacent base metal in the examination volume must be completely scanned by both angle beams from both directions (any combination of two angle beams will satisfy the requirement).

When scanning for reflectors transverse to the weld, the angle beam search units shall be aimed parallel to the axis of longitudinal and circumferential welds. The search unit shall be manipulated so that the ultrasonic beams pass through all of the examination volume. Scanning shall be done in two directions 180 degrees to each other to the extent possible. Areas blocked by geometric conditions shall be examined from at least one direction.

Code Case N-460 allows credit for full volume coverage of welds if it can be shown that greater than 90% of the required volume has been examined.

III. Code Requirement from which Relief is Requested:

Relief is requested from the requirement to examine 100% of the required volume ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition with no Addenda (Code) required volumetric examinations of the Steam Generator Outlet Nozzle-to-Vessel Welds and the Steam Generator Outlet Nozzle Inside Radius Sections described in Section I above.

Due to part geometry, obtaining greater than 90% of the required volume as outlined in Code Case N-460 is not possible.

Duke Energy Corporation

	Station _	Oconee	Units	1, 2 & 3
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10-YEAR INTERVA	IL REQUES I	I FOR RELIEF	NO.	99-01

Pursuant to 10 CFR 50.55a(g)(5)(iii), Duke Energy has determined that compliance with the specified requirements of ASME Boiler and Pressure Vessel Code, Section XI is not practical for Oconee Nuclear Station. Accordingly, information is being submitted in support of our determination and relief is being sought from the applicable ASME Boiler and Pressure Vessel Code, Section XI requirement(s).

I. System/Component(s) for Which Relief is Requested:

Part 1 Steam Generator Outlet Nozzle-to-Vessel Welds;

<u>Unit</u>	ID Number	<u>Item Number</u>
1	1-SGB-WG50-2	B03.130.003
1	1-SGB-WG50-1	B03.130.004
2	2-SGA-WG50-2	B03.130.001
2	2-SGA-WG50-1	B03.130.002
3	3-SGB-WG50-2	B03.130.003
3	3-SGB-WG50-1	B03.130.004

Part 2 Steam Generator Outlet Nozzle Inside Radius Sections;

<u>Unit</u>	ID Number	Item Number
1	1-SGB-WG50-2	B03.140.003
1	1-SGB-WG50-1	B03.140.004
2	2-SGA-WG50-2	B03.140.001
2	2-SGA-WG50-1	B03.140.002
3	3-SGB-WG50-2	B03.140.003
3	3-SGB-WG50-1	B03.140.004

For welds listed in this Request for Relief (both Parts 1 and 2), all configurations, including interferences, are the same for both steam generators of Units 1, 2, and 3. Therefore, all three units are being documented in this Request for Relief

CASES OF ASME BOILER AND PRESSURE VESSEL CODE

Approval Date: March 5, 1990

See Numerical Index for expiration and any reaffirmation dates.

Case N-481
Alternative Examination Requirements for Cast
Austenitic Pump Casings
Section XI, Division 1

Inquiry: When conducting examination of cast austenitic pump casings in accordance with Section XI, Division 1, what examinations may be performed in lieu of the volumetric examinations specified in Table IWB-2500-1, Examination Category B-L-1, Item B12.10?

Reply: It is the opinion of the Committee that the following requirements shall be met in lieu of performing the volumetric examination specified in Table IWB-2500-1, Examination Category B-L-1, Item B12.10:

- (a) Perform a VT-2 visual examination of the exterior of all pumps during the hydrostatic pressure test required by Table IWB-2500-1, Category B-P.
- (b) Perform a VT-1 visual examination of the external surfaces of the weld of one pump casing.

- (c) Perform a VT-3 visual examination of the internal surfaces whenever a pump is disassembled for maintenance.
- (d) Perform an evaluation to demonstrate the safety and serviceability of the pump casing. The evaluation shall include the following:
- (1) evaluating material properties, including fracture toughness values;
- (2) performing a stress analysis of the pump casing;
 - (3) reviewing the operating history of the pump;
 - (4) selecting locations for postulating flaws;
- (5) postulating one-quarter thickness reference flaw with a length six times its depth;
- (6) establishing the stability of the selected flaw under the governing stress conditions;
- (7) considering thermal aging embrittlement and any other processes that may degrade the properties of the pump casing during service.
- (e) A report of this evaluation shall be submitted to the regulatory and enforcement authorities having jurisdiction at the plant site for review.

APPENDIX A

ASME CODE CASE N-481

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- 33. EPRI Report No. NP-5461, "Component Life Estimation: LWR Structural Material Degradation Mechanisms," September 1987, prepared by Structural Integrity Associates.

- 11. S. Bonnet, J. Bourgoin, J. Champredonde, D. Guttmann, and M. Guttmann, "Relationship Between Evolution of Mechanical Properties of Various Cast Duplex Stainless Steels and Metallurgical and Aging Parameters: An Outline of Current EDF Programs," Mater. Sci. and Technol., 6, 221-229 (1990).
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- 14. Y. Meyzaud, P. Ould, P. Balladon, M. Bethmont, and P. Soulat, "Tearing Resistance of Aged Cast Austenitic Stainless Steel," presented at Intl. Conf. on Thermal Reactor Safety (NUCSAFE 88), October 1988, Avignon, France.
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5.0 SUMMARY AND CONCLUSIONS

The evaluations contained in this report have demonstrated that the Oconee Unit 3 reactor coolant pump casing 3B1 meet the safety and serviceability requirements of ASME Code Case N-481. Highlights of these evaluations are provides as follows:.

- The fracture toughness of the base material stainless steel, ASTM A351, Grades CF8 and CF8M casting, and the weld metal were addressed, including thermal embrittlement considerations. A lower bound fracture toughness of 140.7 ksi √in was used in the analysis.
- Six most highly-stressed locations were chosen as the critical locations for evaluation based on finite element analyses performed for operating pressure and heatup/cooldown transients.
- Flaws were postulated both in the axial and hoop directions at the critical locations and the corresponding normal stresses were used in the fracture mechanics evaluation.
- Consistent with similar evaluations for pressure vessels with postulated large flaws, per Appendix G of ASME Code, Section III, safety factors of 2 for primary and 1 for secondary loads were used for Service Levels A and B conditions. At the critical locations, the applied stress intensity factors were below the allowable values. The stress intensity factors at these locations ranged from 28.06 to 136.03 ksi √in compared to the allowable of 140.7 ksi √in.
- Fatigue crack growth analysis was performed assuming an initial flaw size corresponding to the acceptance standards of ASME Code, Section XI, and considering all the significant plant transients. The analysis indicated that fatigue crack growth is very small (maximum of 0.31 in. at the most critical location) during the 40-year plant design life (360 significant heatup/cooldown cycles). It takes approximately 1,100 cycles for the initial assumed flaw at the most critical location to reach the quarter-thickness flaw.

Crack Growth for Path No. 6 (Axial Flaw)

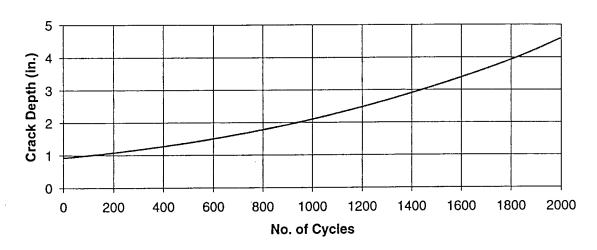


Figure 4-17. Results of Fatigue Crack Growth Analysis for Oconee Unit 3 Pump Casing

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dure: NDE-680 Rev: 1 FC: 45T □ dB 70T ⊠ 82 dB Configuration: Inner Radius ation Sheet No: N/A FC: 45T □ dB 70T ☒ BB Applies to NDE-680 only N/A Flow N/A 92, 9803093 Amax Mp W L L1 L2 W1 Mp1 W2 Mp2 Skew Angle: 20.5° Amax Max Max Max Max Max Mm4 HMA HMA <td< td=""><td>Examiner: 1</td><td>Larry Mauldin</td><td>Man III.</td><td>Level</td><td>\[\equiv \]</td><td></td><td></td><td></td><td>Ç</td><td>Cal Due:</td><td>2/12</td><td></td><td>1</td></td<>	Examiner: 1	Larry Mauldin	Man III.	Level	\[\equiv \]				Ç	Cal Due:	2/12		1
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JENE		B03.140.004
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,	DUKE POWER COMPANY ISI LIMITATION REPORT	COMPANY	FORM	FORM NDE-UT-4
Component/Weld ID: 3-SGB-WG50-1		Item No: B03.140.004	Remarks:	Kevision 1
	SURFACE			
NO SCAN	1		Due to Nozzle Configuration	c
☐ LIMITED SCAN	1 🖂 2			
FROM L to L	INCHES FROM WO	4 WO C/L to Beyond		
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60 □ Other		DEG to		
NO SCAN	SURFACE	BEAM DIRECTION	Due to Support Skirt	
☐ LIMITED SCAN	1 0 2	1		
FROM L to L	INCHES FROM WO	4 WO C/L to 11"		
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60 ☐ Other		DEG to		
□ NO SCAN	SURFACE	BEAM DIRECTION		
☐ LIMITED SCAN	1 0 2	1 2 0 cw 0 ccw		
FROM L	INCHES FROM WO	1 WO		
ANGLE: □ 0 □ 45 □ 60 □ Other				
NO SCAN	SURFACE	BEAM DIRECTION		
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Prepared By: Larry Mauldin Jaur My	aullu-evel: III D	Date: 11/7/98 . Sketch(s) attached 🖂 yes	/es 🔲 no Sheet	300 t
Reviewed By: Jay A Eaton	> Date: 11/16/96	Authorized Inspector: Ang	Date:	II '
,				11-25:98

		DU	KE POW	ER COMP	ANY				NDE-91-1
	han tooma ner	Limited I	Examinatio •	n Coverage	Works	heet			Revision 0
			Exan	nination Volu	ıme/Ar	ea Define			
□Ва	se Meta	ı 🗆	Weld	☐ Ne	ar Surf	ace	☐ Bolting	1	☐ Inner Radius
		Area Cal	lculation			V	olume Cal	lcula	tion
Area =	4.37" sq.	in.				e = 124" x 4	.37 sq. in.	= 542	2 cu. in.
		•		Coverage (Calcula	itions			
Scan #	Angle	Beam Direction	(54.1	ned Exam	ined	Volume Examined (cu.in.)	Volur Requi (cu.i	red	Percent Coverage
1	60°	cw & ccw	3.62	2 66		239	542	2	44.10

Prepared By: Jay A Eaton

Level: II

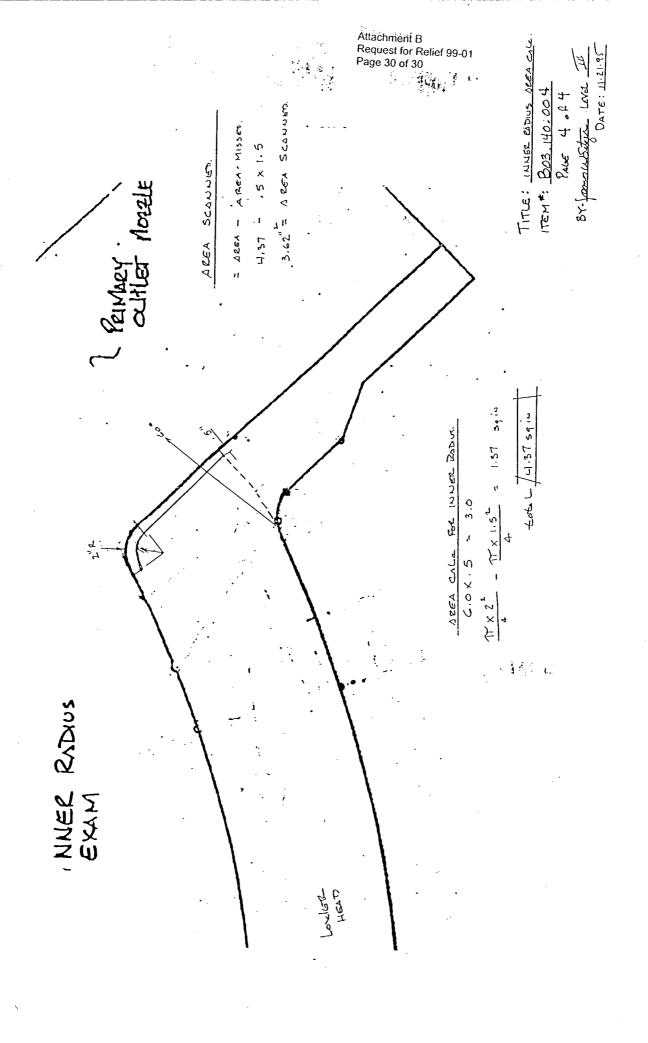
Date: 11/16/98

Reviewed By: Gary Moss

Moss

Level: II

Date: //-/6.98



Duke Energy Corporation

	Station _	Oconee	Unit	1, 2 & 3
10-YEAR INTERVAL	REQUES1	FOR RELIE	F NO.	98-01

Pursuant to 10 CFR 50.55a(g)(5)(iii), Duke Energy has determined that compliance with the specified requirements of ASME Boiler and Pressure Vessel Code, Section XI is not practical for Oconee Nuclear Station. Accordingly, information is being submitted in support of our determination and relief is being sought from the applicable ASME Boiler and Pressure Vessel Code, Section XI requirement(s).

I. System/Component(s) for Which Relief is Requested:

a. Part 1, Pressurizer Surge Nozzle-to-Lower Head Weld

1-PZR-WP15 Item Number B03.110.001

2-PZR-WP15 Item Number B03.110.001

3-PZR-WP15 Item Number B03.110.001

b. Part 2, Letdown Cooler Heat Exchanger Nozzle-to-Vessel Welds

1-LDCA-IN-V2 Item Number B03.150.001

1-LDCA-OUT-V6 Item Number B03.150.002

3-LDCA-IN-V2 Item Number B03.150.001

3-LDCA-OUT-V5 Item Number B03.150.002

For welds listed in this Request for Relief (both Parts 1 and 2), all configurations, including interferences, are the same for Units 1, 2, and 3. Therefore, all three units are being documented in this Request for Relief as described in NRC Inspection Report No. 50-269/95, 50-270/95, 50-287 dated May 5, 1995.

While the examinations have been completed only for Unit 1 at this time, relief is also being sought for Units 2 and 3 for the same welds. If, for

some reason, the actual examination coverages of the welds referenced in this Request for Relief for Units 2 and 3 are less than those listed for Unit 1 in Section IV of this request, additional Requests for Relief will be submitted on a case by case basis.

II. Code Requirement:

ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition with no Addenda, Examination Category B-D, Items B3.110 and B3.150 requires 100% volumetric examination of all Pressurizer nozzle-to-vessel welds as defined by Figure IWB-2500-7,

ASME Section XI 1989 Edition with no Addenda, Appendix 1, including Supplement 9 as clarified by Code Inquiry 95-11 requires scanning using two different angles when scanning from the outside surface of the component. When scanning for reflectors parallel to the weld, the angle beams shall be aimed at right angles to the weld axis, with the search unit(s) manipulated so that the ultrasonic beams pass through the entire volume of weld metal. The adjacent base metal in the examination volume must be completely scanned by both angle beams from both directions (any combination of two angle beams will satisfy the requirement).

When scanning for reflectors transverse to the weld, the angle beam search units shall be aimed parallel to the axis of longitudinal and circumferential welds. The search unit shall be manipulated so that the ultrasonic beams pass through all of the examination volume. Scanning shall be done in two directions 180 degrees to each other to the extent possible. Areas blocked by geometric conditions shall be examined from at least one direction.

Code Case N-460 allows credit for full volume coverage if it can be shown that at least 90% of the required volume has been examined.

III. Code Requirement from which Relief is Requested:

Relief is requested from the requirement of examining 100% of the ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition with no Addenda (Code) required volumetric examinations of the Pressurizer Nozzle-to-Head weld and the Letdown Cooler Heat Exchanger Nozzle to Vessel welds described in Section I above.

Due to part geometry, obtaining at least 90% of the weld length as outlined in Code Case N-460 is not possible with existing ultrasonic techniques.

IV. Basis for Relief:

Request for Relief 98-01, Part 1 Examination Category B-D, Item B3.110, Full Penetration Pressurizer Nozzle-to-Vessel Weld

Pressurizer Nozzle-to-Head Weld 1-PZR-WP15 (Item Number B03.110.00) was examined to the maximum extent practical using ultrasonic techniques in accordance with the requirements of ASME Section V, Article 4, and ASME Section XI, Appendix I, 1989 Edition. Reference Attachment A for drawing.

This weld is limited to 68.39% coverage of the required volume because of the nozzle configuration.

Request for Relief 98-01, Part 2, Examination Category B-D, Item B3.150, Full Penetration Pressurizer Nozzle-to-Vessel Welds

Letdown Cooler Heat Exchangers (Primary Side) Nozzle-to-Vessel Welds 1-LDCA-IN-V2 and 1-LDCA-IN-V6 (Item Numbers B03.110.001 and B03.110.002 respectively) were examined to the maximum extent practical using ultrasonic techniques in accordance with the requirements of ASME Section V, Article 4, and ASME Section XI Boiler and Pressure Vessel Code, Appendix I, 1989 Edition. Reference Attachment B for drawing.

These welds are limited to 26.73% coverage of the required volume because of branch connection interferences.

V. Alternate Examinations or Testing:

Request for Relief 98-01, Part 1, Examination Category B-D, Item B3.110. Pressurizer Nozzle-to-Vessel Weld

The use of radiography as an alternate volumetric examination of the Pressurizer weld referenced in this request is not a viable option. Restrictions to performing radiography are primarily due to inability to access the inside of the Pressurizer to place film or to position a radiographic source.

Duke Energy proposes to use the pressure test and VT-2 visual examination to compliment the limited examination coverage. The Code requires (reference Table IWB-2500-1, Item Number B15.20) that a system leakage test be performed after <u>each</u> refueling outage. Additionally a system hydrostatic test (reference Table IWB-2500-1, Item Number B15.20) is required once during each 10 year inspection interval. These tests require a VT-2 visual examination for evidence of leakage. This testing will provide adequate assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), there are other activities which provide a high level of confidence that, in the unlikely case that leakage did occur through this weld, it would be detected. Specifically, any leakage from this weld would be detected by monitoring of the Reactor Coolant System (RCS), which is performed once each shift under procedure PT/1,2,3/A/0600/10, "RCS Leakage". This RCS leakage monitoring is required by Technical Specification 3.1.6, "Leakage". The leakage could be detected through several methods. The reactor building air particulate monitor is sensitive to low leak rates; the iodine monitor, gaseous monitor and area monitor are capable of detecting any fission products in the coolant and will make these monitors sensitive to coolant leakage. In addition to the radiation monitors, leakage is also monitored by a level indicator in the reactor building normal sump. Another check would be a loss of level in the Letdown Storage Tank.

Duke Energy has examined the weld referenced in this request to the maximum extent possible utilizing the latest in examination techniques and equipment. Duke Energy will continue to perform ultrasonic examination of all welds identified in Section 1 of this request (for all units) to the maximum extent practical, within the limits of original design and construction, in accordance with the requirements of ASME Section V, Article 4, and ASME Section XI, Appendix I, 1989 Edition, and Code Case N-460. This will provide reasonable assurance of weld/component integrity. Thus, an acceptable level of quality and safety will have been achieved, and public health and safety will not be endangered by allowing relief from the aforementioned Code requirements.

Request for Relief 98-01, Part 2, Examination Category B-D, Item B3.150.Letdown Cooler Heat Exchanger Nozzle-to-Vessel Welds

The use of radiography as an alternate volumetric examination of the Letdown Cooler Heat Exchanger Nozzle-to-Vessel welds is not a viable option. Restrictions to performing radiography are primarily due to inability to access the inside of the Letdown Cooler Heat Exchanger to place film or to position a radiographic source.

Duke Energy proposes to use the pressure test and VT-2 visual examination to compliment the limited examination coverage. The Code requires (reference Table IWB-2500-1, Item Number B15.40) that a system leakage test be performed after each refueling outage. Additionally a system hydrostatic test (reference Table IWB-2500-1, Item Number B15.41) is required once during each 10 year inspection interval. These tests require a VT-2 visual examination for evidence of leakage. This testing will provide adequate assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), there are other activities which provide a high level of confidence that, in the unlikely case that leakage did occur through these welds, it would be detected and isolated. Specifically, any leakage from these welds would be detected by monitoring of the Reactor Coolant System (RCS), which is performed once each shift under procedure PT/1,2,3/A/0600/10, "RCS Leakage". This RCS leakage monitoring is required by Technical Specification 3.1.6, "Leakage". The leakage could be detected through several methods. The reactor building air particulate monitor is sensitive to low leak rates; the iodine monitor, gaseous monitor and area monitor are capable of detecting any fission products in the coolant and will make these monitors sensitive to coolant leakage. In

addition to the radiation monitors, leakage is also monitored by a level indicator in the reactor building normal sump. Another check would be a loss of level in the Letdown Storage Tank. In the unlikely case that a leak did occur, these welds would be isolated from the RCS pressure boundary by remotely-operated valves.

VI. Justification for the Granting of Relief

Request for Relief 98-01, Part 1, Examination Category B-D, Item B3.110. Pressurizer Nozzle-to-Vessel Weld

The Code requires 100% volumetric examination of all Pressurizer Nozzle-to-Vessel welds. However, the taper on the nozzle side of the weld restricts scanning and prevents complete volumetric coverage of Pressurizer Nozzle-to-Vessel weld PZR-WP15. Therefore, the 100% volumetric examination is impractical for this nozzle-to-vessel weld. To meet Code examination requirements, modifications to the nozzle would be necessary to allow complete volumetric coverage. Modification to this portion of the reactor coolant system would create a considerable burden on Duke Energy.

Duke Energy obtained 68.39% coverage of Pressurizer Nozzle-to-Vessel weld 1-PZR-WP15. Based on the significant portion of the required volumetric examination that has been completed, any existing pattern of degradation would have been detected. In addition to the Code required volumetric examination; the Pressurizer will be subjected to the Code required VT-2 visual examination after <u>each</u> refueling outage and the 10 year hydrostatic test. Duke Energy believes this provides reasonable assurance of the continued structural integrity of the subject nozzle-to-vessel weld.

Pursuant to 10 CFR 50.55a(g)(6)(i), granting this relief for the Pressurizer Nozzle-to-Vessel weld will provide reasonable assurance of weld/component integrity, and is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

Request for Relief 98-01, Part 2, Examination Category B-D, Item B3.150.Letdown Cooler Heat Exchanger Nozzle-to-Vessel Welds

The Code requires 100% volumetric examination of all Heat Exchanger Nozzle-to-Vessel welds. However, the location of the Letdown Cooler Heat Exchanger Nozzle-to-Vessel welds prevents obtaining 100% volumetric examination coverage. Therefore, the 100% volumetric examination is impractical. To meet Code examination requirements, modifications to the Letdown Cooler Heat Exchanger Nozzle would be necessary to allow complete volumetric examination coverage. Modifications of this magnitude would create a considerable burden on Duke Energy Corporation.

Duke Energy obtained 26.73% coverage on the Letdown Cooler Heat Exchanger Nozzle-to-Vessel welds, 1LDCA-IN-V2 and 1-LDCA-OUT-V6. It is recognized that this represents a small part of the required Code examination volume. However, in conjunction with the Code required VT-2 visual examination after <u>each</u> refueling outage and the 10 year hydrostatic test; Duke Energy believes this provides reasonable assurance of the continued structural integrity of the subject nozzle-to-vessel welds. In addition to the above code required examinations, RCS leakage monitoring and the capability of providing remote isolation of these welds from RCS pressure boundary provide assurance that in the unlikely case that a leak from these welds did occur, the welds could be promptly isolated and evaluated for corrective action.

Pursuant to 10 CFR 50.55a(g)(6)(i), granting this relief for the Letdown Cooler Heat Exchanger Nozzle-to-Vessel weld will provide reasonable assurance of weld/component integrity, and is authorized by law and will not endanger life of property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

VII. Implementation Sched	lule:
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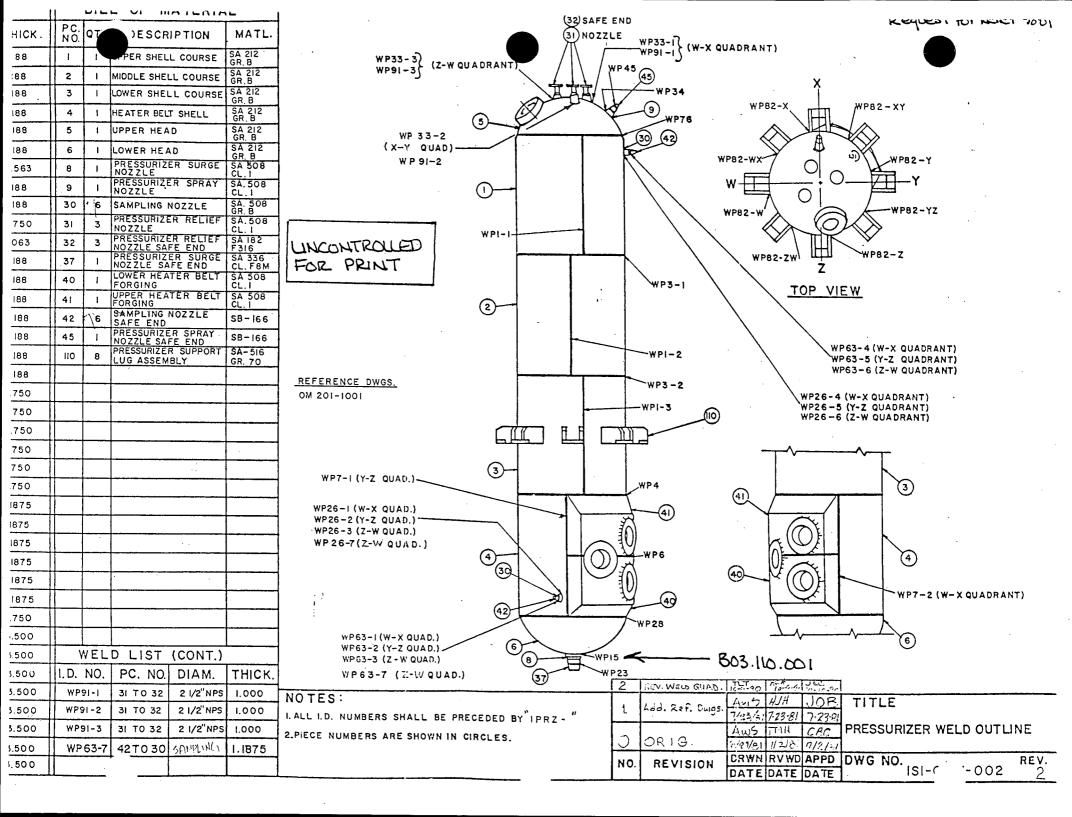
Unit 1, Refueling Outage 17

Unit 2, Refueling Outage 16

Unit 3, Refueling Outage 17

Evaluated By:

Reviewed By



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Exami	ner: Ja	mes L.	Panel A	me esa		Level:	II	4	5 🛛 <u>56</u>	<u>6</u> dB	70 🗆 _	dB			Nozzle	to Pzr He	ad
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		heet No				95-18	8&19	60	T ⊠ <u>63</u>	3_dB			Α		Surface: to NDE-6		
97010	91, 970	1092, 9	701093						Other:	0°-3	0.5 dl	3	Skew An	gle:]	N/A	
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	wed By			1		Level:		Date	e: /	Authorized	Inspector			Date:	Item I		
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	DUKE POWER	COMPANY		FORM NDE-UT-4
	ISI LIMITATIO	N REPORT		Revision 1
Component/Weld ID: 1-PZR-WP15		Item No: B03.110.001	Remarks:	
☑ NO SCAN	SURFACE	BEAM DIRECTION	SURGE LINE NO	DZZLE
☐ LIMITED SCAN	□ 1 🖾 2	□ 1 □ 2 □ cw □ ccw	, '	
FROM L to L	INCHES FRO	M WO WELD C/L to BEYOND		~
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60 ☐ Other		FROM <u>0</u> DEG to <u>360</u> DEG		
□ NO SCAN	SURFACE	BEAM DIRECTION		
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FROM L to L	INCHES FRO	M WO to		
ANGLE: 0 0 45 0 60 0ther		FROM DEG toDEG		
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FROM L to L	INCHES FRO	M WO to		
ANGLE: 0 45 60 Other	-	FROM DEG to		
Prepared By: Jay Eaton	Level: II [Date: 10/24/97 Sketch(s) attached ⊠	yes 🗌 no	Sheet 2 of 13
Reviewed By: G G Bibb Assibb	Date: 10 - 28 - 9	Authorized Inspector: 47/3	_	Date: /1-6-97

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DUKE POWER				NDE-	UT-6
B03.110.001 Ultrasonic Beam Spread M	leasurement Sheet			Revi	sion 1
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		W1	. 6	Mp1	1.45
		1/4t Wms	x 1.1	МрМах	1.85
	•	W2	1.6	Mp2	2.18
		14/4		14-4	·
		1/2t Wms	2.05 x 2.45	Mp1	3. 3
			2.85	MpMax Mp2	3.71 3,98
t5° - 20°					<u>, , , , , , , , , , , , , , , , , , , </u>
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CAL BLOCK: 40394	·	· W2	4.25	Mp2	5.86
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Calibration Sheet No: 9701092	<u> </u>		::		
Examiner: Level: Date: Reviewed By	/: Level: Date:	Authorized Inspe	ector:	······································	Date:
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						·	W1	1.6	Mp1	2.23
			······································			1/41	Wmax	2.25	МрМах	2.68
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	•			_		1/2t		4.6 5.45	MpMax	5.4 6.3
·			X	_						
60° - 20° BEAM SPREAD						3/41	W1	5.85 4.75	Mp1 MpMax	7.3 8.04
RANSDUCER: E19875						-	· W2	8.25		9,3
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Calibration Sheet No: 9701090	2					- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	· · · · · · · · · · · · · · · · · · ·	:		
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DUKE POWER COMPANY Limited Examination Coverage Worksheet

NDE-91-1

Revision 0

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		Examinati	on Volume/	Area Defined	d	
⊠ Base M	letal 🖾	Weld	☐ Near Su	ırface	☐ Bolting	☐ Inner Radius
	Area Calc	ulation		V	olume Cal	culation
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		Cov	rerage Carci	uiations		
	D	Area	Length	Volume	Volun	
Scan # Ang	Beam gle Direction	Examined	Examined	Examined	Requi	Percent Coverage
	Direction	(sq.in.)	(in.)	(cu.in.)	(cu.iı	າ.)
	WELD	•		2177.4	3689	.6 59.01
	BASE META	NL		6071.8	8371	.8 72.53
	TOTAL	AGGREGATE	COVERAGE	8249.2	1206	1.4 68.39

DUKE POWER COMPANY

Limited Examination Coverage Worksheet

NDE-91-1

		Lilling LX		relage Work				Revision 0
			Examinati	on Volume/A	rea Defined			
☐ Bas	se Metal	ı ⊠ v	Veld	☐ Near Su	face C	Bolting		☐ Inner Radius
		Area Calcu	lation		Vo	lume Cal	culat	ion
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Scan #	, Angle	Beam Direction	Area Examined (sq.in.)	Length Examined (in.)	Volume Examined (cu.in.)	Volur Requi (cu.i	red	Percent Coverage
B-C-F-G	45	S1	0	54	0	461.	.2	0.00
B-C-F-G	60	S1	0	54	0	461.	.2	0.00
B-C-F-G	45	S2	7.34	54	396.4	461.	.2	85.95
B-C-F-G	60	S2	7.5	54	405	461.	.2	87.81
B-C-F-G	45	CW	6.37	54	344	461.	.2	74.59
B-C-F-G	45.	CCW	6.37	54	344	461.	2	74.59
B-C-F-G	60	CW	6.37	54	344	461.	2	74.59
B-C-F-G	60	CCW	6.37	54	344	461.	2	74.59
	WELD	TOTAL	AGGREGATE	COVERAGE	2177.4	3689	.6	59.01

DUKE POWER COMPANY

Limited Examination Coverage Worksheet

NDE-91-1

							Revision U					
			Examinati	on Volume/	Area Defined							
⊠ Bas	se Meta	ı 🗆 w	eld	☐ Near Su	rface	☐ Bolting	☐ Inner Radius					
		Area Calcula	ation		Volume Calculation							
Coverage Calculations												
Scan #	Angle	Beam Direction	Area Examined (sq.in.)	Length Examined (in.)	Volume Examined (cu.in.)	Volume Require (cu.in.	ed Percent Coverage					
C-D-E-F	45	S2	15.63	54	844	844	. 100.00					
C-D-E-F	60,	S2	15.63	54	844	844	100.00					
C-D-E-F	45	CW	15.63	54	844	844	100.00					
C-D-E-F	45	CCW	15.63	54	844	844	100.00					
C-D-E-F	60	CM	15.63	54	844	844	100.00					
C-D-E-F	60	CCW	15.63	54	844	844	100.00					
A-B-G-H	45	S2	5.53	54	298.6	551.3	54.16					
A-B-G-H	60	S2	6.37	54	344	551.3	62.40					
A-B-G-H	45	CW	1.69	54	91.3	551.3	16.56					
A-B-G-H	45	CCW	1.69	54	91.3	551.3	16.56					

Item No: B03.110.001 Prepared By: Jay A Eaton Date: 10/24/97 Level: 11 Reviewed By: G G Bibb Date: 10/24/97 Level: Ш

NDE-91-1 **DUKE POWER COMPANY Limited Examination Coverage Worksheet** Revision 0 **Examination Volume/Area Defined** ☐ Bolting ☐ Inner Radius Weld ☐ Near Surface **Volume Calculation** Area Calculation **Coverage Calculations** Length Volume Area Volume Beam Examined Examined Required Examined Percent Coverage Scan # Angle Direction (cu.in.) (sq.in.) (in.) (cu.in.) CW 54 91.3 551.3 16.56 A-B-G-H 60 1.69

54

COVERAGE

91.3

6071.8

551.3

8371.8

16.56

72.53

A-B-G-H

60

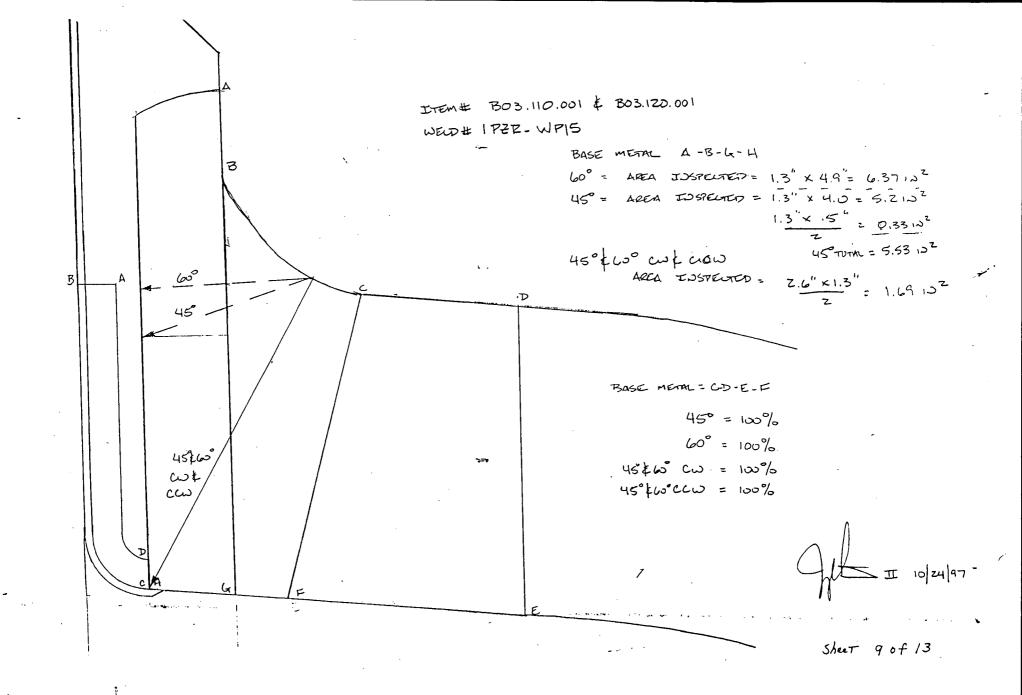
BASE METAL

CCW

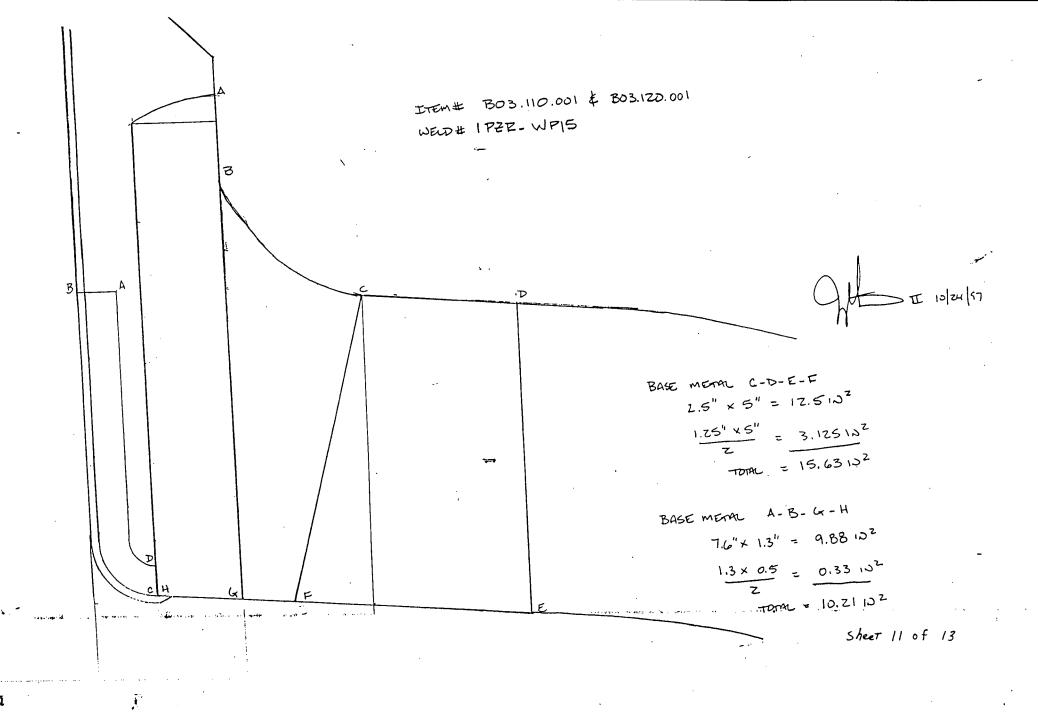
TOTAL

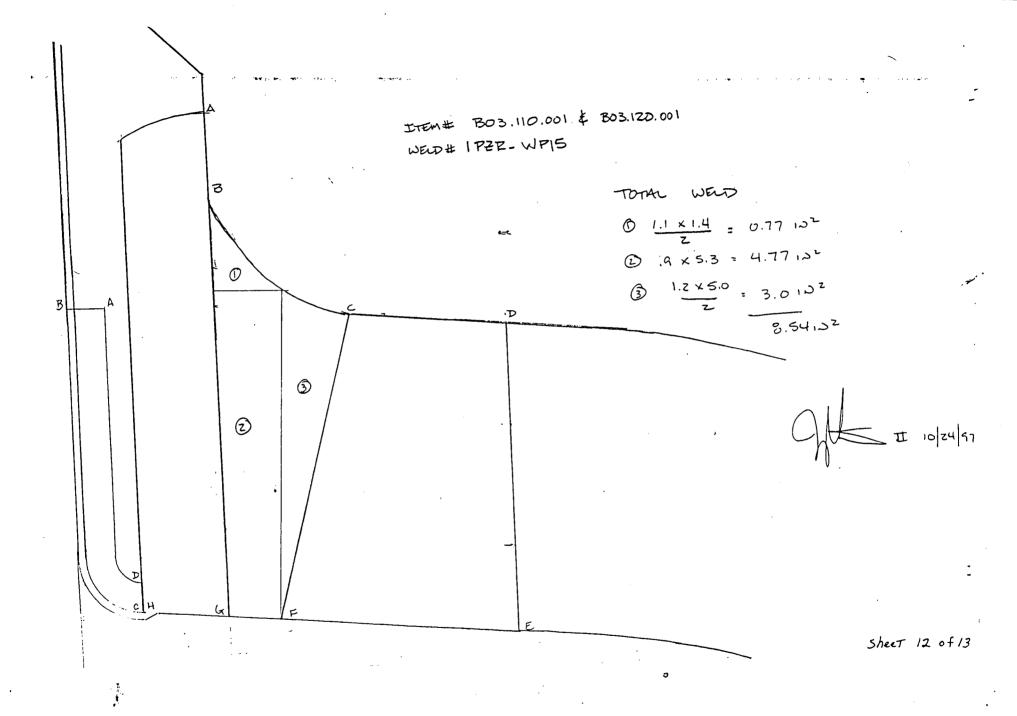
1.69

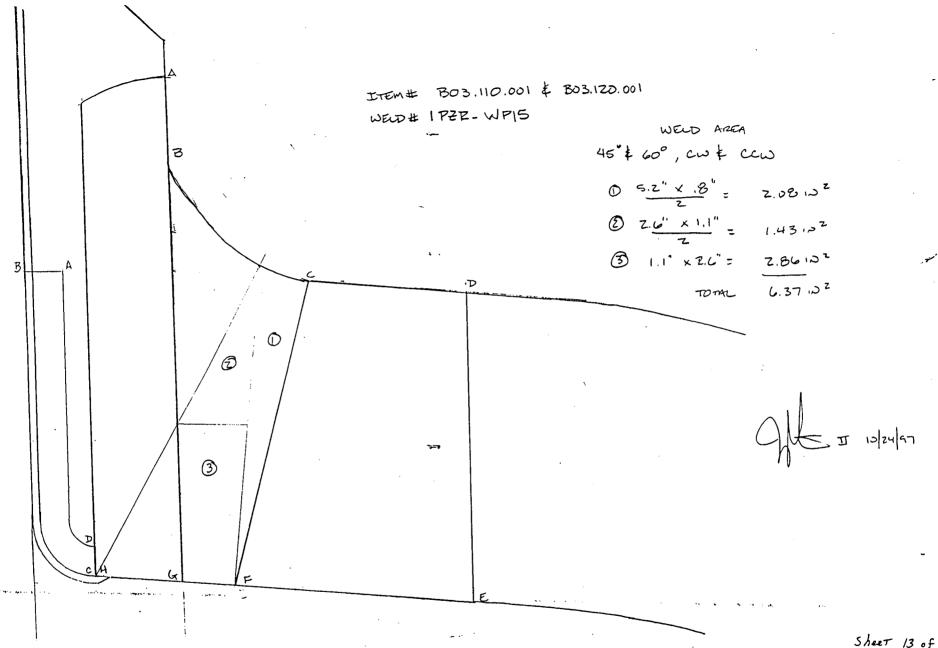
AGGREGATE



L5 172 C1 II = 2 C1 S. L ٠ **ط**٠ SMM 2C1 pe. T 01.1- = 5.1 x c.5 ns:8 = 74421 osh SIAM - 2721 # CMM 100.651.808 \$ 100.011,808 #MATI



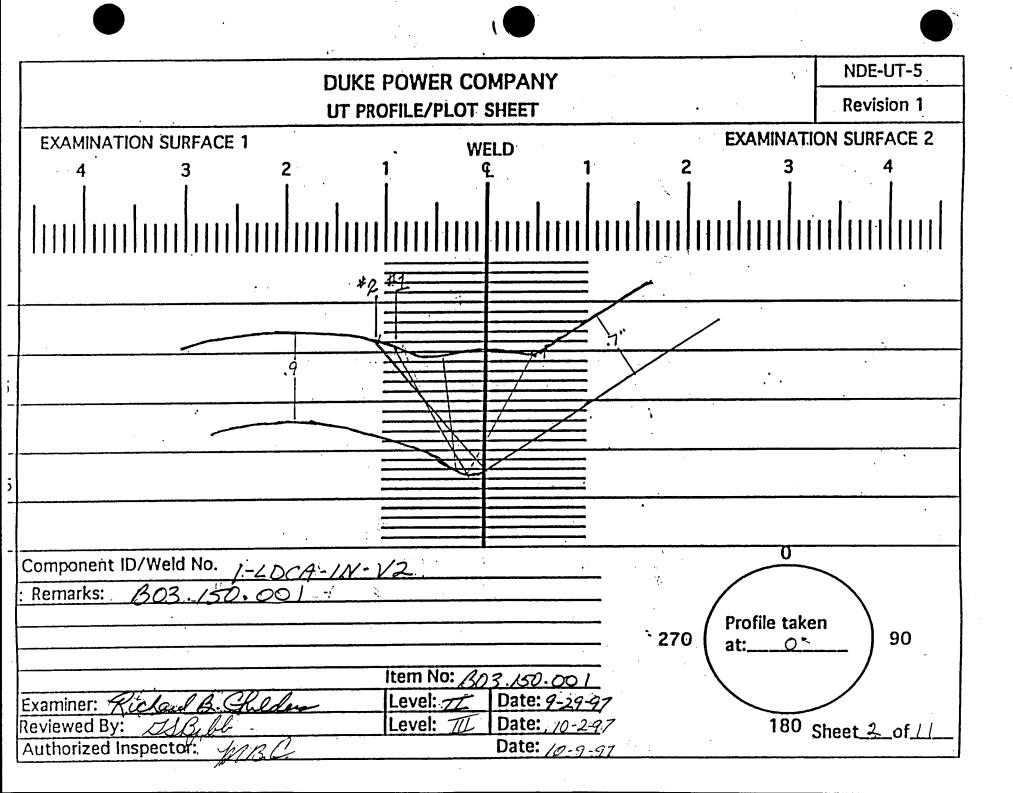




Sheet 13 of 13

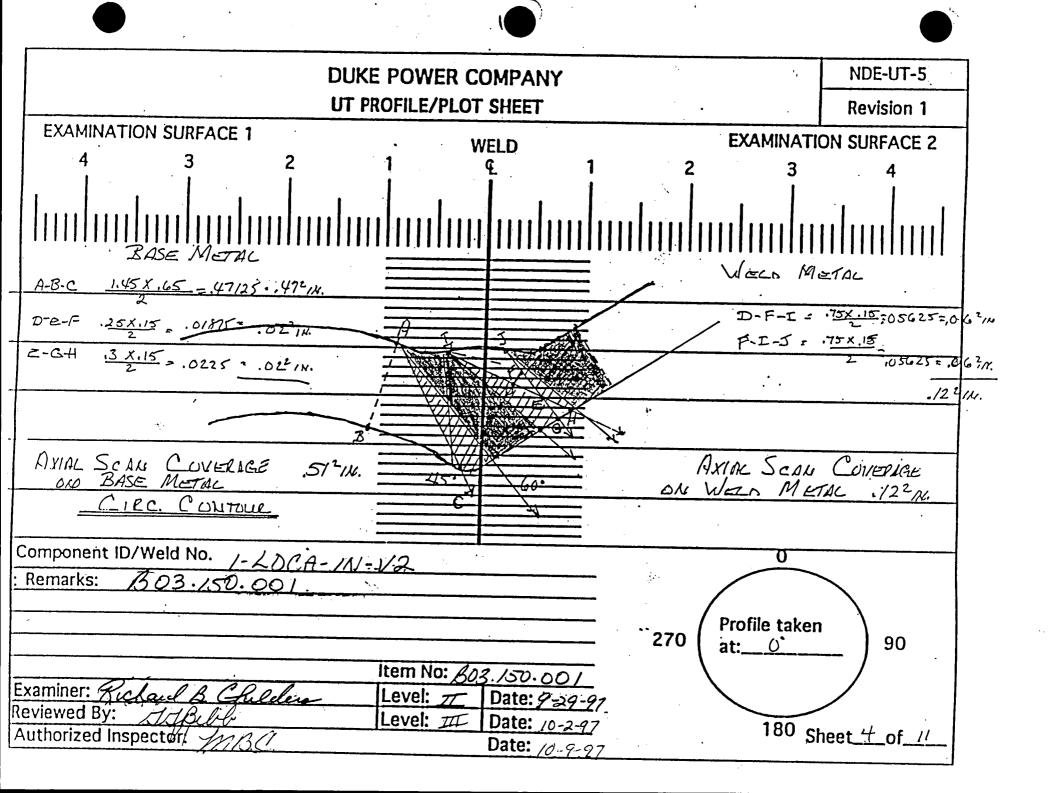
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					ο, A-																	\vdash	=	=	LETDOWN COOLER SCRICT NUMBER 18792-1
④	Carate	o~ (: 4 61. 27	Tan Da	iv ASNA SECT 77	I CLA	55.3	-: \	INL	τ	1							\Box			E			SCRICE NUMBER 18792-1 SYS. 5/A LINE NO. 4 DUKE CLASS
<u>®</u>	Des	IAM	TEX	12' 0	200.1	Drsign Press: 2	<u> 300 F</u>	SIG	1				٠-،	`	,			2	- 1	NEVIC WOLF ON REV 1 TO	2645 2645	\vdash		益	CODE CLASS SCITTI XI CLASS A
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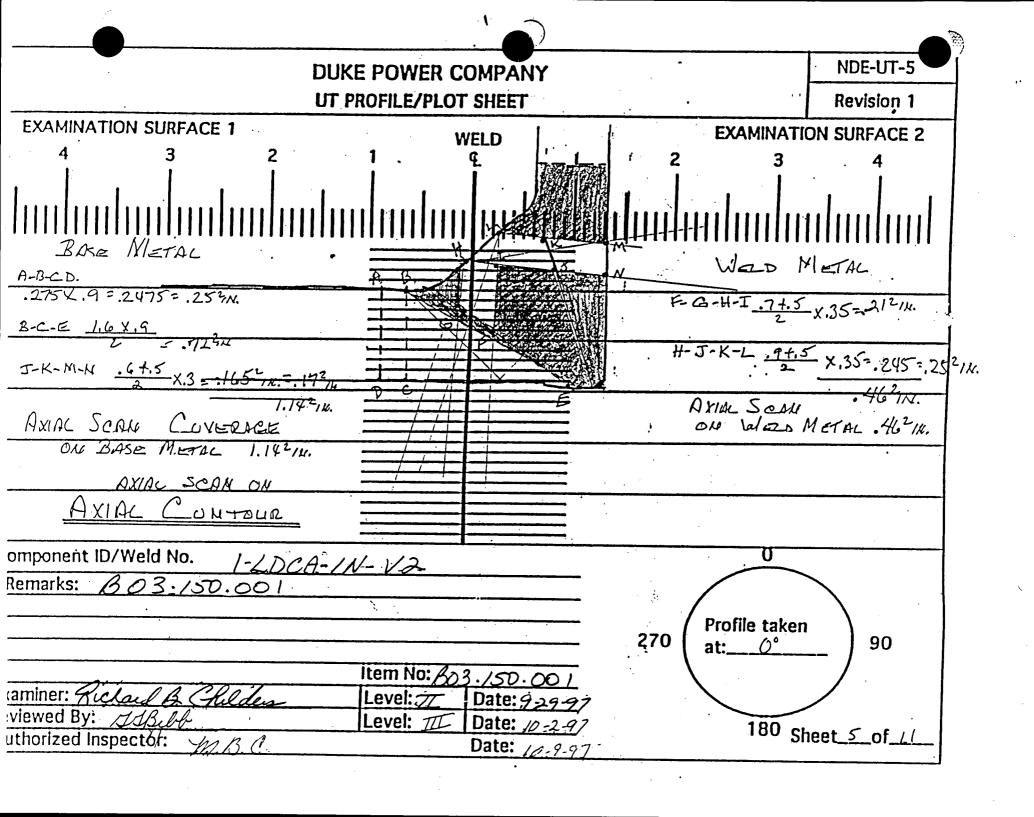
			Dl	JKE PC	WER (Exam St	art: 1	031	Form NDE-UT-2A							
ULT	RASO	NIC E	XAMINA	TION DA	ATA SH	EET F	OR PLANA	R REFLE	CTORS	Exam Fi	nish: 1	146	Revision 4			
Station	า: •		Oconee	·	Unit:	-LDCA-IN-	-V2	97								
Weld I	_ength	(in.):	14.	5	Surface	Condi	tion: AS	GROUND	Lo:	Surface	Date: 9/29/97 Surface Temperature: 71 ° F					
			Boos					27.0 10	Ü		Pyrometer S/N: <u>MCNDE 27018</u> Cal Due: <u>2/14/98</u>					
						: 11	45 🖾 _4		ation:	CIRC						
Proced	aure:	NDE-6	30	Rev: 2		_{!/} ^		4.0 dB	70T ⊔	dB	1 10W 3Z					
Calibration Sheet No:											<u>N</u>	OZZLE				
				7010EE			60T □	dB			Scan Surface: OD Applies to NDE-680 only					
970100		054, 97	701056, 97	01055			Othe	er: <u>45L</u>	=75 dl	В	Skew Angle: N/A					
IND#	4	Max % Ref	Mp Max	W Max	L Max	L1	^ L2	W1	Mp1	W2	Mp2	Beam Dir.	Exam Surf.	Scan	Damps	
		1	NOT WI HIS SP			20%da HMA 50%da 100%d	HMA ac 50%dac	HMA 50%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	D0 IN	O NOT	!	1	
1	45L	159	1.55	0.8	12.5	360°	° INT					S2	S1	AXIAL	NO	
2	60L	60L 159 1.76 1.1 12.5 360° INT										S2	S1	AXIAL	NO	
NRI	45C															
Remarks: SN # 94-18792-1																
Limitat	tions: (see NE)E-UT-4)	90%	6 or grea	ter cov	erage obtain	ned: yes □] no⊠				Sheet		of	
ł	wed By		——— د د د د د		Level:		Date:	Authorized	Inspector	•	·	Date:	Item No:			
G G Bibb SSBibt III 10-2-97 MBC											10	2.9.97	B03.150.001			

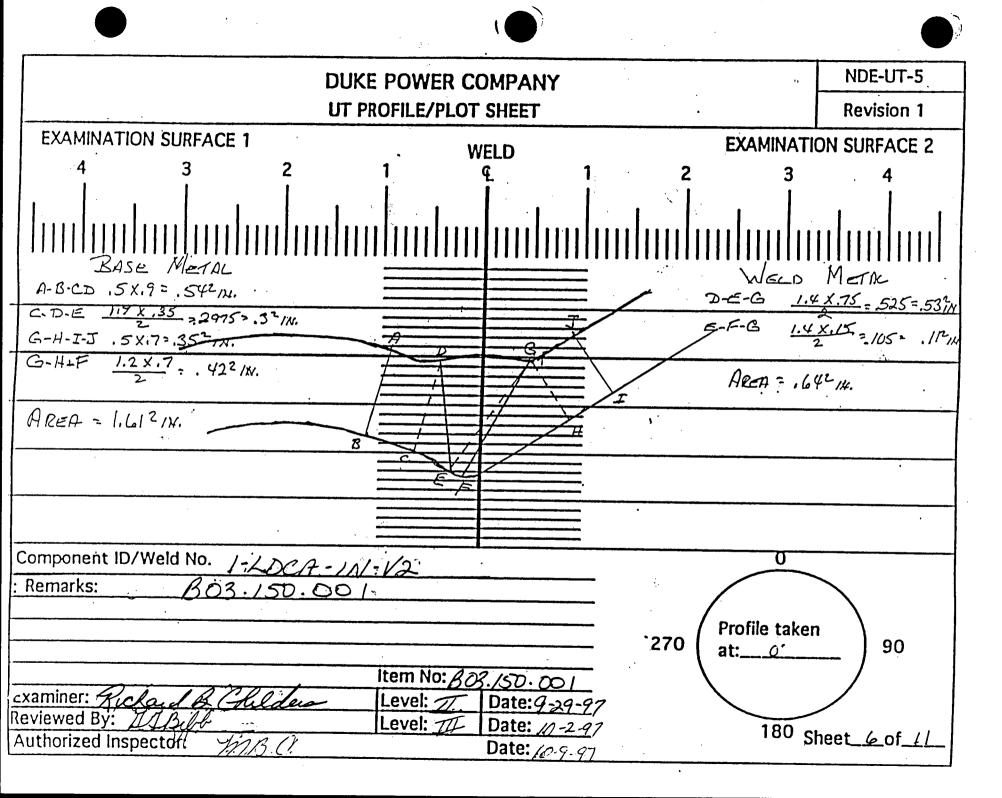


DUKE POWER COMPANY	Form NDE-UT-8									
ULTRASONIC INDICATION RESOLUTION SHEET	Revision 1									
Acceptance Standard:										
AFTER THE USE OF MULTIPLE ANGLES AND REVIEWING PREVIOUS DATA, INDICATIONS 1&2 WERE DETERMINED TO BE GEOMETRY. THIS WAS DUE TO THE I D RADIUS OF THE BRANCH CONNECTION WELD.										
I										
	•									
	,									
Item No: B03.150.001										
Acceptable Indications: 1 -45L& 2-60L										
Rejectable Indications:										
These indications have been compared with previous ultrasonic data										
Examiner: Level: Date:	Sheet <u>3</u> of //									
Richard B. Childers Richard B. Childers II 9/29/97 Reviewer: Level: Date: Authorized Inspector: G.G. BIBB JBbb III 9/29/97 Authorized Inspector:										
Reviewer: Level: Date: Authorized Inspector:	Date:									
G.G. BIBB JB 111 -0/29/97 - 17/3 C	10 0 07									

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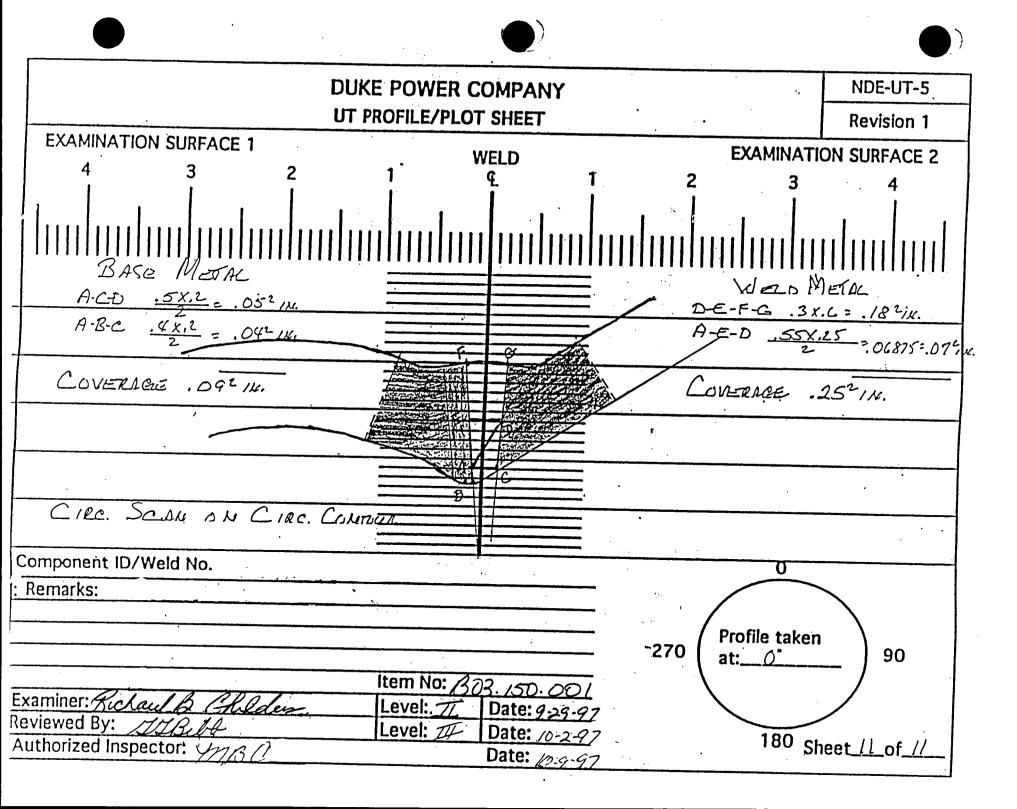


DUKE POWER COMPANY NDE-91-1 Limited Examination Coverage Worksheet Revision o Examination Volume/Area Defined Base Metal 🖾 Weld □ Near-Surface □ Bolting [Inner Radius 🗆 Area Calculation Volume Calculation AXIAC CONTOUR 2.132 14 LENGTH 14.5" CIRC. CONTOUR 3.742/16 1.87 3/K. X 14.5°= 27.115= 27.12 CU.IK.. 3.742/4.÷2 = 1.872/N. AVERABE **Coverage Calculations** Length * Area Beam Scan# Volume Angle Examined Examined Volume Direction Examined Required Percent Coverage (sq.in.) (in) (cu.in.) (cu.in.) ONITOUR Cile. 262111. 1.142/1. 1.42/N. PC. CNTIVIL IRC. 45 0921K. CCM .5/2/1 .62 IN. 6 ÷ 4 scous: 1.44. .52 IK. 14.5" 7.25cu 14 27.12 26.73 Item No: 803.150.001 Prepared BY: Richard B. Childen Level: -Reviewed By: l evel: III Date: 10-2-97

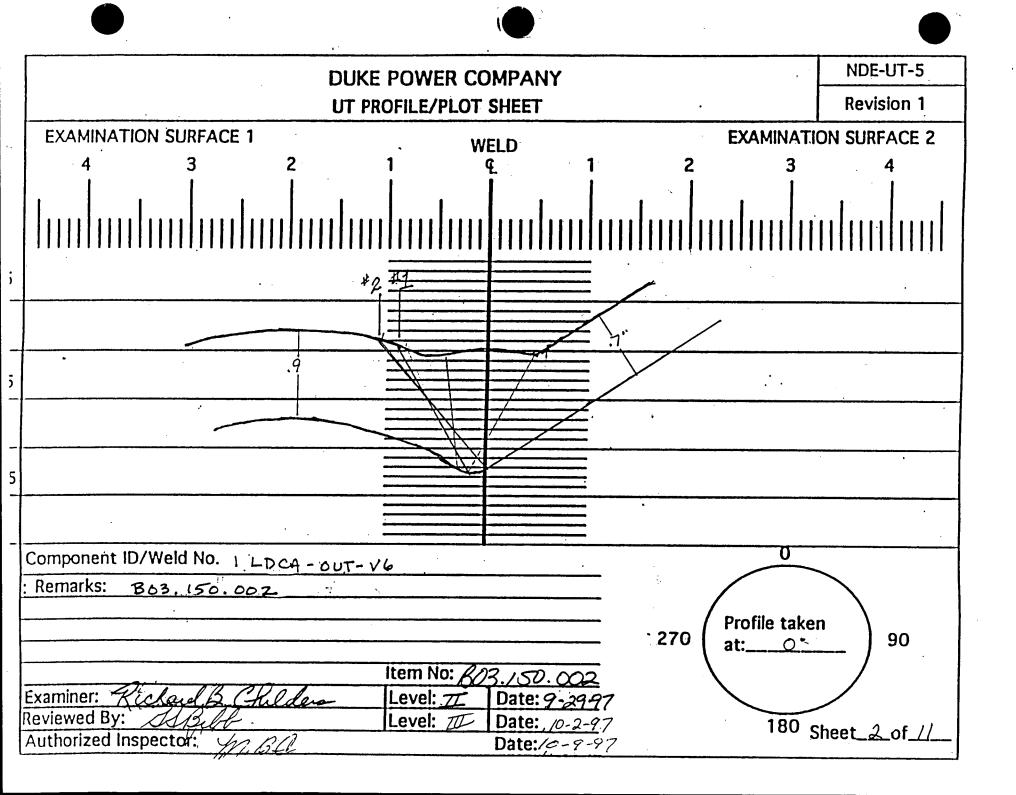
DUKE POWER COMPANY NDE-91-1 Limited Examination Coverage Worksheet Revision 0 Examination Volume/Area Defined Base Metal □ Weld 🛛 Near Surface □ Bolting [Inner Radius 🗆 Area Calculation Volume Calculation AXIAL CONTOUR .642 IX. CIRC. CONTOUR 1.2621K. LENGTH 14,5". .95° 14. Х 14.5° = 13.775 = 13.78 си. /н. 1.9214. = 2 = .95614. **Coverage Calculations** Beam Length Volume Area Scan# Angle Examined Examined Volume Direction Examined Required Percent Coverage (sq.in.) (In) (cu.in.) (cu.in.) ONTOUR cw/ccw CIRC. 45 942 121. .462/x. 1,42 IN. IRC. ONTOUR -IRC. 45 CCW 252/11. 45/60 .122 126. .37214. 1.42/N A.374/N. +45cans = .4425=.441 6.383/K. 14.5 13.783 is. 46.3 Item No: <u>B03.15</u>0.001 Prepared BY: Richard B Childen Level-Reviewed By: Level: TIL

NDE-UT-5 **DUKE POWER COMPANY** Revision 1 UT PROFILE/PLOT SHEET **EXAMINATION SURFACE 1 EXAMINATION SURFACE 2 WELD** WELD METAL BASE METAL A.B.C.D .G X.9 = .542/K. 1.7 × 1.25 1.3 × 19 = .585= .592 NJ. E-F-G 20x.2 = ,22/x. 34-I-J .5 X.7 = .352/N. 7.85 X.7 = .6521N. AREA : 1,262 1st. AREA = 2,132 1x. omponent ID/Weld No. 1-4DCA-1N-V2 ?emarks: 303.150.00 Profile taken 270 90 at:_ Item No: 803.150.00 1 Date: 9-29-97 :aminer: Kula, Level: 🦮 viewed Bý: Level: Date: 10-2-97 180 Sheet 9 of // uthorized Inspector! Date: 10-9-97

NDE-UT-5 **DUKE POWER COMPANY** Revision 1 UT PROFILE/PLOT SHEET **EXAMINATION SURFACE 1 EXAMINATION SURFACE 2** WELD BASE MLETAL E-F-GA .1x.8= .56214. A-B-C-D G-H-I .9 X.1= .092 IN. H-IK 1.1 x.3 2 = .165 = .172K 1.0x.15 = .075= .082/11 COVERACE .942 14. COVERAGE . 262 IN. AXIAL CONTOUR CIRC. SCRU omponent ID/Weld No. Remarks: Profile taken 270 90 Item No: 803-150.00 1 :aminer: Ruckau Level: 🤈 Date: 9-29-97 viewed By: Level: 77 Date: 10-2-97 180 Sheet 10 of 11 uthorized Inspector: Date: 10-9-97

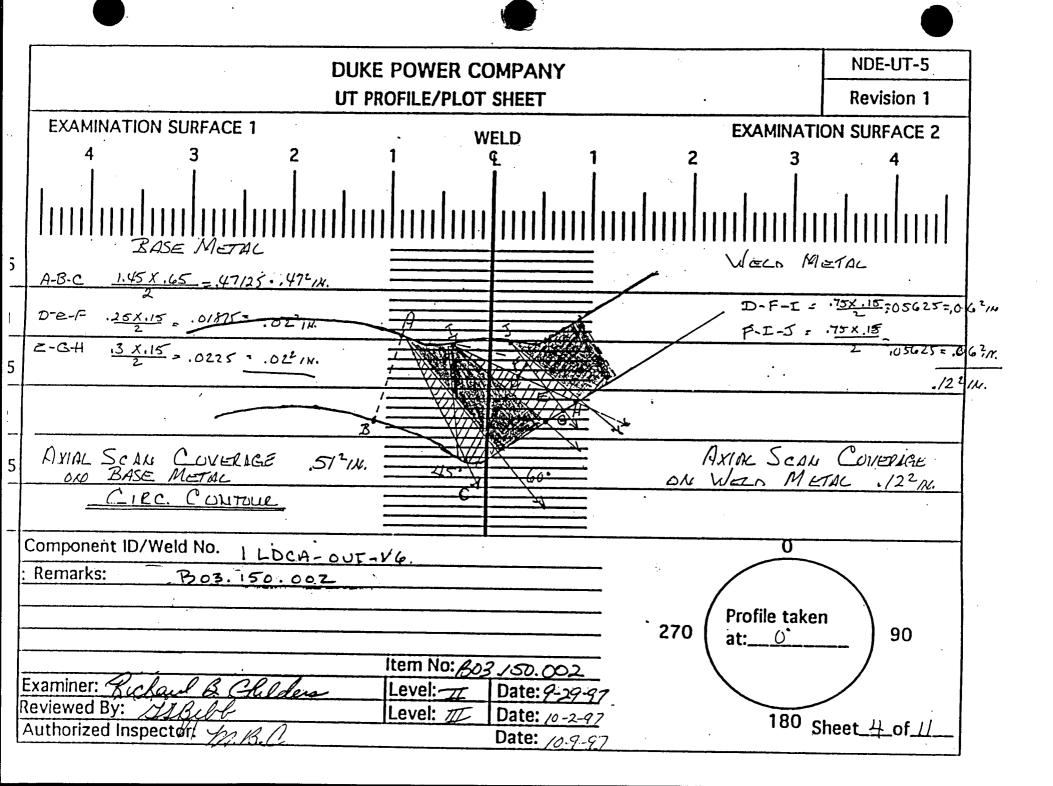


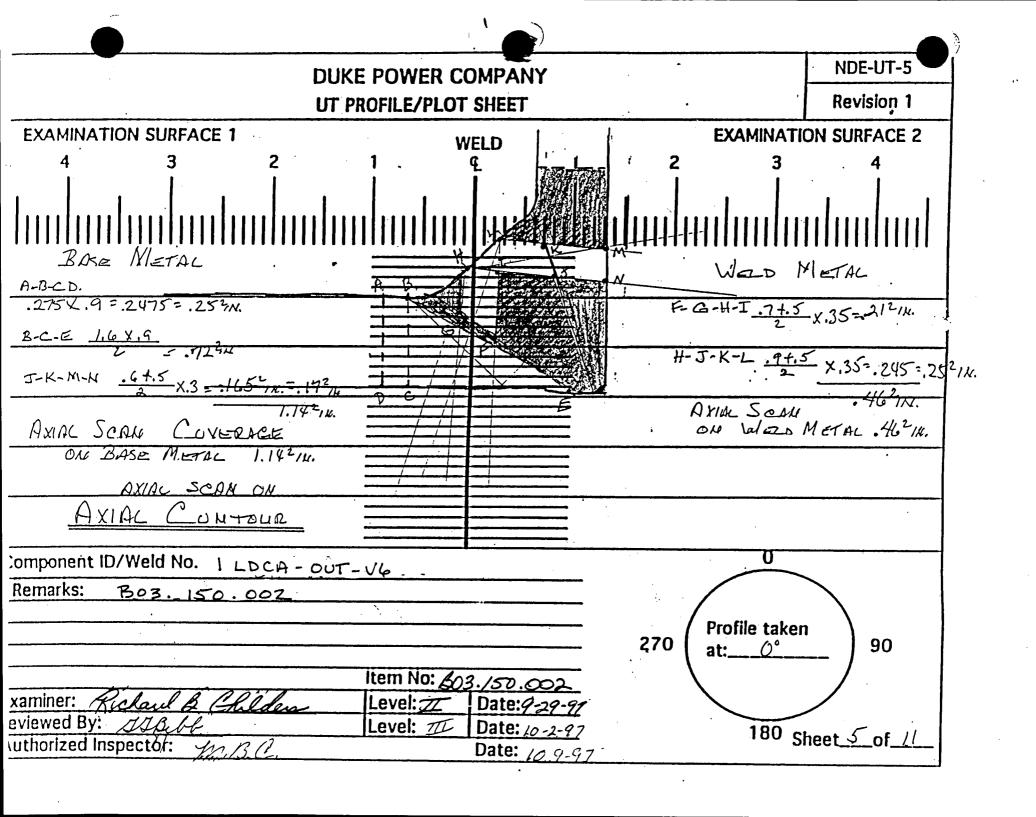
DUKE POWER COMPANY	(,			·					
Station: Ocone Unit: 1 Component/Weld ID: 1-LDCA-OUT-V6 Date: 9/29/97		DUKE POWER COMPANY						Exam St	Exam Start: 1031		Form NDE-UT-2A		Г-2А			
Station:	ULT	RASO	NIC E	XAMINA	TION D	ATA SH	EET FO	R PLANA	R REFLE	CTORS	Exam Fir	nish: 1	146	Revision 4		
Examiner: Richard B. Childers Level: II. Scans: Examiner: James H. Resor Level: II	Station	า:	(Oconee		Unit:	1 C	component/	Weld ID: 1	-LDCA-OL	JT-V6	Γ-V6				
Examiner: James H. Resort James H. Res	Weld I	ength	(in.):	14.	5	Surface	Condition	on: AS	GROUND	Lo:	9.1.1.1	Surface -	Tempera	ture:	71°	F
Examiner: James H. Resor Joneth Rev. 2 Every 1 45 ⊠ 47.0 dB 70 □ dB Cal Die: 2/14/98 Procedure: NDE-630 Rev. 2 FC: N/A 45T ☒ 44.0 dB 70T □ dB Configuration: CIRC Calibration Sheet No: 9701056, 9701056 N/A 60 ☒ 72.0 dB N/A N/A N/A N/A N/A N/A Scan Surface: OD Applies to NDE-680 only Skew Angle: N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A D/A N/A	Exami	ner: R	ichard E	3. Childers	Richard B (-	kevel	: 11 -	Scans:		····					DE 2701	8
Procedure: NDE-630								45 🖾 4	7.0 dB	70 🗆	.dB					
N/A 60 72.0 dB									_			I .				
Calibration Sheet No: 9701053, 9701054, 9701055 GOT □dB						N						FIOW				
9701053, 9701054, 9701056, 9701055 Other: 45L=75 dB Skew Angle: N/A N/A Max Max Max Max Max Max Max L1 L2 W1 Mp1 W2 Mp2 Beam Exam Surf. Scan Damps	Calibra	ation S	heet N	o:					Scan Surface				Surface:	OD		
IND #	970105	3, 9701	054, 97	701056, 97	'01055		·· ·									
ND #			T	1			<u> </u>			T		<u> </u>	<u> </u>	<u> </u>		
DO NOT WRITE HMA 50%dac 100%dac 100	IND#	4	%			L Max	L1	L2	W1	Mp1	W2	Mp2			Scan	Damps
2 45L 159 1.60 0.8 12.5 360 INT S2 S1 AXIAL NO NRI 45C S2 S1 AXIAL NO Remarks: SN # 94 - 18792 - 1 Limitations: (see NDE-UT-4) ☑ 90% or greater coverage obtained: yes ☐ no ☑ Sheet / of // Of // Of Care No: Reviewed By: Level: Date: Authorized Inspector: Date: Item No: G G Bibb			i				HMA 50%dad	HMA 50%dac	HMA 50%dac	HMA 50%dac	HMA 50%dac	HMA 50%dac	1			
NRI 45C Remarks: SN # 94 - 18792 - 1 Limitations: (see NDE-UT-4) ⊠ 90% or greater coverage obtained: yes □ no ⊠ Reviewed By: G G Bibb ANAL NO Sheet of	1	60L	159	1.69	1.1	12.5	360	INT					S2	S1	AXIAL	NO
Remarks: $SN \# 94 - 18792 - 1$ Limitations: (see NDE-UT-4) \boxtimes 90% or greater coverage obtained: yes \square no \boxtimes Sheet $\underline{/}$ of $\underline{/}$ Reviewed By: Level: Date: Authorized Inspector: Date: Item No:	2	45L	159	1.60	0.8	12.5	360	INT			·		S2	S1	AXIAL	МО
Limitations: (see NDE-UT-4) 90% or greater coverage obtained: yes no Sheet of II Reviewed By: G G Bibb AlB Ar III 10 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	NRI	45C					-			,						
Limitations: (see NDE-UT-4) ☑ 90% or greater coverage obtained: yes ☐ no ☑ Sheet ☐ of ☐☐ Reviewed By: Level: Date: Authorized Inspector: Date: Item No: Continue	Remar	Remarks: 5 N # 94 - 18792-1														
Reviewed By: Level: Date: Authorized Inspector: Date: Item No:	Limitat	_imitations: (see NDE-UT-4) ⊠ 90% or greater coverage obtained: yes □ no ⊠ Sheet / of //														
G G Bibb SSBibb III 10-2-97 J. B. Chapman 10-9-97 B03.150.002	100			Level:	Da	ate:	Authorized	Inspector	pector: Date:							
	G G Bibb Sheller III 10-2-97				-2-97	M.B. Chapman 10-9.97 B03.150.002			50.002							

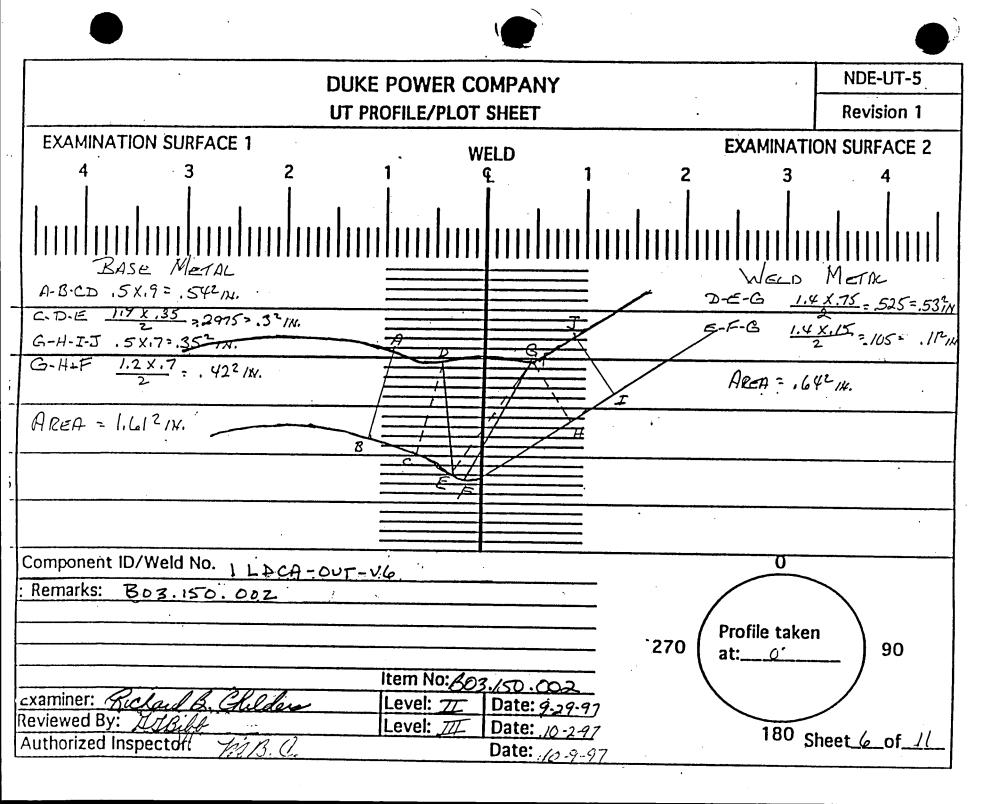


DUKE POWER COMPANY	Form NDE-UT-8		
ULTRASONIC INDICATION RESOLUTION SHEET	Revision 1		
Acceptance Standard:			
AFTER THE USE OF MULTIPLE ANGLES AND REVIEWING PREVIOUS DATA, INDICATIONS 1&2 WERE DEGEOMETRY. THIS WAS DUE TO THE I D RADIUS OF THE BRANCH CONNECTION WELD.	TERMINED TO BE		
	_		
Item No: B03.150.002	`		
Acceptable Indications: 1 -60L& 2-45L			
Rejectable Indications:			
These indications have been compared with previous ultrasonic data			
Examiner: Level: Date:	Sheet <u>3</u> of <u>//</u>		
Richard B. Childers Richard B. Childer II 9/29/97	01100t <u>J</u> 01 <u>11</u>		
Reviewer: Level: Date: Authorized Inspector:	Date:		
G.G. BIBB A Believe III 0129197	14-9-97		

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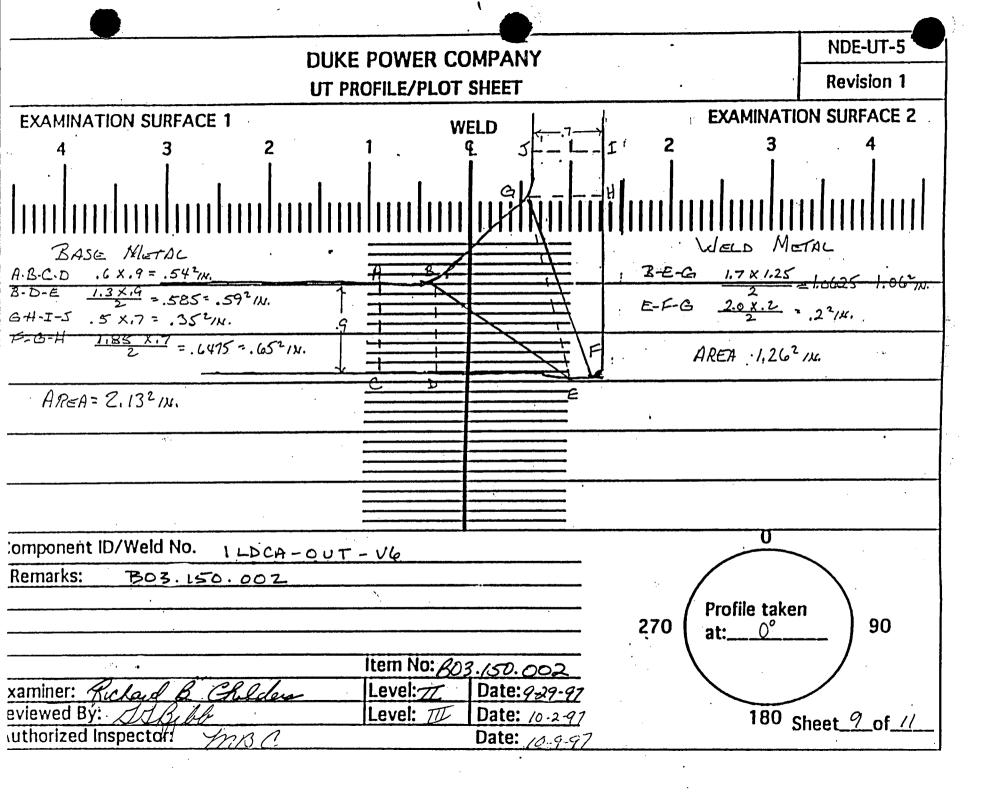






DUKE POWER COMPANY NDE-91-1 Limited Examination Coverage Worksheet Revision 0 Examination Volume/Area Defined Base Metal 🖾 Weld □ Near₃Surface □ Bolting Inner Radius [Area Calculation Volume Calculation AXIAC CONTOUR 2.13 INC. LENGTH 14.5" CIRC. CONTOUR 1.8731K. X14.5°=27.115= 27.12 CU.IK. 3.742/4.÷2 = 1.872/N. AVERABE **Coverage Calculations** Area Length ' Beam Scan# Volume Angle Volume Examined Examined Direction Examined Percent Coverage Required (.ni.pa) (in) (cu.in.) (cu.in.) ONTOUR Cile. 26214. Дx 142/1. 1.42/N. NTIVE IRC. 0921K. ·5/2/1 .621x. 1.4+. 1. + 4 SCANS : .52 IK. 14.5" 7.25cum 27.12 26.73 Item No: B03.150.002 Prepared BY: Richard & Childen Level: Date: 9-29-97 Reviewed By: JJBill l evel: Date: 10-2-97

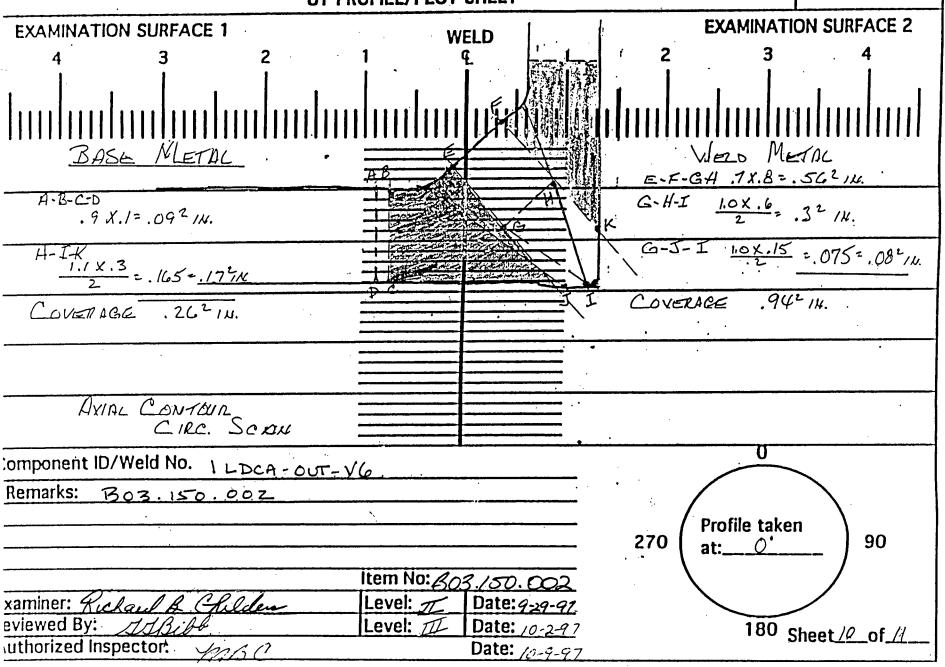
DUKE POWER COMPANY NDE-91-1 Limited Examination Coverage Worksheet Revision 0 Examination Volume/Area Defined Base Metal □ Weld ☑ Near Surface □ Bolting Inner Radius [Area Calculation Volume Calculation AXIAL CONTOUR .642 IK. LENGTH 14,5" CIRC. CONTOUR · 1.2621N. .95° 14. Х 14.5" = 13.775 = 13.78 си. /н. 1.9214. = 2 = .95414. **Coverage Calculations** Area Length : Beam Scan# Volume Angle Volume Examined Examined Direction **Examined** Percent Coverage Required (.ni.pa) (ln)(cu.in.) (cu.in.) ONTOUR cw/cew CIRC. 45 942 12 45/60 462/x. 1,42 IN. IRC. CONTOUR 45 IRA. 252/14. 45/60 .122 16. .3721K. 1.42/N A.373/N. +45cars = .4425=.441 6.383/M. 14.5 13.783 in 46.3 Item No: , B03.150.002 Prepared BY: Richard B Childen Level Date: 9-29-97 Reviewed By: AlBelle Level

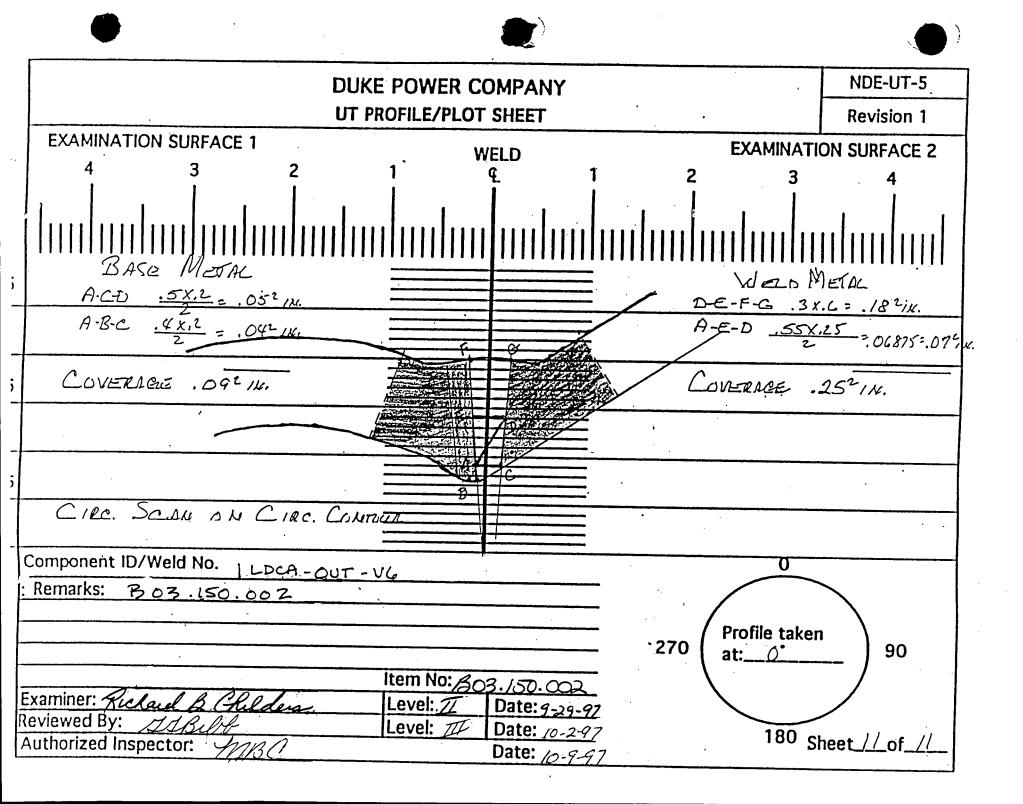


DUKE POWER COMPANY UT PROFILE/PLOT SHEET

NDE-UT-5

Revision 1





Duke Energy Corporation

	Station _	Oconee	Unit	1,2&3
10-YEAR INTERVAL	REQUEST	FOR RELIEF	NO.	98-03

Pursuant to 10 CFR 50.55a(g)(5)(iii), Duke Energy has determined that compliance with the specified requirements of ASME Boiler and Pressure Vessel Code, Section XI is not practical for Oconee Nuclear Station. Accordingly, information is being submitted in support of our determination and relief is being sought from the applicable ASME Boiler and Pressure Vessel Code, Section XI requirement(s).

I. System/Component(s) for Which Relief is Requested:

a. Part 1, Pressurizer Sensing Nozzle-to-Vessel Weld

<u>Unit</u>	ID Number	Item Number
1	1-PZR-WP26-4	B03.110.006
1	1-PZR-WP26-5	B03.110.007
1	1-PZR-WP26-6	B03.110.008
2	2-PZR-WP26-4	B03.110.006
2	2-PZR-WP26-5	B03.110.007
2	2-PZR-WP26-6	B03.110.008
3	3-PZR-WP26-4	B03.110.006
3	3-PZR-WP26-5	B03.110.007
3	3-PZR-WP26-6	B03.110.008

b. Part 2, Pressurizer Sensing Nozzle-to-Vessel Inside Radius Sections

<u>Unit</u>	ID Number	<u>Item Number</u>
1	1-PZR-WP26-4	B03.120.006
1	1-PZR-WP26-5	B03.120.007
1	1-PZR-WP26-6	B03.120.008
2	2-PZR-WP26-4	B03.120.006
2	2-PZR-WP26-5	B03.120.007
2	2-PZR-WP26-6	B03.120.008
3	3-PZR-WP26-4	B03.120.006
3	3-PZR-WP26-5	B03.120.007
3	3-PZR-WP26-6	B03.120.008

For welds listed in this Request for Relief (both Parts 1 and 2), all configurations, including interferences, are the same for Units 1, 2, and 3. Therefore, all three units are being documented in this Request for Relief as described in NRC Inspection Report No. 50-269/95, 50-270/95, 50-287 dated May 5, 1995.

While the examinations have been completed only for Unit 2 at this time, relief is also being sought for Units 1 and 3 for the same welds. If, for some reason, the actual examination coverages of the welds referenced in this Request for Relief for Units 1 and 3 are less than those listed for Unit 2 in Section IV of this request, additional Requests for Relief will be submitted on a case by case basis.

II. Code Requirement:

ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition with no Addenda, Examination Category B-D, Items B3.110 and B3.120 requires 100% volumetric examination of all Pressurizer nozzle-to-vessel welds as defined by Figure IWB-2500-7(a), ASME Section XI 1989 Edition with no

Addenda, Appendix 1, including Supplement 9 as clarified by Code Inquiry 95-11 requires scanning using two different angles when scanning from the outside surface of the component. When scanning for reflectors parallel to the weld, the angle beams shall be aimed at right angles to the weld axis, with the search unit(s) manipulated so that the ultrasonic beams pass through the entire volume of weld metal. The adjacent base metal in the examination volume must be completely scanned by both angle beams from both directions (any combination of two angle beams will satisfy the requirement).

When scanning for reflectors transverse to the weld, the angle beam search units shall be aimed parallel to the axis of longitudinal and circumferential welds. The search unit shall be manipulated so that the ultrasonic beams pass through all of the examination volume. Scanning shall be done in two directions 180 degrees to each other to the extent possible. Areas blocked by geometric conditions shall be examined from at least one direction.

Code Case N-460 allows credit for full volume coverage of welds if it can be shown that greater than 90% of the required volume has been examined.

III. Code Requirement from which Relief is Requested:

Relief is requested from the requirement to examine 100% of the required volume ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition with no Addenda (Code) required volumetric examinations of the Pressurizer Sensing Nozzle-to-Vessel Welds and the Pressurizer Sensing Nozzle-to-Vessel Inside Radius Sections described in Section Labove.

Due to part geometry, obtaining greater than 90% of the required volume as outlined in Code Case N-460 is not possible.

IV. Basis for Relief:

Part 1 Examination Category B-D, Item B3.110, Full Penetration Pressurizer Nozzle-to-Vessel Weld

Pressurizer Sensing Nozzle-to-Vessel Welds 2-PZR-WP26-4, 2-PZR-WP26-5 and 2-PZR-WP26-6 (Item Numbers B03.110.006, B03.110.007

and B03.110.008) were examined to the maximum extent practical using ultrasonic techniques in accordance with the requirements of ASME Section V, Article 4, and ASME Section XI, Appendix 1, 1989 Edition. Reference Attachment A for drawing.

These welds are limited to 28.8% coverage of the required volume because of the nozzle configuration. In order to achieve more coverage, the nozzles would have to be re-designed to allow scanning from both sides of the weld.

Part 2, Examination Category B-D, Item B3.120, Full Penetration Pressurizer Nozzle-to-Vessel Inner Radius Sections

Pressurizer Sensing Nozzle-to-Vessel Inside Radius Sections 2-PZR-WP26-4, 2-PZR-WP26-5 and 2-PZR-WP26-6 (Item Numbers B03.120.006, B03.120.007 and B03.120.008) were examined to the maximum extent practical using ultrasonic techniques in accordance with the requirements of ASME Section V, Article 4, and ASME Section XI, Appendix 1, 1989 Edition. Reference Attachment A for drawing.

These welds are limited to 65.8% coverage of the required volume because of the nozzle configuration. Duke Energy is investigating the use of computer modeling to determine the feasibility of achieving greater coverage.

V. Alternate Examinations or Testing:

Part 1, Examination Category B-D, Item B3.110. Pressurizer Nozzleto-Vessel Weld

The use of radiography as an alternate volumetric examination of the Pressurizer Sensing Nozzle-to-Vessel Welds referenced in this request is not a viable option. Restrictions to performing radiography are primarily due to inability to access the inside of the Pressurizer to place film or to position a radiographic source.

Duke Energy proposes to use the pressure test and VT-2 visual examination to compliment the limited examination coverage. The Code requires (reference Table IWB-2500-1, Item Number B15.20) that a

system leakage test be performed after <u>each</u> refueling outage. Additionally a system hydrostatic test (reference Table IWB-2500-1, Item Number B15.21) is required once during each 10-year inspection interval. These tests require a VT-2 visual examination for evidence of leakage. This testing will provide adequate assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), there are other activities which provide a high level of confidence that, in the unlikely case that leakage did occur through these welds, it would be detected and isolated. Specifically, leakage from these welds would be detected by monitoring of the Reactor Coolant System which is performed once each shift under procedure PT/1,2,3/A/0600/10, "RCS Leakage". This RCS leakage monitoring is a requirement of Technical Specification 3.1.6, "Leakage". Leakage is also evaluated in accordance with this Technical Specification. The leakage could be detected through several methods. One method is the RCS mass balance calculation. Another method is by use of the Reactor Building air particulate monitor. This monitor is sensitive to low leak rates: the iodine monitor, gaseous monitor and area monitor are capable of detecting any fission products in the coolant and will make these monitors sensitive to coolant leakage. In addition to the radiation monitors, leakage is also monitored by a level indicator in the Reactor Building normal sump. Another check would be a loss of level in the Letdown Storage Tank.

Duke Energy has examined the welds referenced in this request to the maximum extent possible utilizing the latest in examination techniques and equipment. Duke Energy will continue to perform ultrasonic examination of all welds identified in Section I of this request (for all units) to the maximum extent practical, within the limits of original design and construction, in accordance with the requirements of ASME Section V, Article 4, and ASME Section XI, Appendix 1, 1989 Edition, and Code Case N-460. This will provide reasonable assurance of weld/component integrity. Thus, an acceptable level of quality and safety will have been achieved, and public health and safety will not be endangered by allowing relief from the aforementioned Code requirements.

Part 2, Examination Category B-D, Item B3.120, Full Penetration Pressurizer Nozzle-to-Vessel Inner Radius Sections

The use of radiography as an alternate volumetric examination of the Pressurizer Sensing Nozzle-to-Vessel Inside Radius Sections is not a viable option. Restrictions to performing radiography are primarily due to

inability to access the inside of the Pressurizer to place film or to position a radiographic source.

Duke Energy proposes to use the pressure test and VT-2 visual examination to compliment the limited examination coverage. The Code requires (reference Table IWB-2500-1, Item Number B15.20) that a system leakage test be performed after each refueling outage. Additionally a system hydrostatic test (reference Table IWB-2500-1, Item Number B15.21) is required once during each 10-year inspection interval. These tests require a VT-2 visual examination for evidence of leakage. This testing will provide adequate assurance of pressure boundary integrity.

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Duke Energy has examined the welds referenced in this request to the maximum extent possible utilizing the latest in examination techniques and equipment. Duke Energy will continue to perform ultrasonic examination of all welds identified in Section I of this request (for all units) to the maximum extent practical, within the limits of original design and construction, in accordance with the requirements of ASME Section V, Article 4, and ASME Section XI, Appendix 1, 1989 Edition, and Code Case N-460. This will provide reasonable assurance of weld/component integrity. Thus, an acceptable level of quality and safety will have been achieved, and public health and safety will not be endangered by allowing relief from the aforementioned Code requirements.

VI. Justification for the Granting of Relief

Part 1, Examination Category B-D, Item B3.110. Pressurizer Nozzleto-Vessel Weld

The Code requires 100% volumetric examination of all Pressurizer Nozzle-to-Vessel Welds. However, the taper on the nozzle side of the weld restricts scanning and prevents complete volumetric coverage of Pressurizer Sensing Nozzle-to-Vessel Welds 2-PZR-WP26-4, 2-PZR-WP26-5, and 2-PZR-WP26-6. Therefore, the 100% volumetric examination is impractical for these nozzle-to-vessel welds. To meet Code examination requirements, modifications to the nozzles would be necessary to allow scanning from both sides of the weld. Modification to this portion of the reactor coolant system would create a considerable burden on Duke Energy.

Duke Energy obtained 28.8% coverage of Pressurizer Sensing Nozzle-to-Vessel Welds 2-PZR-WP26-4, 2-PZR-WP26-5 and 2-PZR-WP26-6. It is recognized that this represents a small part of the required Code examination volume. However, in conjunction with the Code required VT-2 visual examination after <u>each</u> refueling outage and the 10-year hydrostatic test; Duke Energy believes this provides reasonable assurance of the continued structural integrity of the subject nozzle-to-vessel welds.

Pursuant to 10 CFR 50.55a(g)(6)(i), granting this relief for the Pressurizer Sensing Nozzle-to-Vessel Welds will provide reasonable assurance of weld/component integrity, ... "is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility."

Part 2, Examination Category B-D, Item B3.120, Pressurizer Nozzleto-Vessel Inside Radius Sections

The Code requires 100% volumetric examination of all Pressurizer Nozzle-to-Vessel Inside Radius Sections. However, the taper on the nozzle side of the weld restricts scanning and prevents complete volumetric coverage of Pressurizer Sensing Nozzle-to-Vessel Inside Radius Sections 2-PZR-WP26-4, 2-PZR-WP26-5, and 2-PZR-WP26-6. Therefore, the 100% volumetric examination is impractical for these

nozzle-to-vessel inside radius sections. To meet Code examination requirements, modifications to the nozzles would be necessary to allow complete volumetric examination coverage. Modifications to this portion of the reactor coolant system would create a considerable burden on Duke Energy Corporation.

Duke Energy obtained 65.8% coverage on the Pressurizer Sensing Nozzle-to-Vessel Inside Radius Sections, 2-PZR-WP26-4, 2PZR-WP26-5 and 2-PZR-WP26-6. It is recognized that this represents a small part of the required Code examination volume. However, in conjunction with the Code required VT-2 visual examination after each refueling outage and the 10-year hydrostatic test; Duke Energy believes this provides reasonable assurance of the continued structural integrity of the subject nozzle-to-vessel welds.

Pursuant to 10 CFR 50.55a(g)(6)(i), granting this relief for the Pressurizer Sensing Nozzle-to-Vessel Inside Radius Sections will provide reasonable assurance of weld/component integrity, ... "is authorized by law and will not endanger life of property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility."

VII. Implementation Schedule:

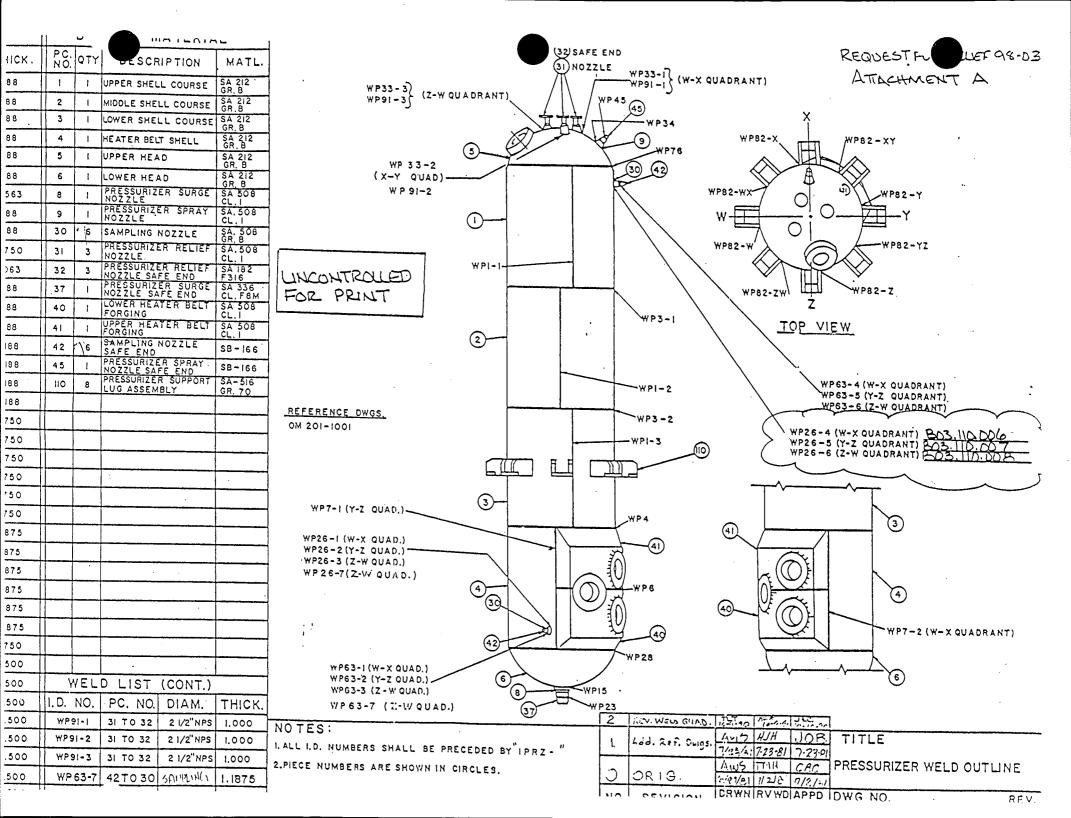
Unit 1, Refueling Outage 18

Unit 2, Refueling Outage 16

Unit 3, Refueling Outage 17

Evaluated By:

Review Physic Date



Request For Relief 98-Page 1 of 33 Attachment B

DUKE POWER COMPANY Exam Start: 1101 Form NDE-UT-2A ULTRASONIC EXAMINATION DATA SHEET FOR PLANAR REFLECTORS Exam Finish: 1151 Revision 4 Station: Oconee Unit: 2 Component/Weld ID: 2-PZR-WP26-4 Date: 3/24/98 Weld Length (in.): Surface Condition: 28.0" AS MACHINED Lo: B&W #1 Surface Temperature: 72 ° F Examiner: Winfred C. Leeper/// /Level: II Pyrometer S/N: MCNDE 27021 Scans: 7/27/98 Cal Due: Examiner: David Zimmerman 45 🖾 <u>54</u> dB 70 🗀 ____dB Level: II Configuration: Nozzle to Shell Procedure: NDE-620 45T ⊠ <u>54</u> dB 70T □ dB Rev: 5 FC: N/A Flow NDE-640 N/A 60 🖾 <u>70.5</u> dB to S1 Calibration Sheet No. Scan Surface: OD 60T ⊠ 70.5 dB Applies to NDE-680 only 9802043, 9802044, 9802046 Skew Angle: Other: 0°-26 dB N/A Max Мρ W L Beam IND# Exam L1 L2 Max Max W1 Mp1 Max W2 Mp2 Scan Damps Dir. Surf. Ref 20%dac 20%dac 20%dac 20%dac 20%dac 20%dac DO NOT WRITE DO NOT WRITE HMA HMA HMA HMA HMA HMA 50%dac 50%dac IN THIS SPACE 50%dac 50%dac 50%dac 50%dac THIS | SPACE 100%dac | 100%dac | 100%dac | 100%dac i 100%dac 100%dac NRI NRI NRI 60° Remarks: *95-18, 95-19 Limitations: (see NDE-UT-4) ☐ 90% or greater coverage obtained: yes ☐ no 🖾 Sheet / of // Reviewed By: Yay Moss Level: Date: Authorized Inspector: Date: Item No: T3.26.98 3-31-98 B03.110.006

Request For Relief 98-1 Page 2 of 33, Atlachin & B

		FORM NDE-UT-4		
		Revision 1		
Component/Weld ID: 2-PZR-WP26-4	Item N	o: B03.110.006	Remarks:	
□ NO SCAN	SURFACE	BEAM DIRECTION	DUE TO LOWER	R HEAD WELD
☐ LIMITED SCAN	□ 1 □ 2 □	1 🛛 2 🔲 cw 🔲 ccw		
FROM L 12.0" to L 19.0"	INCHES FROM WO	11.0" to BEYOND		
ANGLE: ☐ 0 ☐ 45 ⊠ 60 ☐ Other	FR0	DM _ 0 _ DEG to _ 360 _ DEG		
⊠ NO SCAN	SURFACE	BEAM DIRECTION	NOZZLE CONFI	GURATION
☐ LIMITED SCAN	□ 1 □ 2 □	1 🛛 2 🖾 cw 🖾 ccw		
FROM L to L	INCHES FROM WO	0.0"to1.5"		
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60 □ Other		DM 0 DEG to 360 DEG		
☐ NO SCAN	SURFACE	BEAM DIRECTION		
☐ LIMITED SCAN	□ 1 □ 2 · · □	1		
FROM L to L	INCHES FROM WO	to	•	
ANGLE: 0 0 45 0 60 Other	FRO	DM DEG to DEG		
☐ NO SCAN	SURFACE	BEAM DIRECTION		
	□ 1 □ 2 □	1		
FROM L to L	INCHES FROM WO	to		
ANGLE: 0 0 45 60 0ther		DM DEG to		
Prepared By: Paul (3	Level: Date:	3/24/98 Sketch(s) attached ⊠	yes 🗌 no	Sheet 2 of /1
Reviewed By: Yary Moss	Date: 3-26-98	Authorized Inspector: JMB (Date: 331-98
/ 1				

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	NDE-91-1							
		Revision 0						
		Examinati	ion Volu	me/ <i>F</i>	\rea Define	d		
☐ Base Metal ☐ Weld ☐ Ne					ar Surface Bolting Inner Rad			☐ Inner Radius
	Area Calcu	lation			V	olume Cal	culat	tion
SEE ATTACHM	MENT			SEE	ATTACHME	ΝT		
			İ			,		
!								
		Cov	erage C	alcu	lations			
	Beam	Area	Lengt		Volume	Volu		
Scan # Angle	Direction	Examined (sq.in.)	Examir (in.)		Examined (cu.in.)	Requi (cu.i		Percent Coverage
-	BASE METAL					•		37.54
	WELD						22.37	
	AGGREGATE						28.77	

Prepared By: Paul Com Level: I Date: 3/24/58

Reviewed By: Many Moss Level: I Date: 3.26.98

Pg 3 OF11

Request For Relief 98.03 Page 4 of 33, Attachment B

NDE-91-1 **DUKE POWER COMPANY Limited Examination Coverage Worksheet** Revision 0 Examination Volume/Area Defined ☐ Base Metal \boxtimes Weld ☐ Near Surface ☐ Bolting ☐ Inner Radius Area Calculation **Volume Calculation** $B_1D_1E_1F=6.188/2(.75+2.3)=$ 10.6 SQ. IN. X 28" = 296.8 CU. IN. 9.43 $B_{1}F_{1}G = 2.3 X$ 1.0/2 = 1.159.4 SQ. IN. + 1.2 SQ. IN. = 10.6 SQ. IN. **Coverage Calculations** Area Length Volume Volume Beam Examined Examined Examined Required Scan # Angle Percent Coverage Direction (sq.in.) (in.) (cu.in.) (cu.in.) 1 45° <u>S1</u> 5.4 28 151.2 296.8 50.94 2 60° S1 7.4 28 207.2 296.8 69.81 3 45° S2 0.0 28 0 296.8 0.00 4 60° S2 0.0 28 0 296.8 0.00 5 0° N/A 0.0 28 0 296.8 0.00 6 45° CW 1.9 28 53.2 296.8 17.92 45° CCW 1.9 28 53.2 296.8 17.92

464.8

2077.6

22.37

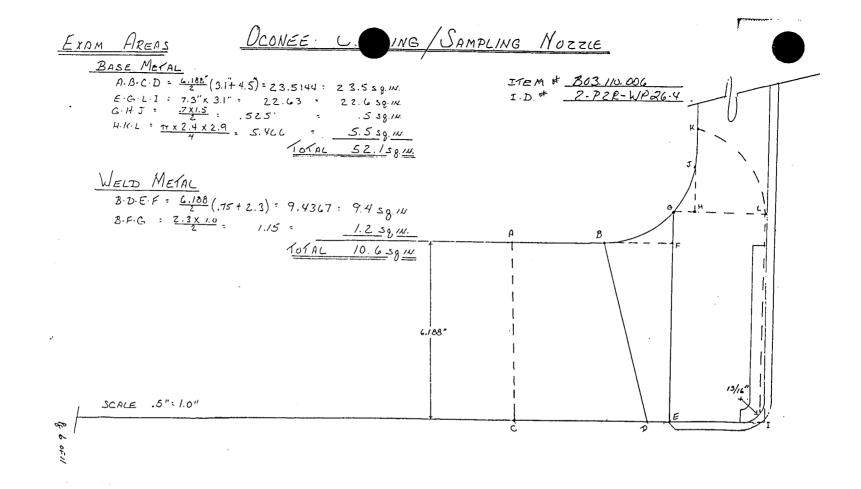
	Item No:	B03.110.006
Prepared By: Parid K. Zare	Level: II	Date: 3 /2 4/98
Reviewed By: Yary/ Moss	Level: B	Date: 3-24-98
· / .		Pg 4 of

Request For Relief 98-03 Page 5 of 33, Attachment B

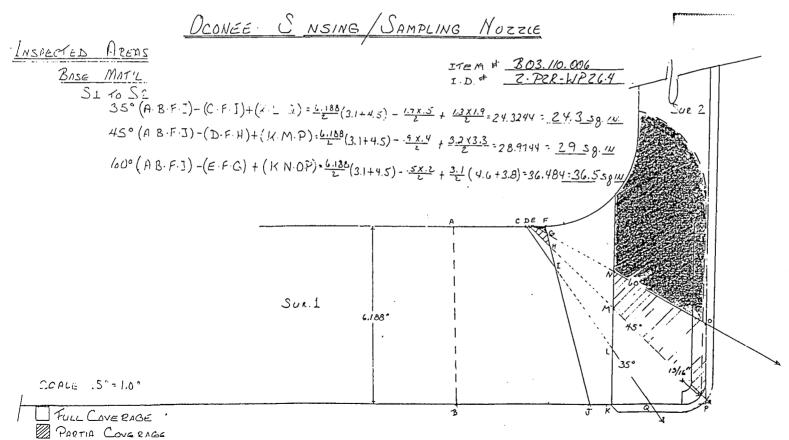
DUKE POWER COMPANY									NDE-91-1
			Revision 0						
			Examinat	tion Volu	ıme/	Area Defined	ſ		
⊠ Ba	☑ Base Metal ☐ Weld ☐ Near Surface ☐ Boltin)	☐ Inner Radius
		Area Calo	culation			Ve	olume Ca	lcula	tion
52.1 SG	Q. IN.				52.1	SQ. IN. X 28°	= 1458.8	CU. I	N.
			Co	verage (Calcu	lations			
Scan#	Angle	Beam Direction	Area Examined (sq.in.)	Leng Exam (in	ined	Volume Examined (cu.in.)	Volu Requ (cu.i	ired	Percent Coverage
1	45°	S2	29	28		812	1458	3.8	55.66
2	60°	S2	36.5	28		1022	1458	3.8	70.06
3	45°	S1	38	28		106.4	1458	8.8	7.29
4	60°	S1	2.0	28		56	1458	3.8	3.84
5	0° N/A 19.2 28		28		537.6	1458	8.8	36.85	
6	45°	CW	23.2	28		649.6	1458	8.8	44.53
7	45°	CCW	23.2	28		649.6	1458	8.8	44.53
						3833.2	1021	1.6	37.54

	Item No:	B03.110.006
Prepared By: Paul K 2	Level: T	Date: 3(24/9 8
Reviewed By: Hary Moss	Level: I	Date: 3.26.98
11		0 "

P8 5 0 p 11



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A 70F11

No CoveRAGE

DONÉE SLNSING/SAMPLING NOZZIE INSPECTED AREAS ITEM # <u>BO3./10.006</u> I.D. # <u>2-PZR· k/PZG.4</u> BASE MAT'L .52 to S1 35° 35° A.D.G. $\frac{2.9 \times 4.2}{2} = 2.09 = 6.1 \times 8.10$ 45° A.C.F = $\frac{2.75 \times 2.75}{2} : 3.781 = \frac{3.8 \times 9.10}{2}$ 60° A.B.E. $\frac{2.0 \times 1.5}{2} = 1.95 : \frac{2.0 \times 8.10}{2}$ SUR 1 SCALE .5"=1.0" FULL COVERAGE PARTIAL COVERAGE No COVERAGE

Request For Relief 98-63
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PE 8 05/1

DONEE SENSING / SAMPLING MOZZIE

INSPECTED FIDER:

THEM # BOS. 110 COC

Z-PIR-WP16-4

WELD MAT'L

TOTAL LOSS

A

B

CLASS*

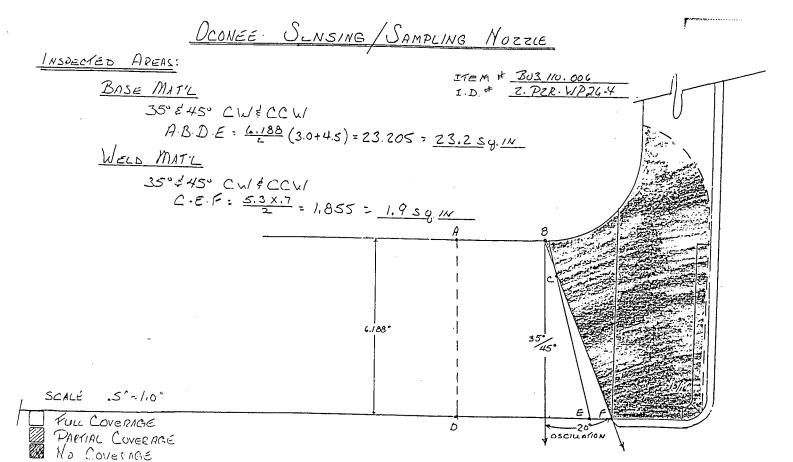
Request For Reliet 40.0.

Page 9 of 33

SCALE: .5"=1.0"

PULL COVERAGE
PARTIAL COVERAGE
No COVERAGE

A. 9 0511



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Altachment B

DOONÉE SENSING/SAMPLING MOZZLE INSPECTED HPEHS: WELD MATIL S1 TO S2 35° CDF+DEF= 4.8 × 1.2 + .9 × .75 = 3.2 17 = 3.2 S8.14 45° BDG+DEG= 5.6x15 + 3.3x.75=5.437 = 5.4 3 9.14 60° ADH+DEH = 6.0 x1.9 + 4.6 x.75 = 7.425 = 7.4 sq.1N SUR 21 52651 35° YOTAL LOSS 450 Suc.1 6.188" .5" = 1,0" FULL COVERAGE
PARTIAL COVERAGE
No COVERAGE

Request for Keliet 98 Page 11 of 33 Attachment B

A 120512

DUKE PO	Exam St	art: 1	105	Form	NDE-UT	-2A				
ULTRASONIC EXAMINATION DATA SHEET FOR PLANAR REFLECTORS Exam Fin						nish: 1	204		evision 4	
Station: Oconee	Unit: 2	Component/V	Veld ID: 2	-PZR-WP2	<u>. </u>			Date:	3/24/9	
Weld Length (in.): 28.0"	Surface Cond	ition: AS N	MACHINE	Lo:	B&W #1	Surface 1	l	·		
Examiner: Winfred C. Leeper	Pevel: II	Scans:		<u>-</u>		Pyromete			_	
Examiner: David Zimmerman		45 🖾 <u>5</u>	4 dB	70 🗆	dB	Cal Due:				
Procedure: NDE-620 Rev:		45T ⊠			· · · · · ·	Configura				
NDE-640	I N/A	60 🗵 70		·	ub	N	<u>/A</u> S2			
Calibration Sheet No:		60T ⊠					Scan	Surface:		_
9802043, 9802044, 9802046		1	. <u>o_</u> ub 0°-:	מה או	5	Skew An	ole:		80 only N/A	
		J Other.		20 0					•//	
IND# % Max Mp W % Max Max Ref	L Max L1	L2	W1	Mp1	W2	Mp2	Beam Dir.	Exam Surf.	Scan	Damps
DO NOT WRITE IN THIS SPACE	20%d HM, 50%d 100%	A HMA lac 50%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	D(IN	NOT THIS	WRIT SPACE	
NRI 0°										
NRI 45°										
NRI 60°										
Remarks: *95-18, 95-19										
Limitations: (see NDE-UT-4) ☐ 909	% or greater cov	rerage obtaine	d: yes □	no ⊠	· · · · · · · · · · · · · · · · · · ·			Sheet	/ ^	<i>s</i> //
Reviewed By: Yary Moss	Level: [Date: A	Authorized			T-31	• Date: - 98	Item N B03.1	o:	"

Request For Relief 98.03 Page 12 of 33, Attachment B

	COMPANY		FORM NDE-UT-4 Revision 1	
Component/Weld ID: 2-PZR-WP26-5	[1	tem No: B03.110.007	Remarks:	TOTAL I
☐ NO SCAN ☐ LIMITED SCAN	SURFACE ☑ 1 □ 2	BEAM DIRECTION ☐ 1 ☑ 2 ☐ cw ☐ ccw	DUE TO LOWER	R HEAD WELD
FROM L 12.0" to L 19.0" ANGLE: □ 0 □ 45 ⊠ 60 □ Other				
⊠ NO SCAN	SURFACE 1 2 INCHES FROM	BEAM DIRECTION ☐ 1 ☐ 2 ☐ cw ☐ ccw	NOŻZLE CONFI	GURATION
☐ NO SCAN ☐ LIMITED SCAN FROM L to L	SURFACE 1 2 INCHES FROM	BEAM DIRECTION 1		
LI NO SCAN	SURFACE			
ANGLE: 0 45 60 Other		FROM DEG to ate: 3/24/97 Sketch(s) attached		Sheet 2 of 11 Date: 3-31-98

Request For Relief 98-03 Page 13 of 33, Attachment B

Request For Relief 98-03 Page 14 of 33, Attachmend B

NDE-91-1 **DUKE POWER COMPANY Limited Examination Coverage Worksheet** Revision 0 **Examination Volume/Area Defined** ☐ Base Metal \boxtimes Weld ☐ Near Surface ☐ Bolting ☐ Inner Radius Area Calculation Volume Calculation B,D,E,F=6.188/2(.75+2.3)=10.6 SQ. IN. X 28" = 296.8 CU. IN. 9.43 $B_1F_1G = 2.3 X$ 1.0/2 = 1.159.4 SQ. IN. + 1.2 SQ. IN. = 10.6 SQ. IN. **Coverage Calculations** Area Length Volume Volume Beam Examined Examined Examined Required Scan # Angle Percent Coverage Direction (sq.in.) (in.) (cu.in.) (cu.in.) 1 45° <u>S1</u> 28 5.4 151.2 296.8 50.94 2 60° **S1** 7.4 28 207.2 296.8 69.81 3 45° S2 0.0 28 0 296.8 0.00 4 60° S2 0.0 28 0 296.8 0.00 5 0° N/A 0.0 0 28 296.8 0.00 6 45° CW 1.9 28 53.2 296.8 17.92 45° **CCW** 1.9 53.2 28 296.8 17.92

464.8

2077.6

22.37

	Item No:	B03.110.007
Prepared By: David C. 2	Level: <i>II</i>	Date: 3/24/9 &
Reviewed By: Yany Mos	Level: 15	Date: 3-26-98
/		A 306

Request For Relief 98-03 Page 15 of 33, Attachmend B

		DUK	E POWER	COMPA	NY			NDE-91-1
				Revision 0				
			Examinati	ion Volum	ne/Area Defi	ned		
⊠ Ba	se Meta	1 🗆 V	Veld	☐ Near	Surface	☐ Bolting]	☐ Inner Radius
		Area Calcu	ılation			Volume Ca	lculat	tion
52.1 S	Q. IN.			5	52.1 SQ. IN. X	28" = 1458.8	CU. II	N.
I								
				ļ				
			Cov	l ∕erage Ca	lculations			
			Area	Length	Volume	e Volui	mo	
0 "		Beam	Examined	Examine				İ
Scan #	Angle	Direction	(sq.in.)	(in.)	(cu.in.			Percent Coverage
1 .	45°	\$2	29	28	812	1458	3.8	55.66
2	60°	S2	36.5	28	1022			70.06
3	45°	S1	38	28	106.4			7.29
4	60°	S1	2.0	28	56	1458	3.8	3.84
5	0°	N/A	19.2	28	537.6	1458	3.8	36.85
6	45°	CW	23.2	28	649.6	1458	8.8	44.53
7	45°	CCW	23.2	28	649.6	1458	3.8	44.53
					3833.2	2 1021	1.6	37.54

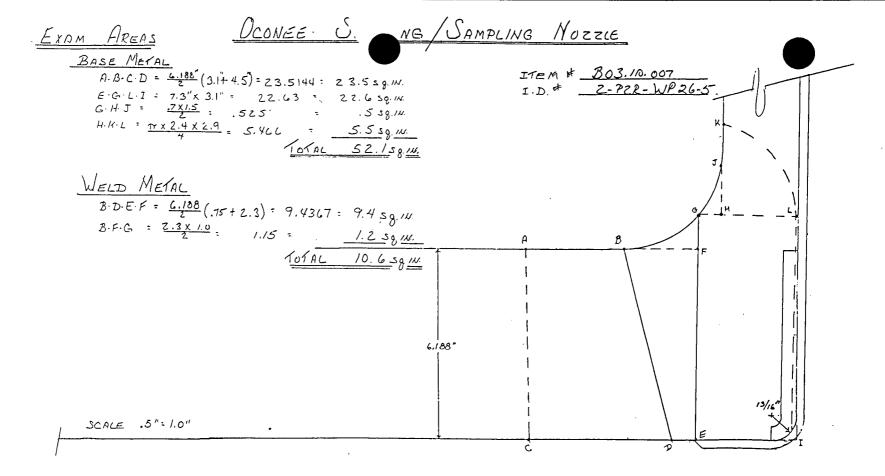
4298 12289.2

Item No: B03.110.007 Prepared By: David K. Gong Level: II Date: 3/24/9 8 Date: 3-26-98 | P8 40F (1 Level: #

Request For Relief 98-03 Page 16 of 33, Attachment B

				NDE-91-1					
	Limited Examination Coverage Worksheet								Revision 0
Examination Volume/Area Defined									
☐ Base Metal ☐ Weld ☐ Ne						ırface	☐ Bolting)	☐ Inner Radius
		Area Calcula	ition			1	/olume Ca	lcula	tion
SEE ATTACHMENT					SEE	ATTACHME	NT		
·								i	
						,			
			Co	verage (Calcu	ılations			
		D	Area	Lenç	-	Volume	\ Volu	me	
Scan#	Angle	Beam Direction	Examined (sq.in.)	Exami (in		Examined (cu.in.)	Requ (cu.i		Percent Coverage
		BASE METAL					1,		37.54
		WELD AGGREGATE							22.37

Item No: B03.110.007 Prepared By: Parid K. Zen Level: I Date: 3.26.98 | Pg 5 oF il Level: 1



P8 6 0F/1

Page 17 of 33 Attachment B

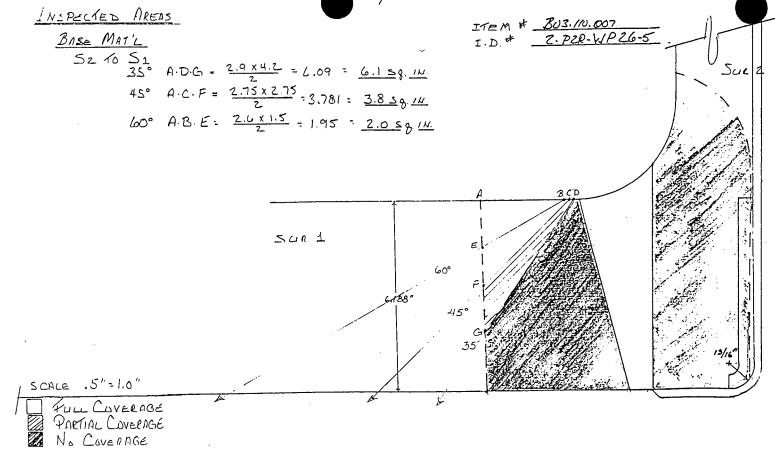
DOONÉE C NG/SAMPLING NOZZIE INSPECTED AREAS ITEM # 303, 110.007 I.D. # Z-PZR-WP26.5 Base MATIL.

S1 to S2

35° (A-B-F-I)-(C-F-I)+(x-L-1)=6.188/2(3.1+4.5)-1.7x.5+1.3x1.9=24.3244=24.3244=24.338.11. 45° (A.B.F.J) - (D.F.H.) + (K.M.P) = 6.188 (3.1+4.5) - .9 x.4 + 3.2 x 3.3 = 28.9144 = 29 sg. 14 60° (AB.F.]) -(E.F.G) + (K.N.O.P) = 6.188 (3.1+4.5) - .5x.2 + 3.1 (4.6+3.8) = 36.484:36.5 sgm/ CDEF Sur.1 Ser & .5"=1.0" FULL COVERAGE . PARTIA COVERAGE
No COVERAGE

\$ 70F11

Request For Relied 98:0 Page 18 of 33 Attachment PS



P8 8 0F11

Page 19 ct 33 Attachment B

DOONÉE SI NG/SAMPLING NOZZIE INSPECTED AREA: ITEM # <u>BO3.110.007</u> I.D. # <u>2-PCR-MP</u>26.5 BASE MATIL

0° ABCD= 3.1 X6.188=19.182=19.2 sg.14 WELD MATIL
MOTAL LOSS 6.188" SCALE: .5"=1.0"

Pa 9 0=11

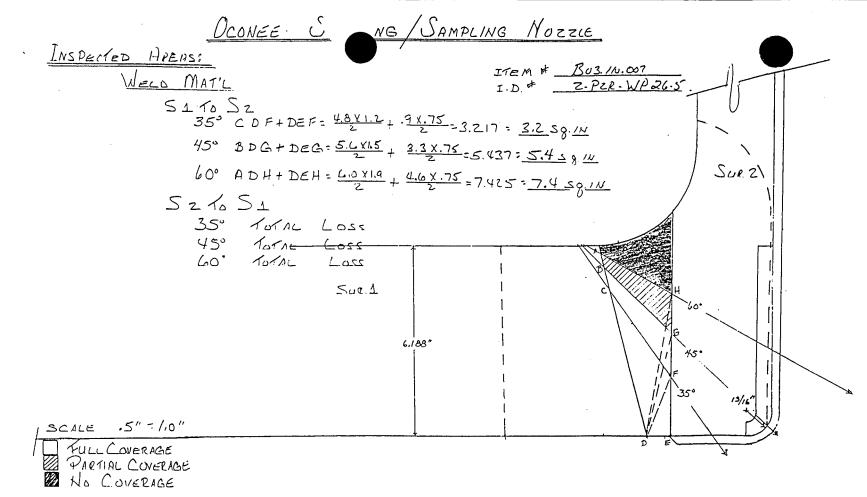
FULL CONERAGE
PARTIAL COVERAGE
No COVERAGE

Page 20 of 33 Attachment B

DOONÉE C NG / SAMPLING NOZZIE INSPECTED AREAS: ITEM # 803 /10.007 I.D. # Z-PZR-WP26.5 BASE MIT'L 35° & 45° CW & CCW A.B.D. E = 6.188 (3.0+4.5) = 23.205 = 23.2 sq.11 WELD MATIL 35° \$ 45° CW \$ CCW C.E.F: 5.3 x.7 = 1.855 = 1.9 sq 1N 6.188" SCALÉ .5" -1.0" FULL COVERAGE OSCILLATION PARTIAL COVERAGE No COVERAGE

A 10 OF11

Request For Kellet 980 Page 21 of 33



P8 11 OF 11

Page 22 of 33 Attachment B

	DU	JKE PO	WER	COM	PANY			Exam St	art: 1	110	Form	NDE-U	Γ-2A
ULTRASONI	ULTRASONIC EXAMINATION DATA SHEET FOR PLANAR REFLECTORS Exam Fir						nish: 1:	217		evision 4			
Station:	Oconee		Unit:	2	Component	/Weld ID: 2	-PZR-WP2	26-6			Date:	3/24/	
Weld Length (in	.): 28.0)"	Surface	Condi	tion: AS	MACHINE	D Lo:	B&W #1	Surface ²				
Examiner: Winfi	<u> </u>	Maen.	Level		Scans:				Pyromete	er S/N:	MCNI		
Examiner: David	d Zimmerman	wid & Za	Level	: 11	45 🖾	54dB	70 🗆 _	dB	Cal Due:			la ta Sha	11
Procedure: ND		Rev: 5			45T ⊠	54 dB	70T 🗆 _	dB	ì	-	Flow		
	E-640	1	N	/A	60 🖾 <u>7</u>	<u>'0.5</u> dB				S2		S 1	
9802043, 980204					60T 🖾 <u>7</u> Othe	<u>'0.5</u> dB er: <u>0°-</u>	26 d	3	Skew An	pplies t	Surface: o NDE-6		
IND#	Max Mp % Max Ref	W Max	L Max	L1	L2	W1	Mp1	W2	Mp2	Beam Dir.	Exam Surf.	Scan	Damps
1 1 1	O NOT WI I THIS SP	1		20%d HM/ 50%d 100%d	A HMA ac 50%dac	HMA	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	20%dac HMA 50%dac 100%dac	i	O NOT		1 17
NRI 0°				-		-							
NRI 45°										<u> </u>			
NRI 60°													
Remarks: *95-1	18, 95-19	<u></u>					1				<u> </u>		
Limitations: (see	NDE-UT-4) [90%	or great	er cov	erage obtain	ed: yes [no ⊠			**************************************	Sheet		of //
Reviewed By: (977	Level:			Authorized		•		Date:	Item N		

Request For Relief 98-03 Page 23 of 33

	COMPANY		FORM NDE-UT-4	
	ISI LIMITATION	REPORT		Revision 1
Component/Weld ID: 2-PZR-WP26-6	it.	em No: B03.110.008	Remarks:	
☐ NO SCAN	SURFACE	BEAM DIRECTION	DUE TO LOWER	R HEAD WELD
☐ LIMITED SCAN	⊠ 1 □ 2	☐ 1 ⊠ 2 ☐ cw ☐ ccw		
FROM L 12.0" to L 19.0"	INCHES FROM	WO 11.0" to BEYOND		
ANGLE: ☐ 0 ☐ 45 ⊠ 60 ☐ Other		FROM 0 DEG to 360 DEG		
NO SCAN	SURFACE	BEAM DIRECTION	NOZZLE CONFI	GURATION
LIMITED SCAN	⊠ 1 □ 2	☐ 1 ☑ 2 ☑ cw ☑ ccw		
FROM L to L	INCHES FROM	WO <u>0.0"</u> to <u>1.5"</u>		
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60 ☐ Other		FROM <u>0</u> DEG to <u>360</u> DEG		
□ NO SCAN	SURFACE	BEAM DIRECTION		
☐ LIMITED SCAN	□ 1 □ 2	☐ 1 ☐ 2 ☐ cw ☐ ccw		
FROM L to L	INCHES FROM	I WO to		
ANGLE: 0 45 60 Other		FROM DEG to DEG		
□ NO SCAN	SURFACE	BEAM DIRECTION		
	□ 1° □ 2	☐ 1 ☐ 2 ☐ cw ☐ ccw		
FROM L to L	INCHES FROM	WO to		·
ANGLE: 0 0 45 60 0ther		FROM DEG to	-	·
Prepared By: David K 3	Level: Da	ate: 3/24/98 Sketch(s) attached 🖂	yes 🗌 no	Sheet 2 of /1
Reviewed By: Yay Moss		Authorized Inspector: \mathcal{y}_16/	?	Date: 5-3/-98

Request For Relief 98-03 Page 24 of 33 Page Attachment B

Request For Relief 9803 Page 25 of 33 Attachment B

	DUKE POWER COMPANY									
	Limited Examination Coverage Worksheet									
Examination Volume/Area Defined										
☐ Base Me	tal 🛭 V	/eld	☐ Near S	Surface	☐ Bolting		Inner Radius			
	Area Calcul	ation		V	olume Cal	culation				
SEE ATTACH	MENT	SE	EE ATTACHME	NT						
		Cov	erage Calc	culations						
	Doom	Area	Length	Volume	Volu					
Scan # Angle	Beam Direction	Examined (sq.in.)	Examined (in.)	I Examined (cu.in.)	Requi (cu.i		ercent Coverage			
•	BASE METAL						37.54			
	WELD						22.37			
	AGGREGATE						28.77			

Item No: B03.110.008 Prepared By: David Reviewed By: Hon Level: 11 Date: 3.26.98 Rs 3 of 12 Level: 5

Request For Relief 98-03 Page 26 of 33 Attachment B

			NDE-91-1					
			Revision 0					
TOTAL MARKET SALES	TO A COMPANY ACTUAL		Examinat	ion Volu	ne/Area D	efined		
⊠ Ba	se Meta	ı 🗆 w	/eld	☐ Nea	r Surface	☐ Boltin	g	☐ Inner Radius
		Area Calcul	ation			Volume Ca	alcula	ition
52.1 SC	Q. IN.			52.1 SQ. IN. X 28" = 1458.8 CU. IN.				IN.
			Cov	verage C	alculations	5		
Scan#	Angle	Beam Direction	Area Examined (sq.in.)	Lengt Examin (in.)	ned Exam	ined Req	ume uired .in.)	Percent Coverage
1	45°	.S2	29	28	8	12 14	58.8	55.66
2	60°	S2	36.5	28	10	22 14	58.8	70.06
3	45°	S1	38	28	10	6.4 145	8.8	7.29
4	60°	S1	2.0	28	5	6 145	8.8	3.84
5	0°	N/A	19.2	28	53	7.6 145	8.8	36.85
6	45°	CW	23.2	28	64	9.6 145	8.8	44.53
7	45°	CCW	23.2	28	64	9.6 145	8.8	44.53
					383	33.2 102	11.6	37.54

	Item No:	B03.110.008
Prepared By: Daniel K. Box	Level:	Date: 3/24/ 98
Reviewed By: You Moss	Level: 15	Date: 3.26-98
		0.1

Ps 4 or 11

Request For Relief 98-03 Page Z7 of 33 Attachment B

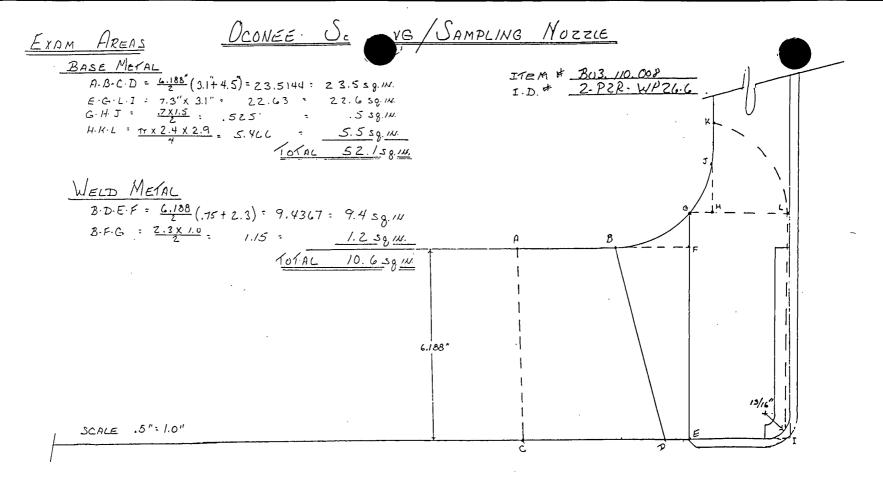
NDE-91-1 **DUKE POWER COMPANY Limited Examination Coverage Worksheet** Revision 0 **Examination Volume/Area Defined** ☐ Base Metal \boxtimes Weld ☐ Near Surface ☐ Bolting ☐ Inner Radius Volume Calculation Area Calculation 10.6 SQ. IN. X 28" = 296.8 CU. IN. $B_1D_1E_1F = 6.188/2(.75 + 2.3) =$ 9.43 $B_1F_1G = 2.3 X$ 1.0/2 = 1.159.4 SQ. IN. + 1.2 SQ. IN. = 10.6 SQ. IN. **Coverage Calculations** Area Length Volume Volume Beam Examined Examined Examined Required Scan # Angle Percent Coverage Direction (in.) (sq.in.) (cu.in.) (cu.in.) 1 45° S1 5.4 28 151.2 296.8 50.94 2 60° S1 7.4 28 207.2 296.8 69.81 3 45° S2 0.0 0 0.00 28 296.8 4 60° S2 0.0 0 28 296.8 0.00 0° 5 0 N/A 0.0 28 296.8 0.00 6 45° CW 53.2 1.9 28 296.8 17.92 7 45° CCW 1.9 28 53.2 296.8 17.92

464.8

2077.6

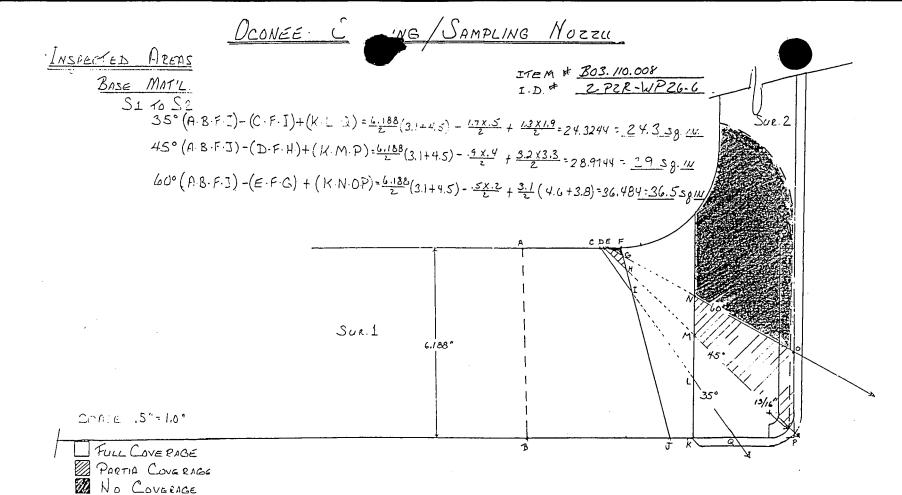
22.37

	Item No:	B03.110.008
Prepared By: Daniel IC. Tung	Level:	Date: 3/24/98
Reviewed By: Yang Mon	Level: 15	Date: 3-21-98
//		A FOF



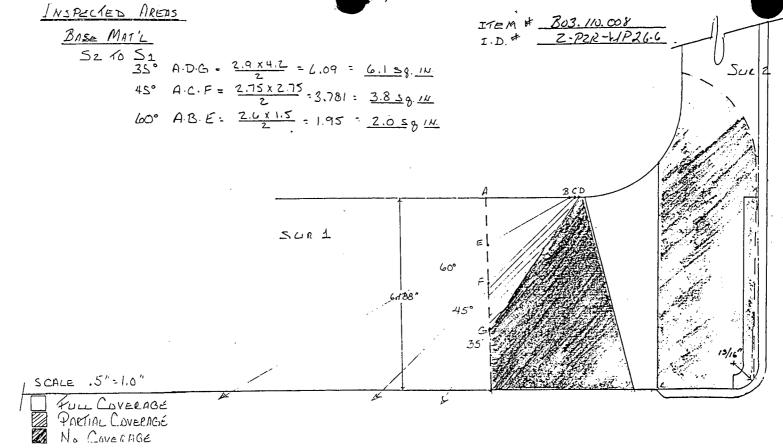
Po 6 OF 11

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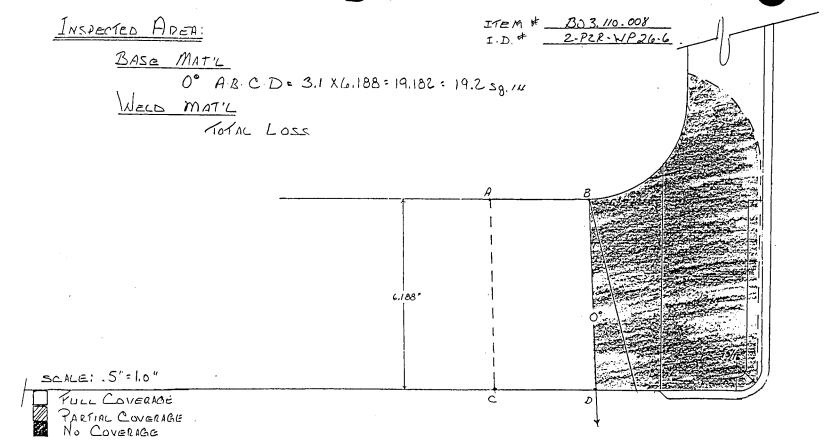
P8 70F11

Request for Keliet Page 29 of 33 Attachment B



P& 8 OF 11

Page 30 of 33 Attachment B DONÉE SE SAMPLING NOZZIE



P8 9 OF 11

Request For Kellet 98 Page 31 of 33

DOONEE SE NG / SAMPLING MOZZIE INSPECTED AREAS: ITEM # <u>BO3.110.008</u> I.D. # <u>2.PZR-WPZ6-6</u> BASE MIT'L 35° & 45° CW & CCW ABDE = 6.188 (3.0+4.5) = 23.205 = 23.2 sy.1N WELD MATIL 35° & 45° CW & CCW C-E-F = 5.3 x.7 = 1.855 = 1.9 sq m 6.188"

FULL COVERAGE

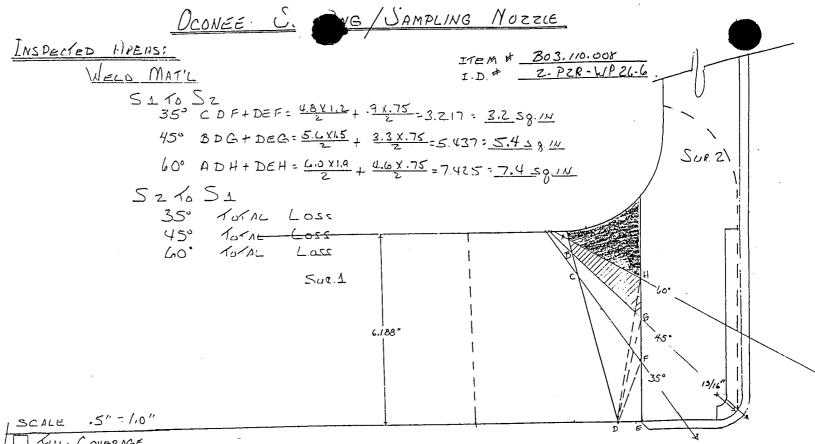
PARTIAL COVERAGE

No COVERAGE

Pg10 OF11

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OSCILLATION



FULL COVERAGE

PARTIAL COVERAGE

No COVERAGE

P8 11 0F11

J. W. Hampton Vice President (864)885-3499 Office (864)885-3554 Fax



DUKE POWER

March 3, 1997

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

Subject: Duke Power Company

Oconee Nuclear Station, Units 1, 2, and 3

Docket No. 50-269, -270, -287

Third Ten Year Inservice Inspection Interval

Request for Relief ONS-009

Request for Relief ONS-009 was previously submitted to the NRC in a Duke letter dated June 14, 1994. This request for relief addresses the High Pressure Injection System letdown coolers for Units 1, 2, and 3. The NRC approved this request for relief in a Safety Evaluation Report (SER) to Duke dated November 15, 1995.

Please find attached Revision 1 to Request for Relief ONS-009, which includes an editorial change which deletes the weld identification numbers. The weld identification numbers are redundant to the code item numbers. Weld identification numbers are subject to change due to replacement of like-for-like components. This editorial revision does not affect the basis for relief granted in the November 15, 1995, SER since letdown cooler joint configuration and examination accessibility have not been affected.

If there are any questions or further information is needed you may contact D. A. Nix at (864) 885-3634.

Very truly yours,

J. W. Hampton

Site Vice President

Attachment

Printed on recycled page

U. S. Nuclear Regulatory Commission
March 3, 1997
Page 2

xc (w/attch):

Mr. D. E. LaBarge Project Manager

Office of Nuclear Reactor Regulation U. S. Nuclear Regulatory Commission

Washington, DC 20555

Mr. L. A. Reyes

Regional Administrator, Region II U. S. Nuclear Regulatory Commission

xc (w/o attch):

Mr. M. A. Scott

Senior NRC Resident Inspector

Oconee Nuclear Station

Mr. Max Batavia

Bureau of Radiological Health

SC Dept. of Health & Environmental Control

2600 Bull St.

Columbia, SC 29201

U. S. Nuclear Regulatory Commission March 3, 1997 Page 3

bxc (w/ attch):

ISI Relief Request File

J. O. Barbour

D. A. Nix

R. G. Rouse

T. J. Coleman

bxc (w/o attch):

B. W. Carney

M. B. Chapman

J. C. Shropshire

V. B. Dixon

ELL ECO50

R. L. Gill (EC12R)

DUKE POWER COMPANY

Request for Relief From Inservice Inspection Requirement

Station: Oconee

Unit: 1, 2 & 3

Requesting Department:

Nuclear Generation

Reference Code:

ASME Section XI, 1989 Edition, no addenda

- I. Component for which exemption is requested:
 - a. Name and Identification Number:

Letdown Cooler Nozzles (Inside Radius Section) for Units 1, 2 & 3 OM-201-3107 (Attachment "A"). The following item numbers are affected:

Oconee 1	Oconee 2	Oconee 3
Item No.	Item No.	Item No.
B03.160.001	B03.160.001	. B03.160.001
B03.160.002	B03.160.002	B03.160.002
B03.160.003	B03.160.003	B03.160.003
B03.160.004	B03.160.004	B03.160.004

b. Function:

The Letdown Cooler reduces the temperature of the letdown flow from the Reactor Coolant System to a temperature suitable for demineralization.

- c. ASME Section XI Code Class: Class 1
- d. Construction Code and Class (If Applicable):

N/A

e. Valve Category (If Applicable):

N/A

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

Table IWB-2500, Examination Category B-D, Item Number B03.160. Table requires that an inside radius volumetric examination be performed on heat exchanger nozzles.

III. Basis for Requesting Relief:

Due to the size and geometry of the nozzle inside radius on the Letdown Coolers, we have been unable to perform a meaningful (i.e. unable to get sound into the area of interest) volumetric examination.

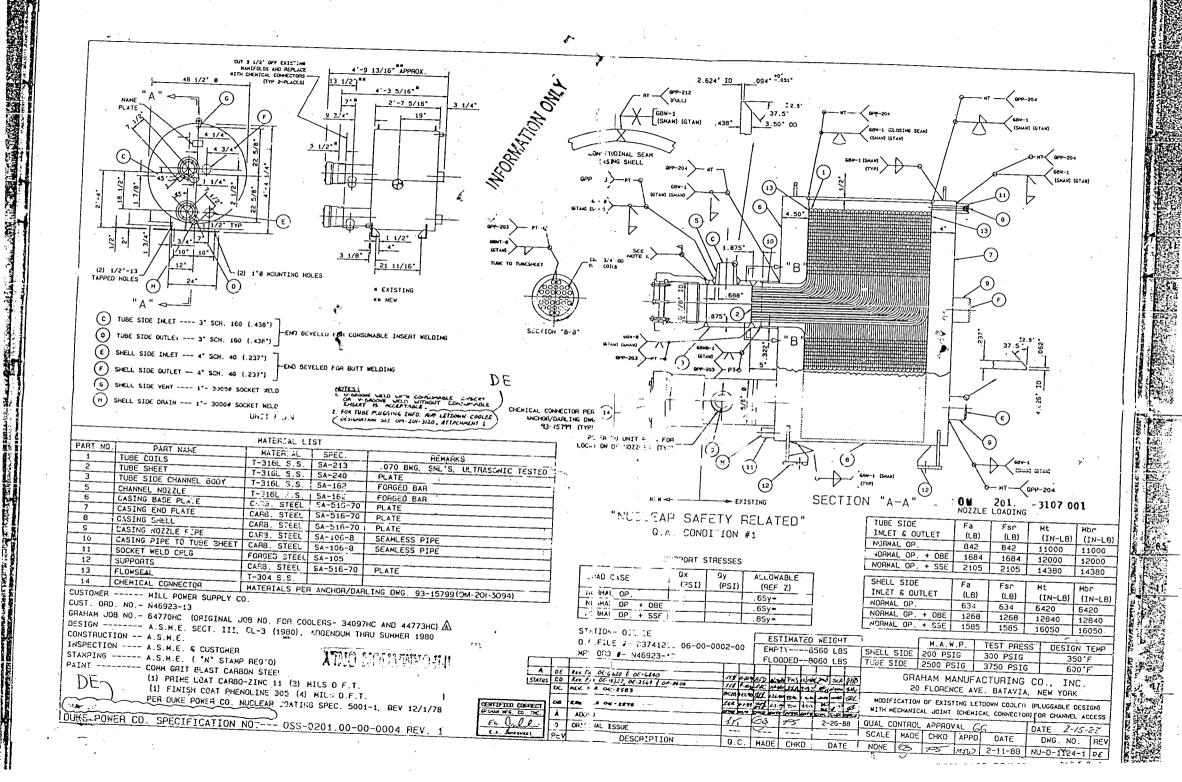
IV. Alternate Examination:

Perform the volumetric examination on the weld volume, as required by ASME Section XI, Table IWB-2500-1, Examination Category B-D, Item Number B03.150. This will provide adequate Assurance of the welded connection. The alternate proposed inservice testing will provide an acceptable level of quality and safety and ensures the level of public health and safety is not reduced.

V. Implementation Schedule:

Oconee 1		Oconee 2		Oconee 3	
Item No.	RFO	Item No.	RFO	Item No.	<u>RFO</u>
B03.160.001	16	B03.160.001	15	B03.160.001	17
B03.160.002	16	B03.160.002	15	B03.160.002	17
B03.160.003	20	B03.160.003	20	B03.160.003	21
B03.160.004	20	B03.160.004	20	B03.160.004	21

Evaluated By:	K/SKoure	Date	2/10/97
Reviewed By:	Sarlow	Date	7/11/97
neviewed by.	7000000		91. [.]



Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5073

Action Category: 3

LER No:

Other Report:

I. Problem ID

Discovered Time/Date: 11:00 10/25/98

Occurred Time/Date:

Unit(s): 3

Status at Time Discovered

Unit 1

Unit 2

Unit 3

Mode

N/A

N/A

NOMODE

% Power

Unit Status Remarks:

System(s) Affected: HPI

Other High Pressure Injection Equip.

RC

Reactor Coolant

Affected Equipment

Comp.

WMS Equipment ID No.

Code

Manufacturer

Location of Problem - Bldg: R

Column Line:

Elev:

Location Remarks:

Method Used to Discover Problem:

Radiographic examination

Brief Problem Description:

Radiographic examination reveals visible gap between HPI/MU Nozzles and Thermal Sleeves.

Detailed Problem Description:

Radiographic examination of 3B-1 and 3B-2 HPI/MU Nozzle Thermal Sleeves revealed gaps that are reportable to the acceptance standards of Duke Power procedure NDE-105 Revison 2.

Radiographic film for all previous radiographic examinations of Thermal Sleeves 3B-1 and 3B-2 were reviewed to determine maximum visible gap length and to determine if the visible gap had increased in length.

Radiographic film for Nozzle/Thermal Sleeve 3B-1 shows an expansion area of 2.25 inches in length. Visible gap was observed between the nozzle and thermal sleeve on the nozzle side of the expansion area with a maximum gap length of 1.125 inches.

Radiographic film for Nozzle/Thermal Sleeve 3B-2 shows an expansion area of 2.125 inches in length. Visible

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5073

Action Category: 3

LER No:

Other Report:

gap was observed between the nozzle and thermal sleeve on the nozzle side of the expansion area with a maximum gap length of 0.5625 inches.

Based on comparision to previous radiographs, no apparent change was observed for Nozzle/Thermal Sleeves 3B-1 and 3B-2 in visible gap length or in thermal sleeve position.

No new gaps were observed during radiographic examination.

Recommend that this PIP be screened as LSE Cat.3 and assigned to CEN for evaluation/resolution

Originated By: TLT8302: TUCKER, TIMOTHY L Team: KWS8302 Group: QAT Date: 10/25/98

Last Updated By: TLT8302: TUCKER, TIMOTHY L Team: KWS8302 Group: OAT Date: 10/25/98

Last Updated By: TLT8302: TUCKER, TIMOTHY L Team: KWS8302 Group: QAT Date: 10/25/98

Other Units/Components/Systems/Areas Affected (Y,N,U): N

Industry Plants Affected (Y,N,U): U

Immediate Corrective Actions:

Problem Found While Working with Document No.:

Immediate Corrective Action Work Request / Work Order No.:

Problem Identified By:

<u>Indiv</u>

<u>Team</u>

Group

Date:

Problem Entered By:

TLT8302 TLT8302 KWS8302 KWS8302 **QAT** OAT 10/25/98 10/25/98

II. Screening

Is the Problem Significant? N

Action Category: 3

OEP No:

Other Report Nos:

Event Codes: F

Equipment/System Concerns

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5073

Action Category: 3

LER No:

Other Report:

Screening Remarks:

This event has been reviewed by the CST and found not to meet the MSE significance criteria.

Screening members present for this review: Richard Ledford (MNT), Sandy Severance (ENG), and Mike Pruitt (OPS).

Originated By: RWV1470: VASSEY, RAY W Team: RTB7310 Group: SRG Date: 10/26/98

Responsible Group(s) for Problem Evaluation:

CEN

Civ, Elect., Nuclear

Responsible Group for Present Operability:

Responsible Group for Overall PIP approval:

N/A

Responsible Group for Past Operability:

N/A

Responsible Group for Reportability:

N/A QAT

QA Tech. Services

0 10

<u>Indiv</u>

<u>Team</u>

<u>Group</u>

Date

Screened By:

RWV1470 RTB7310

SRG

10/26/98

III. Operability

Present Operability:

Responsible Group:

Status:

Sys/Comp Operable?(Y,N,C,E):

Required Mode:

Comments:

Indiv

Team

Group

Date

No current Signatures for this section.

Past Operability:

Responsible Group:

Status:

Sys/Comp Operable?(Y,N,C,E):

Required Mode:

Comments:

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5073

Action Category: 3

LER No:

Other Report:

Indiv

Team

Group

Date

No current Signatures for this section.

IV. Reportability/Investigation

Responsible Group:

Status:

Problem Reportable(Y,N,E):

Reportable Per:

Comments:

Indiv

Team

Group

Date

No current Signatures for this section.

Investigation Report:

Responsible Group:

Act Date:

Investigator:

Due Date:

Date Due to VP or Sta. Mgr:

Date Regulatory or Agency Rpt Due:

Date Investigation Report Approved:

NRC Cause Codes:

V. Problem Evaluation

System(s) Affected:

HPI

Other High Pressure Injection Equip.

RC

Reactor Coolant

Affected Equipment

Comp.

WMS Equipment ID No.

Code

Manufacturer

Event

Cause Cd

Cause Description Not Applicable

Primary Causing Group(s)

Yes UNK

1/7/99 9:45:24 AM

Page 4

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5073

Action Category: 3 Other Report:

LER No:

Problem Evaluation From: Resp. Group: CEN

Status: Closed

OEDB Checked: No

No apparent cause evaluation is needed. This PIP was written as required by acceptance criteria of NDE procedure referenced and involves existing known equipment conditions. The condition is being identified by PIP as a tracking mechanism for necessary procedural changes.

Originated By: BWC7315: CARNEY JR, BASIL W Team: RAH8344 Group: CEN Date: 11/03/98

See PIP 2-O98-1658 for Unit 2's PIP on RT inspection results.

Last Updated By: BWC7315: CARNEY JR, BASIL W Team: RAH8344 Group: CEN Date: 11/03/98

•	<u>Indiv</u>	<u>Team</u>	<u>Group</u>	<u>Date</u>
Due Date:	11/24/98	•	-	
Accepted By:	RAH8344	RAH8344	CEN	10/28/98
Assigned To:	BWC7315	RAH8344	CEN	10/28/98
Ready For Approval:	BWC7315	RAH8344 '	CEN	11/03/98
Approval Assigned To:	RAH8344	RAH8344	CEN	11/03/98
Approved By:	RAH8344	RAH8344	CEN	11/03/98

VII. Corrective Actions

Seq.	No:	1
------	-----	---

Resp Group: QAT Orig Group: **CEN**

Status:

Closed

Prop CAC:

A3

Event Code:

Cause Code: N/A

Proposed Corrective Action:

NDE Procedure NDE-105 to be revised (and issued) to include baseline data for Unit 3 as an acceptable evaluation standard.

Originated By: BWC7315: CARNEY JR, BASIL W Team: RAH8344 Group: CEN Date: 11/03/98

		<u>Indiv</u>	<u>Team</u>	Group	<u>Date</u>
Ready For Approval:		BWC7315	RAH8344	CEN	11/03/98
Approval Assigned To:		RAH8344	RAH8344	CEN	11/03/98
Approved By:	`	RAH8344	RAH8344	CEN	11/03/98

General:

Outage:

Mode:

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5073

Action Category: 3

LER No:

Other Report:

Other Tracking Processes

Type

Number

Text

Actual Corrective Action:

Actual CAC:

Status: Open

Due Date: 01/23/99

Due Date:

<u>Indiv</u>

Team

Group

Date

Accepted By:

01/23/99

KWS8302

KWS8302

QAT

11/04/98

Assigned To:

TLT8302

KWS8302

QAT 11/04/98

VIII. Final and Overall PIP Approval

Responsible Group: QAT

Status:

Screened

<u>Indiv</u>

Team

Group

Date

Assigned To:

QAT

10/26/98

Closure Document Type

Closure Document No

Supplemental Concurrences - These do not affect PIP closure.

Concurrences Associated with External Committments:

Indiv

Team

Group

Date

Concurred By:

IX. Attachments

Generic Applicability

Generic Applicability Review Not Required for this PIP.

Environmental

No Environmental for this PIP.

Failure Prevention Investigation:

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5073

Action Category: 3

LER No: **Other Report:**

No FPI for this PIP.

Remarks

No Remarks for this PIP

Maintenance Rule

No Maintenance Rule for this PIP

End of the Document for PIP No:

3-098-5073

The status of this PIP is:

Screened

The duration of this PIP was:

days

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5083

Action Category: 3

LER No:

Other Report:

I. Problem ID

Discovered Time/Date:

10/26/98

Occurred Time/Date:

Unit(s): 3

Status at Time Discovered

Unit 1

Unit 2

Unit 3

Mode

N/A

NOMODE

% Power

Unit Status Remarks:

System(s) Affected: HPI

Other High Pressure Injection Equip.

Affected Equipment

Comp.

WMS Equipment ID No.

Code

Manufacturer

Location of Problem - Bldg: R

Column Line:

Elev:

Location Remarks:

Method Used to Discover Problem:

Brief Problem Description:

Weld isometric 3RC-211 rev. 3 does not reflect the way that the welds are numbered in the field on the HPI piping to 3A1 RC Pump discharge piping.

Detailed Problem Description:

The weld that joins 3HP-127 to the 2 1/2" HPI pipe is etched 3RC-211-54 in the field but is listed as 3RC-211-56 on the weld isometric. The weld that joins the 2 1/2" HPI pipe to the 2 1/2" safe end is etched 3RC-211-56 in the field but is listed as 3RC-211-54 on the weld isometric. A comparison was made of previous weld documention (RT film and UT data) and the documentation reflects field etchings.

Originated By: TJC0182: COLEMAN, TOMMY J Team: RHL8302 Group: MNT Date: 10/26/98

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5083

Action Category: 3

LER No:

Other Report:

Other Units/Components/Systems/Areas Affected (Y,N,N):

Industry Plants Affected (Y,N,U): N

Immediate Corrective Actions:

Problem Found While Working with Document No.:

Immediate Corrective Action Work Request / Work Order No.:

Problem Identified By:

<u>Indiv</u>

<u>Team</u>

<u>Group</u>

Date:

Problem Entered By:

TJC0182 TJC0182 RHL8302 RHL8302 MNT MNT 10/26/98 10/26/98

II. Screening

Is the Problem Significant? N

Action Category: 3

OEP No:

Other Report Nos:

Event Codes: D6

Drawings or Calculations

Screening Remarks:

This event has been reviewed by the CST and found not to meet the MSE significance criteria.

Screening members present for this review: Richard Ledford (MNT), Sandy Severance (ENG), and Mike Pruitt (OPS).

Originated By: RWV1470: VASSEY, RAY W Team: RTB7310 Group: SRG Date: 10/26/98

Responsible Group(s) for Problem Evaluation:

WCG

Work Control

Responsible Group for Present Operability:

N/A

Responsible Group for Past Operability: Responsible Group for Reportability: N/A N/A

Responsible Group for Overall PIP approval:

MNT

Maintenance MECH/IAE

Screened By:

Indiv RWV1470 Team RTB7310 <u>Group</u> SRG <u>Date</u> 10/26/98

Problem Investigation Process - PIP Problem Investigation Form

		PIP Serial No: LER No:	3-098-5	5083	Action Category: 3 Other Report:		
	III	. Operability	- 1 Min H - 18 ma - 1 Min - 1				
	<u>Presei</u>	nt Operability:					
	Respon	sible Group:	Status:		·		
	Sys/Coi	mp Operable?(Y,N,C,E):					
	Require	ed Mode:					
	Comme	ents:					
	No o	Uurrent Signatures for this s	Indiv section.	<u>Team</u>	Grou	p <u>Date</u>	
	Past C)perability:	•				
	Respons	sible Group:	Status:				
	Sys/Cor	mp Operable?(Y,N,C,E):					
	Require	d Mode:					
	Comme	nts:					
	No o	<u>I</u> current Signatures for this s	Indiv section.	<u>Team</u>	<u>Grou</u>	<u>p Date</u>	
<u>I</u>	V. Rep	ortability/Investiga	<u>ution</u>				
	Respons	sible Group:	Status:				
	Problem	n Reportable(Y,N,E):					
	Reporta	ble Per:					
	Comme	nts:	,				
	No.	Surrent Signatures for this s	ndiv Section	<u>Team</u>	<u>Grou</u>	p <u>Date</u>	

Investigation Report:

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5083

Action Category: 3 Other Report:

LER No:

Investigator:

Due Date:

Act Date:

Date Due to VP or Sta. Mgr:

Responsible Group:

Date Regulatory or Agency Rpt Due:

Date Investigation Report Approved:

NRC Cause Codes:

V. Problem Evaluation

System(s) Affected: HPI

Other High Pressure Injection Equip.

Affected Equipment

Comp.

WMS Equipment ID No.

Code

Manufacturer

Event

Cause Cd

Cause Description

Primary Causing Group(s)

D6

F3d

Self-checking not applied to ensure correct component

Yes

ESS

MNT WCG

Problem Evaluation From:

Resp. Group: WCG

Status: Closed

OEDB Checked: Yes

Weld isometric 3RC-211 was reviewed to determine if previous revisions had changed the location of welds 54 and 56 there is no objective evidence that this occurred. The likely scenario is that the section of piping was pre-fabbed and marked prior to installation and that it was installed backwards. Review of the weld tickets for the subject welds was inconclusive as both weld tickets identified a new piece of pipe welded to existing material. It cannot be determined which weld was made to the safe end and which one was made to the existing valve. With the exception of the weld number, the process control for these welds is identical, ie same inspector same welder etc. This discrepancy was detected by the ISI UT inspectors who used the weld isometric to locate the weld to be examined and noted that it did not correspond to the previous inspection data for these welds.

There was one inappropriate action, failure to use self checking, and four groups involved:

The craft team that installed the piping had the responsibility of verifying that it was installed per the drawing.

The QC welding inspector failed to verify that the weld identification numbers marked on the pipe were located as shown on the isometric sketch.

The ESS QC inspectors who performed the RT inspections of these welds should have verified the weld location to the

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No: LER No:

3-098-5083

Action Category: 3
Other Report:

weld isometric.

The ESS QC inspectors who performed the PSI UT inspections also failed to verify the weld location to the weld isometric.

Originated By: CRH4406: HENSON, CHARLES R Team: GES8270 Group: WCG Date: 11/04/98

OEDB Comments:

No matches were identified for the situation identified in this PIP.

Originated By: CRH4406: HENSON, CHARLES R Team: GES8270 Group: WCG Date: 11/11/98

	<u>Indiv</u>	<u>Team</u>	Group	<u>Date</u>
Due Date:	11/25/98			
Accepted By:	CLC1517	RHL8302	WCG	10/28/98
Assigned To:	GES8270	GES8270	WCG	10/28/98
Ready For Approval:	CRH4406	GES8270	WCG	11/16/98
Approval Assigned To:	GES8270	GES8270	WCG	11/16/98
Approved By:	GES8270	GES8270	WCG	11/16/98

VII. Corrective Actions

Seq. No: 1	Resp Group:	MNT	Status:	Closed
Seq. 100 1	Orig Group:	WCG	Event Code:	D6
	Prop CAC:	D1	Cause Code:	E34

Proposed Corrective Action:

Maintenance welding group shall reinforce the requirement to verify that piping and components must be installed in accordance with applicable drawings to all welders and fitters.

Originated By: CRH4406: HENSON, CHARLES R Team: GES8270 Group: WCG Date: 11/04/98

	<u>Indiv</u>	<u>Team</u>	<u>Group</u>	<u>Date</u>
Ready For Approval:	CRH4406	GES8270	WCG	11/04/98
Approval Assigned To:	GES8270	GES8270	WCG	11/12/98
Approved By:	GES8270	GES8270	WCG	11/16/98

General:

Outage:

Mode:

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No: LER No:

3-098-5083

Action Category: 3 Other Report:

Other Tracking Processes

Type

Number

Text

Actual Corrective Action:

Actual CAC:

Status: Open

Due Date: 01/24/99

Due Date:

<u>Indiv</u>

Team

Group

<u>Date</u>

Accepted By:

01/24/99 CLC1517

RHL8302

MNT

11/16/98

Assigned To:

WTM5506

ESL7310

MNT

11/16/98

Seq. No:

Resp Group: WCG

Status:

Closed

Orig Group: Prop CAC:

WCG D1

Event Code: Cause Code:

D6 F3d

Proposed Corrective Action:

QC inspection supervisor to counsel welding inspectors on importance of verifying weld location on the isometric sketch and the procedural requirement to do so. (QAL-16 paragraph 5.3.1.b)

Originated By: CRH4406: HENSON, CHARLES R Team: GES8270 Group: WCG Date: 11/04/98

Ready For Approval: Approval Assigned To: Approved By:

<u>Indiv</u> CRH4406 GES8270 GES8270

Team GES8270 GES8270 GES8270 Group WCG

WCG

WCG

<u>Date</u> 11/12/98 11/12/98

11/12/98

General:

Outage:

Mode:

Other Tracking Processes

<u>Type</u>

Number

Actual Corrective Action:

Actual CAC:

Status: Open

Due Date: 01/24/99

Due Date:

<u>Indiv</u> 01/24/99 **Team**

Group

Date

Accepted By:

CLC1517

RHL8302

WCG

11/17/98

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5083

Action Category: 3

LER No:

Other Report:

Assigned To:

GER8996

JNW8302

WCG

12/22/98

Seq. No:

Resp Group: ESS

Status:

Closed

Orig Group:

WCG

Event Code:

D6

Prop CAC:

D1

Cause Code: F3d

Proposed Corrective Action:

ESS QC RT supervisor shall stress the importance of using drawings to identify the location of welds and components. He shall also evaluate current QV&V and STAR practices used by his team to determine correct component and or weld and make improvements if necessary.

Originated By: CRH4406: HENSON, CHARLES R Team: GES8270 Group: WCG Date: 11/04/98

Ready For Approval: Approval Assigned To: <u>Indiv</u> CRH4406 **GES8270**

Team GES8270 GES8270 Group WCG WCG

<u>Date</u> 11/12/98 11/12/98

Approved By:

GES8270

GES8270

WCG

11/12/98

General:

Outage:

Mode:

Other Tracking Processes

Type

Number

<u>Text</u>

Actual Corrective Action:

Actual CAC: C

Status: ReadyForApprove

Due Date: 01/24/99

The Radiographer's practice for verifying that they are inspecting the correct component or weld is to veryify that the weld number or component number etched on or near the item agrees with the documentation supplied to them. Isometric drawings are not usually supplied with the documentation package, unless the weld or component is an inservice inspection item. It is important to add here that the Radiographers did not violate a procedural requirement, however it is a good practice to employ a questioning attitude in everything we do. All radiography team members have been provided with the first stages of Human Error Reduction training since this incident occured, and are now more aware of the need to use the six tools.

Entered for Richard M Painter

Originated By: VRQ8337: QUINN, VERNON R Team: VRQ8337 Group: ESS Date: 12/14/98

Due Date:

<u>Indiv</u> 01/24/99 <u>Team</u>

Group

<u>Date</u>

1/11/99 9:47:54 AM

Page 7

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5083

Action Category: 3

LER No:

Other Report:

Accepted By:
Assigned To:
Ready For Approval:
Approval Assigned To:

VRO8337 VRO8337 VRQ8337 RDR5271

VRO8337 VRQ8337 VRO8337 VRQ8337 **ESS** 11/16/98 **ESS ESS ESS**

11/16/98 12/14/98 12/14/98

Seq. No:

Resp Group: ESS Orig Group: WCG

Status: Event Code: Closed

Prop CAC:

D1

Cause Code:

D6 F3d

Proposed Corrective Action:

ESS QC UT supervisor shall counsel team on importance of using drawings and other available tools to verify correct component and or weld. Current QV&V and STAR methods used by his team shall be evaluated and improvements made if necessary.

Originated By: CRH4406: HENSON, CHARLES R Team: GES8270 Group: WCG Date: 11/04/98

	<u>Indiv</u>	<u>Team</u>	<u>Group</u>	<u>Date</u>
Assigned To:	GES8270	GES8270	WCG	11/12/98
Ready For Approval:	GES8270	GES8270	WCG	11/12/98
Approval Assigned To:	GES8270	GES8270	WCG	11/12/98
Approved By:	GES8270	GES8270	WCG	11/12/98

General:

Outage:

Mode:

Other Tracking Processes

<u>Type</u>

<u>Number</u>

Text

Actual Corrective Action:

Actual CAC:

Status: Open

Due Date: 01/24/99

Due Date:

Indiv 01/24/99 VRQ8337 <u>Team</u>

Group

Date

Accepted By: Assigned To:

VRQ8337

VRQ8337 VRQ8337 **ESS ESS** 11/16/98 11/16/98

Seq. No: 5 Resp Group: WCG

Closed

Orig Group:

WCG

Status: Event Code: D6

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5083

Action Category: 3

LER No:

Other Report:

Prop CAC:

B2

Cause Code: F3d

Proposed Corrective Action:

Welding Technical shall revise weld isometric to reflect the installed configuration.

Originated By: CRH4406: HENSON, CHARLES R Team: GES8270 Group: WCG Date: 11/04/98

Last Upd ated By: CRH4406: HENSON, CHARLES R Team: GES8270 Group: WCG Date: 11/04/98

	<u>Indiv</u>	<u>Team</u>	<u>Group</u>	<u>Date</u>
Assigned To:	GES8270	GES8270	WCG	11/12/98
Ready For Approval:	GES8270	GES8270	WCG	11/12/98
Approval Assigned To:	GES8270	GES8270	WCG	11/12/98
Approved By:	GES8270	GES8270	WCG	11/12/98

General:

Outage:

Mode:

Other Tracking Processes

<u>Type</u>

Number

Text

Actual Corrective Action:

Actual CAC: B1d

Status: ReadyForApprove

Due Date: 01/24/99

WELD ISOMETRIC HAS BEEN REVISED TO RELOCATE WELDS 3RC211-54 AND 3RC211-56.

Originated By: HLV8344: VINSON JR, HARRY L Team: GES8270 Group: WCG Date: 12/17/98

	<u>Indiv</u>	<u>Team</u>	<u>Group</u>	<u>Date</u>
Due Date:	01/24/99			
Accepted By:	CLC1517	RHL8302	WCG	11/17/98
Assigned To:	TMC4757	GES8270	WCG	12/14/98
Ready For Approval:	HLV8344	GES8270	WCG	12/17/98
Approval Assigned To:	GES8270	GES8270	WCG	12/17/98

Seq. No:

Resp Group: QAT Orig Group: WCG Status:

Closed D6

Prop CAC:

B2

Event Code: Cause Code: F3d

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

LER No:

3-098-5083

Action Category: 3

Other Report:

Proposed Corrective Action:

QATS shall revise the ISI plan to reflect the installed configuration.

Originated By: CRH4406: HENSON, CHARLES R Team: GES8270 Group: WCG Date: 11/04/98

	<u>Indiv</u>	<u>Team</u>	<u>Group</u>	<u>Date</u>
Assigned To:	GES8270	GES8270	WCG	11/12/98
Approval Assigned To:	GES8270	GES8270	WCG	11/12/98
Ready For Approval:	GES8270	GES8270	WCG	11/12/98
Approved By:	GES8270	GES8270	WCG	11/12/98

General:

Outage:

Mode:

Other Tracking Processes

Type

Number

<u>Text</u>

Actual Corrective Action:

Actual CAC:

Status: Open

Due Date: 01/24/99

The ISI Plan has been revised to reflect the changes made on revision 4 of isometric 3RC-211. Plan Addenda serial number ONS3-091 documents this change.

Originated By: RGR8304: ROUSE, RICHARD G Team: KWS8302 Group: QAT Date: 01/07/99

<u>ıv Tear</u>	<u>n</u> . <u>(</u>	<u>roup</u> .	<u>Date</u>
24/99			
/S8302 KW	S8302	QAT	11/30/98
K8302 KW	S8302 (QAT	11/30/98
	24/99 /S8302 KW	24/99 VS8302 KWS8302	24/99 VS8302 KWS8302 QAT

VIII. Final and Overall PIP Approval

Responsible Group: MNT

Status:

<u>Indiv</u>

Screened

Assigned To:

Team

Group

<u>Date</u>

MNT

10/26/98

Closure Document Type

Closure Document No

Problem Investigation Process - PIP Problem Investigation Form

PIP Serial No:

3-098-5083

Action Category: 3

LER No:

Other Report:

Supplemental Concurrences - These do not affect PIP closure.

Concurrences Associated with External Committments:

<u>Indiv</u>

<u>Team</u>

Group

<u>Date</u>

Concurred By:

IX. Attachments

Generic Applicability

Generic Applicability Review Not Required for this PIP.

Environmental

No Environmental for this PIP.

Failure Prevention Investigation:

No FPI for this PIP.

Remarks

No Remarks for this PIP

Maintenance Rule

No Maintenance Rule for this PIP

End of the Document for PIP No:

3-098-5083

The status of this PIP is:

Screened

The duration of this PIP was:

2 days

10.0 Class 1 and 2 Repairs and Replacements

As required by ASME Section XI 1989 Edition, no Addenda, a record (Form NIS-2) of the Class 1 and Class 2 Repairs and Replacements for work performed from March 15, 1997 through December 19, 1998 is provided and is included in this section of the report. The individual work request documents are on file at Oconee Nuclear Station.



F

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

									
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	201-1006					6-2-97
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679					Sheet ₋	
	Unit		•	red (specify Units) 3a. V	Vork Orde	r# <u>97043</u> Repair Organi	3201
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/A	1-1006 Expiration Date N/A				Repair Organ	
4.	Identificatio	n of System_	HP						
5.	(a) Applica	ble Constructi ble Edition of	ion Code MS/ B3/. 7 Section XI Utilized for Repai	19 <i>69</i> Edition, <i>XII</i> rs or Replacements 198	<i>IgUST</i> Ac e, No Addenda	ddenda,	·		_Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced a	nd Replacement Compo	nents				
	Cól	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	FIPIA	16	· D.P.Co.	NX	-NX	NX	12/14	☐ Repaired ☐ Replaced ➤ Replacement	✓ No ☐ Yes
В			-					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F			·.					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in. (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.
7. Description of Work Replaced Minimum Flow Orfices For 3A HPS
8. Test Conducted: Hydrostatic Pneumatic Nominal Operating Pressure Other Exempt
Pressure psig Test Temp °F
Pressure psig Test Temp °F
Pressure psig Test Temp °F
9. Remarks Tested IAW ASME Code Case N4/6-1
(Applicable Manufacturer's Data Records to be Attached)
We certify that the statements made in the report are correct and this repair or replacement conforms to the rules of the ASME Code, Section XI. Type Code Symbol Stamp N/A Certificate of Authorization No. N/A Signed Signed Date 6-/7, 19 97 Owner or Owner's Designee, Title
OFFICIATE OF INOFFICIAL
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of
Date <u>6-/8</u> , 19 <u>97</u>



1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	201-1006					<i>5-22-97</i>
2.	Plant Address	Oconee Nuc P.O. Box 143	elear Station 19, Seneca, S.C. 29679					Sheet	of /
2a.	Unit	□ 1] 2	red (specify Units		.)		. C 7 A 7C	207
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/A					r # <u>970-39</u> Repair Organ M # <u></u>	
4.	Identificatio	n of System_	JJ P	Class	2		•		
5.	(a) Applica	able Constructi	ion Code <u>B3/. 7</u> Section XI Utilized for Repairents Repaired or Replaced a	19 <u>69</u> Edition, irs or Replacements 198	<u>8-69</u> A 39, No Addenda	ddenda,	NO	•	_Code Cases
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	Pipi	<i>~</i> 5	DPC	MA	N/A	MA	9/74	☐ Repaired ☐ Replaced ☑ Replacement	No Yes
В							•	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D		,		4.				☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E		:			0			☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F			,					Repaired Replaced	☐ No ☐ Yes

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in. (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.
7. Description of Work Replaced LDST Reservoires AND INSTruments
8. Test Conducted: Hydrostatic Pneumatic Nominal Operating Pressure Other Exempt
Pressure psig Test Temp °F
Pressure psig Test Temp °F
Pressure psig
9. Remarks Tested IAW ASME Code Case 19416-1
(Applicable Manufacturer's Data Records to be Attached)
We certify that the statements made in the report are correct and this repair or replacement conforms to the rules of the ASME Code, Section XI. Type Code Sympol Stamp N/A Certificate of Authorization No. N/A Signed Owner or Owner's Designee, Title Date 5-28, 19 7
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of
MS Charmon Commissions Negry Inspector's Signature National Board, State, Providence and Endorsements
Date <u>5-38</u> , 19 <u>97</u>



1.	Owner Address	Duke Power	Company ch Street, Charlotte, NC 28	3201-1006				1a. Date	8-1-96
2.	Plant Address	Oconee Nuc	•	3201-1000				Sheet ₋	of
2a.	Unit] 2 📈 3 🗌 Sha	ared (specify Units)		01000	
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/					r # <u>940336</u> Repair Organi M #	zation Job #
4.	Identificatio	n of System_	LPI	Class	2				
5.	(a) Applica (b) Applica	able Constructi	ion Code <u>33/-7</u> Section XI Utilized for Repa	19 <u>69</u> Edition, airs or Replacements 198	8-69 9, No Addenda	ddenda,	N	<u>ඵ</u>	_Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced a	and Replacement Compo	onents				
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	3LPI	FE 0004	NA	N/A	NA	NA	MA	☐ Repaired ☐ Replaced ☑ Replacement	✓ No ☐ Yes
В		· · · · · · · · · · · · · · · · · · ·						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D	1.	100 To 100 To 100 To 100 To 100 To 100 To 100 To 100 To 100 To 100 To 100 To 100 To 100 To 100 To 100 To 100 To						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
Ε								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F					,			☐ Repaired ☐ Replaced	☐ No

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

7. Description of Wo	rk Replaced	bulting	ON Flange	3LPIFE	0004
8. Test Conducted:	Hydrostatic		☐ Nominal Operating P		
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
9. Remarks					
	(Ар	plicable Manufact	urer's Data Records to be A	ttached)	
		CERTIFICATE	OF COMPLIANCE		
We certify that the	e statements made		correct and this repair or	replacement confor	ms to the rules
of the ASME Code,	Section XI.				
Type Code Symbol S	Stamp N/A				
Certificate of Author	ization No. N/A		Expiration	Date N/A	
Signed Sall	s R Susse Owner or Owner	's Designee, Title	Date_ <i>&-</i> _	, 19 <u></u>	
			NSERVICE INSPECT		
I, the undersigned	l, holding a valid co	mmission issued	by the National Board of I	Boiler and Pressure \	/essel
Hartford Connectic	ut have inspected t	the components (described in this Owner's F	Report during the per	iod 7-9-96
to 8-1-96 ; and	state that to the be	est of my knowled	lge and belief, the Owner t	nas performed exami	nations and
Section XI.	isures described in	this Owners Re	port in accordance with the	requirements of the	ASME Code,
By signing this ce	rtificate, neither the	Inspector nor hi	s employer makes any war	ranty, expressed or i	mplied,
concerning the exam	inations and correct	ctive measures de le in any manner	escribed in this Owner's Refor any personal injury or p	eport. Furthermore, r	neither the
kind arising from or o	connected with this	inspection.	ior any personal injury or	property damage or a	a loss of any
4116 Caper	as Co	ommissions	NC914		ار
Inspector's Sig	nature		National Board, State, Pro	ovidence and Endors	ements
Date8	196				



1.	Owner Address	Duke Power 526 S. Churc	Company ch Stréet, Charlotte, NC 28	3201-1006					11-23-98	
2.	Plant Address	Oconee Nuc	,					Sheet ₋	<u> </u>	
2a.	Unit	□ 1] 2 🔀 3 🗌 Sha	ared (specify Units		.)		001-50	10	
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 2820 o N/A Authorization No. N/A	01-1006 A Expiration Date N/A	·			r# <u>981058</u> Repair Organi M# <u>13044</u>		
4.	Identificatio	n of System_	SF	Class	2					
5.	(a) Applicable Construction Code ANSI B31.7 1949 Edition, August Addenda,Code Cases (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989. No Addenda									
6.	Identificatio	n of Compone	ents Repaired or Replaced a	and Replacement Compo	nents					
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8	
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)	
A	5/R 56-0-2478	9-GPD-0501	DPC	NA.	NA	NA	NA	☒ Repaired☐ Replaced☐ Replacement	⊠ No □ Yes	
В								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes	
D	ر		i,					☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes	
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
F								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	

8 1/2 in. x sheet, and this form.	11 in. (2) in d (3) each sh	formation in item heet is numbered	ketches, or drawings as 1 through 6 on this d and the number of	s report is sheets is	included of recorded a	on each at the top of
	Moditie	J 5/R 54-D	-2478A-GRD-05 learance For	501 ph	notchir	ig items
7. Description of Work	(2+3 +	o provide ci	learance for	valve.	35F-70	<i>></i> / 2
8. Test Conducted:	·		☐ Nominal Operating			Exempt
	Pressure _	psig	Test Temp.		°F	`
	Pressure _	psig	Test Temp.			
	Pressure _	psig	Test Temp.		°F	
9. Remarks						
			•			
					-	
,	(4	Applicable Manufact	urer's Data Records to be	Attached)		
of the ASME Code, S Type Code Symbol Si Certificate of Authoriz	Section XI. tamp N/A		correct and this repair of	or replacem		ns to the rules
Signed & M	Ason		Date //-		_	
Signed_C/	Owner or Owr	ner's Designee, Title	Date //	<u>~</u> , 19	10	
		,				
	CEI	RTIFICATE OF I	NSERVICE INSPEC	TION		·
Inspectors and the State Hartford Connecticuto 11-24-18; and staken corrective meas Section XI. By signing this cert concerning the examination of the section olding a valid ate or Providen at have inspected that to the sures described tificate, neither thations and corolloyer shall be lied.	commission issued ace of	by the National Board of and employers and belief, the Owner's cort in accordance with the semployer makes any we secribed in this Owner's for any personal injury of	of Boiler and byed by HSE seport dur has perform he requirem rarranty, exp	I and I Con ing the perion med examinatents of the A ressed or im	npany of od //-33-84 ations and ASME Code, uplied,	
kind arising from or co	onnected with th	nis inspection.	,,	, E F A		1,000 0,
Inspector's Sign	ature	Commissions	Negrup National Board, State, F	Providence a	and Endorse	ments
Date <i>//,</i> 19_	98	,				



Ε

F

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

			As Required	By The Provisions	Of The ASM	E Code Section	XI		
1.		Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	3201-1006	,	,			1-12-99
2.		Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679					Sheet ₋	of
				ared (specify Units		.) 3a. W	ork Orde	r# 980 19	185
3.	Work Performed By Duke Power Company Address 526 S. Church Street, Charlotte, NC 28201-1006 Type Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A 3a. Work Order # 980 19185 Repair Organization Job #								
4.	Identification	of System_	BS	Class	2				
5.	(a) Application (b) Application	ole Construct	ion Code <u>ANS / B3 / A</u> Section XI Utilized for Repa	7 19 <u>49</u> Edition, <u>7</u> irs or Replacements 198	2905 A	ddenda,			_Code Cases
6.	Identification	of Compone	ents Repaired or Replaced a	and Replacement Compo	onents				
	Colu	ımn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α	514B-0-2	~ 0 <i>n 5/R</i> 477-H9B	Grinne//	34184	NA	NA	NA	☐ Repaired ☐ Replaced ☒ Replacement	⊠ No □ Yes
В								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

No

Yes

No

Yes

☐ Repaired ☐ Replaced ☐ Replacement

Repaired
Replaced
Replacement

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

7. Description of W	ork Replaced Snubl	ber on 5/R 3-54B-0-2477-H9B
8. Test Conducted:	☐ Hydrostatic ☐ Pneuma	
	Pressure psig	Test Temp°F
	Pressure psig	Test Temp °F
	Pressure psig	Test Temp°F
9. Remarks		
	(Applicable Manu	Ifacturer's Data Records to be Attached)
	CERTIFIC	ATE OF COMPLIANCE
		t are correct and this repair or replacement conforms to the rules
of the ASME Code	, Section XI.	
Type Code Symuol	Stamp N/A	
Certificate of Author	orization No. N/A	Expiration Date N/A
Signed & M	lason	Date/~/Z19_99
	Owner or Owner's Designee,	Title
	·	
		OF INSERVICE INSPECTION
I, the undersigned	ed, holding a valid commission is: State or Providence of	sued by the National Board of Boiler and Pressure Vessel N. C. and employed by HSBI and I Company of
Hartford Connecti	cut have inspected the compone	ents described in this Owner's Report during the period
to <u>/-12-99</u> ; an	d state that to the best of my kno	wledge and belief, the Owner has performed examinations and
taken corrective me Section XI.	easures described in this Owner's	s Report in accordance with the requirements of the ASME Code,
	ertificate, neither the Inspector n	or his employer makes any warranty, expressed or implied,
concerning the exa	minations and corrective measure	es described in this Owner's Report. Furthermore, neither the
Inspector nor his en	mployer shall be liable in any mar	nner for any personal injury or property damage or a loss of any
kind arising from oi	r connected with this inspection.	
· has Of		,
Inspector's S	commissions_	National Board, State, Providence and Endorsements
Date <i> /_</i> ,		The Estate Control and Endorsomethe



1.	Owner Address	Duke Power Con 526 S. Church St			1a. Date 11-24-9	
2.	Plant Address	Oconee Nuclear P.O. Box 1439, Se			Sheet $\underline{\mathcal{L}}$ of $\underline{\mathcal{L}}$	
2a.	Unit	□ 1 □ 2	⊠ з	Shared (specify Units)		98049103
3.		ormed By Duke Pov 26 S. Church Stree			3a. Work Order #	Repair Organization Job #
	Type Code	Symbol Stamp N/A	Authorizati	on No. N/A Expiration Date N/A	3b. NSM o r MM #	11240
4.	Identificatio	on of System \mathcal{R}	<u>C</u>	Class		
5.	(a) Applica	able Construction C able Edition of Secti	ode <u>ANS.</u> on XI Utilized	1 B31,7 1949 Edition, August Addenda, d for Repairs or Replacements 1989, No Addenda		Code Cases
6	Identificatio	on of Components F	Renaired or E	Inplaced and Penlacement Company		

6. Identification of Components Repaired or Replaced and Replacement Components

	Column 1 Column 2 Column 3 Column			Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	Snubber on 5/R 3-50-0-1046A- RCPM-3B1-SSI	Grinnell	340 26	NA	NA	NA	☐ Repaired ☐ Replaced ☑ Replacement	No □ Yes
В	Snubber on 5/R 3-50-0-1066A- RCPM-381-SSZ	Grinnell	34026 34027 30427	NA	NA	NA	☐ Repaired ☐ Replaced ☑ Replacement	⊠ No □ Yes
С	Snubber an 5/R 3-50-0-1066A- RCPM-381-553	Grinne/	34028	NA	NA	NA	☐ Repaired☐ Replaced☒ Replacement	No Yes
D							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
F							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

8 1/2 in. x sheet, and this form	11 in. (2) inford (3) each she	rmation in item et is numbered	tetches, or drawings is 1 through 6 on this d and the number of some sources with M-3B1-SS1, Section 1981	report is included sheets is recorded	on each at the top of			
7. Description of World	k3-50-0-10	66A-RCP/	M-3BI-SSI, S.	52, tSS3 per	DE 1124			
8. Test Conducted:	Hydrostatic		☐ Nominal Operating		_			
	Pressure	psig	Test Temp.	°F				
	Pressure	psig	Test Temp.	°F	-			
	Pressure	psig	Test Temp.	°F				
9. Remarks					·			
	(Ap	plicable Manufacti	urer's Data Records to be	Attached)				
		CEDTIFICATE	OF COMPLIANCE					
We certify that the			correct and this repair of	or replacement confo	rms to the rules			
of the ASMÉ Code, S								
Type Code Symbol S	stamp N/A .		•					
Certificate of Authoria	·		Evpiratio	n Doto N/A				
$\Gamma \subset \mathcal{N} \subset \mathcal{N}$	A O D		Expiration Date N/A					
Signed 6 / /	Owner or Owner	's Designee, Title	Date <u>//- 24</u> , 19 <u>98</u>					
	OED!	TITIOATE OF I	NOEDWOE INODEO	TION				
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of								
m. B. M.	Man and - Co	ommissions	NC914					
Inspector's Sign			National Board, State, F	Providence and Endor	sements			
Date //- محتى , 19	98			•				



				,	- : : : : : : : : : : : : : : : : : : :	- 0000 000000	/ \				
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 282	201-1006			_		11-25-98		
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679		,	,		Sheet _	<u></u>		
a.	Unit [,]	□ 1	☐ 2	red (specify Units		_)		040			
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 28201	I-1006				r# <u>980272</u> Repair Organi			
	Type Code	Type Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A 3b. NSM or MM # 10943									
		n of System_		Class							
5.	(a) Applica (b) Applica	a) Applicable Construction Code ANSI B31.7 1949 Edition, Augus + Addenda,Code Cases b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989, No Addenda									
3. —	Identification	n of Compone	ents Repaired or Replaced ar	nd Replacement Compo	nents				•		
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8		
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)		
Α	5/R 3-5	57-0-	700					Repaired	No No		
	2481A-EC	WD-H/701	DPC	NA	NA	NA	NA	☐ Replaced☒ Replacement	☐ Yes		
В			·					☐ Repaired ☐ Replaced	☐ No		
							-	Replacement	☐ Yes		
2				•				☐ Repaired ☐ Replaced	No		
					-		ļ	Replacement	Yes		
כ								☐ Repaired ☐ Replaced	☐ No		
						<u> </u>		Replacement	Yes		
Ξ				•				☐ Repaired ☐ Replaced	☐ No		
	ļ							☐ Replacement	∟ Yes		

☐ No

☐ Repaired
☐ Replaced
☐ Replacement

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

	d (3) each shee		s 1 through 6 on this repair and the number of sheet	oort is included on each ets is recorded at the top of
7. Description of Wo	rk Replaced =	spring can	on 5/R 3-57-0-248	1A-EWD-H1701 per OE-1094
8. Test Conducted:		•		sure Other Exempt
	Pressure	psig	Test Temp	°F
	Pressure	psig	Test Temp	°F
	Pressure	psig	Test Temp	°F
9. Remarks	· · · · · · · · · · · · · · · · · · ·			
	(Арр	licable Manufacto	urer's Data Records to be Atta	ched)
We certify that the of the ASME Code, Type Code Symbol Sertificate of Author Signed	Section XI. Stamp N/A ization No. N/A	<i>:</i>	Expiration Date //-25	•
Inspectors and the S Hartford Connection to //- 25-98/; and taken corrective mean Section XI. By signing this center concerning the example of the section in the section	d, holding a valid contact or Providence cut have inspected to state that to the because described in entificate, neither the minations and correct aployer shall be liable connected with this contact.	mmission issued of	described in this Owner's Replige and belief, the Owner has port in accordance with the research semployer makes any warrancescribed in this Owner's Rep	iller and Pressure Vessel by HSBI and I Company of cort during the period //- 1-18 s performed examinations and equirements of the ASME Code, inty, expressed or implied, ort. Furthermore, neither the operty damage or a loss of any



1.	Owner Address		Power Com Church Str		otte, NC 28201-1006			1a. Date 1/-30-9
2.	Plant Address		e Nuclear S ox 1439, Se		29679			Sheet 1 of 86
2a.	Unit	<u> </u>	□ 2	⊠ 3	☐ Shared (specify Units_)	3a. Work Order # 97104109
3.		16 S. Chi	urch Street	, Charlotte	ny s <mark>, NC 28201-1006</mark> tion No. N/A Expiration Date N	/ A		3a. Work Order # 1120410 Repair Organization Job # 3b. NSM-or MM # 11244
	Identificatio	•			Class_		- .	
5.	(a) Applica (b) Applica	ible Cons ible Editi	struction Co on of Section	ode <u>ANS</u> on XI Utilize	I B31.1 1967 Edition ed for Repairs or Replacements	1, July 1989, No Adde	_ Addenda, enda	Code Cases

6. Identification of Components Repaired or Replaced and Replacement Components

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	5/R 3-148-0-2480A·H36B	DPC ;	NA	NA	NA	NA	☒ Repaired☐ Replaced☐ Replacement	No Yes
В	5/R 3-14B- <u>0-24</u> 8 <u>0</u> A-H/3A	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes
С	<i>5/R</i> 3-14B-0-2486A-H <i>1</i> 3-8	DPC	NA	NA	NA	NA	☒ Repaired☐ Replaced☐ Replacement	⊠ No □ Yes
D	-5/X 3-14B-0-2490A-444A	DPC)	NA	NA	NA	NA	Repaired Replaced Replacement	t⊠ No ☐ Yes
E	3-14B-0-248bA-HJ4B	DPC	NA	NA	NA	NA	☒ Repaired☐ Replaced☐ Replacement	✓ No ☐ Yes
F	3-14B-0-2480A-H24A	DPC	NA	NA	NA	NA	➢ Repaired☐ Replaced☐ Replacement	D No □ Yes

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

	x 11 in. (2) information in item nd (3) each sheet is numbered		
7. Description of Wo	rk Repaired/Modified h	angers as regulared for	LPSW piping replace
8. Test Conducted:		☐ Nominal Operating Pressure	☐ Other ☐ Exempt
	Pressure psig	Test Temp.	°F
	Pressure psig	Test Temp	°F
	Pressure psig	Test Temp.	°F
9. Remarks			
	· .		
	(Applicable Manufact	urer's Data Records to be Attached)	
We certify that the of the ASME Code, Type Code Symbol Sertificate of Author Signed	e statements made in the report are Section XI. Stamp N/A rization No. N/A	Expiration Date N /A	A
Inspectors and the S Hartford Connectio to _/2-/-98'; and taken corrective mea Section XI. By signing this ce concerning the exan Inspector nor his em	certificate of I d, holding a valid commission issued State or Providence of	and employed by HS described in this Owner's Report dudge and belief, the Owner has performent in accordance with the requires semployer makes any warranty, extended in this Owner's Report. Further than the content of the content o	GBI and I Company of uring the period &-3-98 rmed examinations and ments of the ASME Code, pressed or implied, or thermore, neither the
MB Chap	Commissions	10914	
Inspector's Sig	jnature	<i>JC914</i> National Board, State, Providence	and Endorsements
Date /2-/ , 19	9 78		



1.	Owner Address	Duke Pow 526 S. Chi			otte, NC 28201-	·1006					11-30-98
	Plant Address	Oconee N P.O. Box 1			29679					Sheet _2	2 of \$6
2a.	Unit	□ 1	_ 2	⊠ 3	Shared	(specify Units	· · · · · · · · · · · · · · · · · · ·)		07/04/	-0
3.	Work Perfor Address 52 Type Code	6 S. Churc	h Street,	Charlotte.	NC 28201-10	06 xpiration Date N/A			3a. Work Order # 3b. NSM or MM #	Repair Organiz	ation Job #
4.	Identificatio	n of System	LPS	5		Class	2				
5.	(a) Applica (b) Applica	ble Construble Edition	ction Cod of Section	de <u>ANS 1</u> n XI Utilize	B31,1 d for Repairs o	19 <u>4</u> 7 Edition, r Replacements 1	プリy 989, Mo Adden	Addenda, da			_Code Cases

6. Identification of Components Repaired or Replaced and Replacement Components

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	5/R 3-148-0-2480A-H25A	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes
В	5/R 3-148-0-2480A-H25B	DPC	NA.	NA	NΑ	NA	Repaired Replaced Replacement	⊠ No □ Yes
С	5/R 3-14B-D-248DA-HZ6A	DPC	NA	NA	NΑ	NA	☒ Repaired☐ Replaced☐ Replacement	⊠ No □ Yes
D	5/R 3-148-0 <u>-24</u> 808-H26B	JPC	WA	NA	NA	NA	Repaired Replaced Replacement	No □ Yes
Е	5/R 3-14B-0-2480A-H33A	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes
F	S/R 3-148-0-2480 <i>9</i> -433B	DPC	NA	NA	NA	WA	Repaired Replaced Replacement	No Yes

8 1/2 in. :	x 11 in. (2) info nd (3) each she	rmation in item	s 1 through 6 on this rep	be used, provided (1) size a ort is included on each ets is recorded at the top of	(
7. Description of Wo	rkRepaired/Msc	lified hange	rs as required for	1.850 piping replacen	2
8. Test Conducted:			☐ Nominal Operating Pres		
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp	°F	
	Pressure	psig	Test Temp	°F	
9. Remarks					_
					_
·					_
	(Ap	plicable Manufact	urer's Data Records to be Attac	ched)	
of the ASMÉ Code, Type Code Symuol Certificate of Author Signed	Section XI. Stamp N/A rization No. N/A	r's Designee, Title	Expiration Da	te N/A	of eem t
	OED:	TIFICATE OF I	NCEDVICE INCREATION		_
Inspectors and the S Hartford Connection to _/2-/-98/; and taken corrective mean Section XI. By signing this concerning the example of the section of the s	d, holding a valid of State or Providence out have inspected I state that to the basures described in ertificate, neither the ninations and corresployer shall be lial	ommission issued to of	described in this Owner's Rep dge and belief, the Owner has port in accordance with the re s employer makes any warran escribed in this Owner's Repo	by HSBI and I Company of cort during the period 8-3-98 performed examinations and quirements of the ASME Code, aty, expressed or implied,	
Inspector's Sid		commissions	NC 9/4 National Board, State, Providence	· · · · · · · · · · · · · · · · · · ·	(



1.	Owner Address		ower Comp Church Str		otte, NC 28201-1006					H-30-98
2.	Plant Address		e Nuclear S x 1439, Sei		29679				Sheet _	3 of \$4
2a.	Unit	□ 1	□ 2	⊠ з	☐ Shared (specify Units)	3a. Work Order #	9710/116	\ Q
3.		6 S. Chi	ırch Street	, Charlotte	ny , NC 28201-1006 ion No. N/A Expiration Date N/	A		3a. Work Order # 3b. ~NSM or MM #	Repair Organi	
4.	Identificatio	n of Sys	tem_ <i>LP</i>	S	Class	2				
5.	(a) Applica (b) Applica	ble Cons	struction Co on of Section	ode <i>ANS</i> on XI Utilize	B31.1 1947 Edition d for Repairs or Replacements	, אונען 1989, No Addend	Addenda, da			_Code Cases
							•			

6. Identification of Components Repaired or Replaced and Replacement Components

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	<i>SJR</i> 3-14 <i>B</i> -0-2485A- H.34 A	DPC	NA	N-A	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes
В	5/R 3-148-0- <u>24</u> 80 <i>A-1</i> 1348	DPC	NA	NA	AU	NA	Repaired Replaced Replacement	™ No □ Yes
С	5/K 3-146-0-2480A-H35A	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes
D	<i>5/R</i> 3-14B-D-2480 <i>9-H</i> 358	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes
E	5/R 3-14B-D-2480A-H36A	DPC	NA	NA	NA	NA	☒ Repaired☐ Replaced☐ Replacement	⊠ No □ Yes
F	S/R 3-14B== 2480 C-H6549	DPC	NA	NA	NA	NA	⊠ Repaired □ Replaced □ Replacement	⊠ No □ Yes

8 1/2 in. >	x 11 in. (2) inform d (3) each sheet	nation in items 1	hes, or drawings mag through 6 on this re ad the number of she	port is included	on each
7. Description of Wor	rkepaired/Moo	litied hangers	as required for	LPSW pipin	g replaceme
8. Test Conducted:	☐ Hydrostatic		Nominal Operating Pres	1/	Exempt
	Pressure	psig	Test Temp	°F	
	Pressure	· -		°F	
	Pressure	psig	Test Temp	°F	
9. Remarks					
	(Appli	icable Manufacturer'	s Data Records to be Atta	ıched)	
of the ASME Code, Type Code Symbol S Certificate of Author Signed	Section XI. Stamp N/A		ect and this repair or re Expiration D Date 11-3		ms to the rules
			·	······································	
Inspectors and the S Hartford Connectic to 12-1-98; and taken corrective mea Section XI. By signing this ce concerning the exam Inspector nor his em	d, holding a valid come of the control of the contr	nmission issued by if	the National Board of Board and employed and employed ribed in this Owner's Reand belief, the Owner has in accordance with the respective makes any warranged in this Owner's Repany personal injury or professional Board, State, Prov	iller and Pressure Notes to be the performed examine equirements of the onty, expressed or interest for the performents of the	mpany of iod 8-3-98 nations and ASME Code, mplied, neither the a loss of any
Date /2-/ , 19	98				



1.	Owner Address	Duke Power Company 526 S. Church Street, Charlotte, NC 28201-1006		1a. Date //-,38 - 9 8	ç
2.	Plant Address	Oconee Nuclear Station P.O. Box 1439, Seneca, S.C. 29679	·	Sheet <u>4</u> of <u>\$</u>	•
2a.	Unit	☐ 1 ☐ 2 ☒ 3 ☐ Shared (specify Units)		971444	
3.	Address 52	med By Duke Power Company 6 S. Church Street, Charlotte, NC 28201-1006 Symbol Stamp N/A Authorization No. N/A Expiration Date N/A	3a. Work Order # 3bNSM or MM #	Repair Organization Job #	
4.	Identificatio	n of SystemLPSClass2		·	
5.	(a) Applica (b) Applica	ble Construction Code ANSI B31. 1 1947 Edition, July Addenda, Addenda, ble Edition of Section XI Utilized for Repairs or Replacements 1989, No Addenda		Code Cases	
^	1 ml m m 4 ! f ! m m 4 ! m				

6. Identification of Components Repaired or Replaced and Replacement Components

_	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	S/R 3-148-2480-44551	DPC	NA	NA	WA	NA	Repaired Replaced Replacement	No □ Yes
В	5/R 3-14B-0-2480A-H5A	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes
С	5/R 3-14B-0-2480A-H5B	DPC	WA	NA	NA	NA	☒ Repaired☐ Replaced☐ Replacement	No □ Yes
D	3-14B-0-2480A·H6B	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	☑ No ☐ Yes
Е	S/R 3-148-0-2480A-H7A	DPC	NA	NA	NA	NA	☒ Repaired☐ Replaced☐ Replacement	⊠ No □ Yes
F	5/R 3-148-0-2480A-H7B	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes

	(11 in. (2) d (3) each	s in form of list information in sheet is numb	items	s 1 throug	gh 6 on th	is repo	rt is i	ncluded	on each	
7. Description of Wor	krepaired/	Modified han	gers	05 1290	nred For	4854	קים ע	Ding re	phasen	X
8. Test Conducted:	Hydrost			,	al Operatino				☐ Exemp	
	Pressure	psi	ig		Test Temp.			_ °F		
	Pressure	psi	ig		Test Temp.			_ °F		
	Pressure	psi	ig		Test Temp.			_°F		
9. Remarks										
								-	-	
. /		(Applicable Man	nufactu	rer's Data F	Records to b	e Attach	ed)			_
of the ASME Code, Type Code Symbol S Certificate of Author Signed	Stamp N/A ization No. N	N/A J Dwner's Designee	e, Title		Expirat	ion Date		98		
								-	·····	
I, the undersigned Inspectors and the Startford Connection to 12-1-98; and taken corrective means Section XI. By signing this ceconcerning the examples arising from or significant or significant to the section of th	d, holding a va State or Provident have inspe- state that to the asures describer trificate, neither innations and aployer shall be	dence ofected the componenthe best of my knowed in this Owner the Inspector recorrective measure liable in any magnetical forms.	ssued A.C nents d nowledg r's Rep nor his ures de anner f	by the National lescribed in ge and belified for the semployer escribed in	ional Board and emp this Owner ef, the Own rdance with makes any this Owner's	of Boiler loyed by s's Report er has p the requirements warranty s Report	r and f y HSBI rt durir perform uireme y, expre t. Furth	and I Co ng the per led exami ents of the essed or in hermore, i	ompany of riod <u>& 3 - 58</u> inations and e ASME Coomplied, neither the	de,
MB Chap	man_	Commissions		NC414						
Inspector's Sig	nature			National B	oard, State,	Provide	ence a	nd Endor	sements	1
Date /2-/ .19	98									



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

				a by the riovisions	OI THE ASIV	L Code Section	i Ai					
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 2	8201-1006				1a. Date	11-38-98 5 of \$6			
2.	Plant Address	Oconee Nuc P.O. Box 143	elear Station 19, Seneca, S.C. 29679					Sheet_	<i>5</i> _ of _ <i>5</i> _6			
2a.	Unit	□ 1]2 🕅3 ☐ Sh	ared (specify Units)		0-4	0			
3.	Work Performed By Duke Power Company Address 526 S. Church Street, Charlotte, NC 28201-1006 Type Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A 3a. Work Order # 9714409 Repair Organization Job # 3b. NSM or MM # 11244											
4.	Identificatio	n of System_	LPS	Class	2							
5.	(a) Applica (b) Applica	ble Constructi ble Edition of	on Code <i>ANSI B31</i> Section XI Utilized for Rep	19 <u>47</u> Edition, <u>J</u> airs or Replacements 198	کر کے 9, No Addenda	ddenda,			_Code Cases			
6.	Identificatio	n of Compone	ents Repaired or Replaced	and Replacement Compo	nents							
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8			
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)			
Α	5/	R							⊠ No			
	3-14B-Z48	6A-H8B	DPC	NA	WA	NA	WA	☐ Replaced ☐ Replacement	☐ Yes			
В	3-148-248	86A-HIIA	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes			
C	5/A	? }8≤A-1132B	DEC 28M 11-	30-96 NA	MAA	M // A		⊠ Repaired □ Replaced □	№ No			
D	J, 10 0 - Cq	7.607-113CD	<i>V</i> 1 ~	,0,,			NA	Replacement Repaired Replaced Replacement	☐ Yes☐ No☐ Yes			

No Yes

No

Yes

☐ Repaired
☐ Replaced
☐ Replacement

☐ Repaired ☐ Replaced ☐ Replacement

NOTE: Suppleme 8 1/2 in. x sheet, an this form.	< 11 in. (2) inf d (3) each sh	ormation in ite	ms 1 through	gh 6 on this	s report is	included	ided (1) size is on each at the top of
7. Description of Wor	Repaired Me	ditied hanger	s as regu	yrad for	LPSW D	iaina se	placomen+
8. Test Conducted:	Hydrostation			al Operating		, ,	☐ Exempt
	Pressure	psig		Test Temp.		°F	•
	_	psig		Test Temp.		' °F	
		psig		Test Temp.			
9. Remarks		, 2		·			
		-					
	4)	Applicable Manufa	cturer's Data F	Records to be	Attached)		_
We certify that the of the ASME Code, SType Code SymJol Stype Certificate of Authority Signed	Section XI. Stamp N/A ization No. N/A	ier's Designee, Tit		Expiratio	on Date N/A		
					1304		
I, the undersigned Inspectors and the S Hartford Connectic to 12-1-98 ; and taken corrective mea Section XI. By signing this cerconcerning the examinspector nor his emikind arising from or content of the section of	d, holding a valid state or Provident thave inspecte state that to the asures described rtificate, neither thinations and corployer shall be lie	ce of	ed by the Nati s described in edge and belie deport in according to the described in the second sec	onal Board on and employ this Owner's ef, the Ownerdance with the owner's end with some any withis Owner's	of Boiler and by HSE is Report during the requirem varranty, exp	I and I Co ring the per med examin nents of the pressed or in thermore, r	mpany of iod <u>8-3-98</u> nations and ASME Code, mplied, neither the
M.B. Chay	muen	Commissions	Negiu				, 1
Inspector's Sign	nature			oard, State,	Providence	and Endors	ements
Date/, 19	98						



1.	Owner Address	Duke Power Con 526 S. Church St		1a. Date 11-17-98				
2.	Plant Oconee Nuclear Station Address P.O. Box 1439, Seneca, S.C. 29679							<u>6</u> of <u>6</u>
2a.	Unit	□ 1 □ 2	3 3	☐ Shared (specify Units)		041.4	<i>•</i>
3.	Address 52	rmed By Duke Pov 26 S. Church Stree Symbol Stamp N/	t, Charlotte	ny , NC 28201-1006 ion No. N/A Expiration Date N/A	·	3a. Work Order # 3b. NSM or MIN#	97/04/0 Repair Organ	ization Job #
4.	Identificatio	on of System	LPS	Class _		· ·		
5.	(a) Applica (b) Applica	able Construction Cable Edition of Secti	ode <i>MS/</i> ion XI Utilize	d for Repairs or Replacements 1989, No A	Addenda, Addenda			Code Cases
6	Idontificatio	n of Components F	Samainad an I	Deutsteil D. J. D. J. D. J. D. J. D. J. D. J. D. J. D. J. D. J. D. J. D. J. D. J. D. J. D. J. D. J. D. J. D. D. J. D. D. J. D. D. J. D. D. J. D. D. J. D. D. J. D. D. D. D. D. D. D. D. D. D. D. D. D.				•

6. Identification of Components Repaired or Replaced and Replacement Components

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	VLV. 3LP5W-96	ITT	92-59833-4-5	8026		1993	☐ Repaired ☐ Replaced ☑ Replacement	☐ No 🔀 Yes
В	VLV. 3LPSW-96	·	3-14-62	NA		NA	☐ Repaired ☐ Replaced ☐ Replacement	➤ No
С	VLV. 3 LPSW-92	ITT	92-59833-4-13	8034		1993	☐ Repaired ☐ Replaced ☑ Replacement	☐ No 🔀 Yes
D	VLV. 3LPSW-92		3-14-47	NA		NA	☐ Repaired ▶ Replaced ☐ Replacement	☑ No ☐ Yes
E	PIPING	D.P. Co.	NA	NX		12/4	☐ Repaired ☐ Replaced ☐ Replacement	No Yes
F	Flange Bolting	D. P. Co.	NA	NA		NA	☐ Repaired ☐ Replaced ☑ Replacement	⊠ No □ Yes

	11 in. (2)	information	on in item	ns 1 through	6 on this	s report is	s included	` '
7. Description of World	REPLIED.	CED T	TIPINO	S + VLV MOTOR	15,#5 100LE	31P	5-9Z4	196 J FEAN
8. Test Conducted:	⊠ Hydros	static \square F	Pneumatic		Operating	Pressure		Exempt
	Pressure	205	psig	To	est Temp.	743	°F	
	Pressure		psig		est Temp.		°F	
	Pressure		psig	To	est Temp.		°F	
9. Remarks					· · · · · · · · · · · · · · · · · · ·			
· -								
·		(Applicabl	le Manufact	turer's Data Re	cords to be	e Attached)		
We certify that the of the ASME Code, S Type Code Symuol S Certificate of Authoriz Signed	Section XI. Stamp N/A zation No.				Expirati	on Date N /.	A	
I, the undersigned Inspectors and the S Hartford Connecticuto 12-1-98; and taken corrective mean Section XI. By signing this cere concerning the examulation Inspector nor his emplicit arising from or constant of the section of the	, holding a value or Provint have inspected that to sures descratificate, neithinations and ployer shall sonnected with the sures descrations and ployer shall sonnected with the sures and ployer shall sonnected sonnected with the sures and ployer shall sonnected sonnect	valid commisidence ofected the cother the line of	omponents my knowled Owner's Re ector nor hi measures d any manner	described in todge and beliefeport in according to the semployer madescribed in the for any personal described in the semployer many personal described in the semployer any personal described in the semployer any personal described in the semployer any personal described in the semployer and the sem	nal Board of and empl his Owner's f, the Owner dance with nakes any v nis Owner's onal injury	of Boiler an loyed by HS is Report dier has perforthe require warranty, exemple Report. Further reports or property	SBI and I Couring the peomed examments of the appropriate the	inations and e ASME Code, implied, neither the a loss of any
Inspector's Sign	nature			National Boa	ard, State,	Providence	and Endor	sements
D-1- /A	a./							



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1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	201-1006					12-1-98
2.	Plant Address	Oconee Nuc P.O. Box 143	lear Station 9, Seneca, S.C. 29679					Sheet _	of
a.	Unit	□ 1] 2	red (specify Units		.)	Kanta Ouda	" 90103	490
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/A	1-1006 A Expiration Date N/A				r# <u>98103</u> Repair Organi M# <u>NA</u>	ization Job #
4.	Identificatio	n of System	FDW	Class	· 				
5.	(a) Applica (b) Applica	ble Constructi ble Edition of	FDW on Code <u>ANSI B31.</u> Section XI Utilized for Repai	19 <u>47</u> Edition, <u>J</u> irs or Replacements 198	کر کے 9, No Addenda	ddenda,			_Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced a	nd Replacement Compo	nents				-
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	5/1 3-03A-1	Q 0 <i>-24</i> 018-3R5	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes
B			·					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С —								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D		·						☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No☐ Yes

☐ No☐ Yes

☐ Repaired
☐ Replaced
☐ Replacement

	ental sheets in fo 11 in. (2) inford d (3) each shee	mation in item	is 1 throug	gh 6 on this	report is	included	on each
7. Description of World	welded	shim to	o 5/R	3-03A-	1-0-24	401B-S	SR5
8. Test Conducted:	Hydrostatic	Pneumatic	☐ Nomir	nal Operating	Pressure	Other	Exempt
	Pressure	psig		Test Temp.		°F	
	Pressure	psig		Test Temp.		°F	
	Pressure	psig		Test Temp.		°F	
9. Remarks				·			
				·			
-							
				····			
	(App	olicable Manufacti	urer's Data	Records to be	Attached)		
We certify that the of the ASME Code, Some of the ASME Code, Some of Suthorization of Authorizations o	Section XI.				on Date N/A	١	ms to the rules
I, the undersigned Inspectors and the Single Hartford Connecticut to 12-2-98 ; and staken corrective mea Section XI. By signing this cere concerning the examular Inspector nor his empty kind arising from or constant.	, holding a valid co tate or Providence at have inspected to state that to the be sures described in tificate, neither the inations and correct ployer shall be liable connected with this	of	d by the Nat 2. described in dge and bel port in acco s employer described in for any per	ional Board o and emplo n this Owner's lef, the Owne ordance with t makes any w this Owner's	f Boiler and byed by HS Report du r has perfor he requirer arranty, exp Report. Fur property of	BI and I Co ring the per rmed exami nents of the pressed or in rthermore, re damage or a	empany of riod //-/४-१४ nations and ASME Code, mplied, neither the a loss of any
Inspector's Sign	nature		National E	Board, State, I	Providence	and Endors	sements
Data 14 4 10	61/						



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASMF Code Section XI

					· · · · · · · · · · · · · · · · · · ·				
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	201-1006				1a. Date	12-1-9/8
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679					Sheet	1 of 1
2a.	Unit	□ 1] 2 - ⊠ 3 □ Sha	red (specify Units) ~~			
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/A	1-1006 A Expiration Date N/A				# <u>981042</u> Repair Organ 1# <u>WA</u>	218 ization Job #
4.	Identificatio	on of System_	RC	Class	<u> </u>				
			ion Code <u>ANS1 B31</u> Section XI Utilized for Repai	.7 19 <u>69</u> Edition, <u>A</u> irs or Replacements 1989	A D, Wo Addenda	ddenda,			Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced a	nd Replacement Compor	nents				
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	ļ ,	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	3-50-D-2	2 <u>479A-H</u> ZA	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	
В					·			☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
Е								Replaced Replacement	☐ No ☐ Yes

☐ Repaired ☐ Replaced ☐ Replacement

No Yes

8 1/2 in. x	(11 in. (2) infor	mation in item	ketches, or drawings is 1 through 6 on this dand the number of	report is inclu	ided on each
7. Description of Wor	Replaced	reservoir pe clampl	support bracker	60/ts and	d traditioned
8. Test Conducted:	☐ Hydrostatic		☐ Nominal Operating		
	Pressure	psig	Test Temp.	°F	
		psig	Test Temp.		
	Pressure	psig	Test Temp.		
9. Remarks					,
•	(Ap	plicable Manufact	urer's Data Records to be	Attached)	
of the ASME Code, S Type Code Symbol S Certificate of Authori	Section XI. Stamp N/A ization No. N/A	in the report are	Date /2	on Date N/A	
			NOEDWOE INODEO	TION	
Inspectors and the S Hartford Connectice to _/2-/-98/; and taken corrective mea Section XI. By signing this cel concerning the exam	I, holding a valid or State or Providence ut have inspected state that to the be sures described in rtificate, neither the ninations and corre ployer shall be liab	the components of this Owner's Respector nor his ctive measures dele in any manner	NSERVICE INSPECT by the National Board of and employer and belief, the Owner's port in accordance with the semployer makes any wescribed in this Owner's for any personal injury of	of Boiler and Presidence by HSBI and Bell and Be	examinations and of the ASME Code, and or implied, nore, neither the
bro M					4
Inspector's Sign	nature Co	ommissions	<i>I ⊂ 9 ↓</i> National Board, State,	Providence and E	Indorsements
	98		,		



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

			AS Rec	ulred By The Provision	S Of The ASN	IE Code Section	n XI		
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte,	NC 28201-1006					12-1-98
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 296	79				Sheet	<u></u>
2a.	Unit	_ 1 _	2 🛭 3	Shared (specify. Units		_)		^-· ^-	
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC p N/A Authorization	28201-1006 No. N/A Expiration Date N/A				er # <u>981033</u> Repair Organi M #	<u> </u>
4.	Identification	n of System_I	FDW	Class	2				
5.	(a) Applica (b) Applica	ble Constructi ble Edition of	ion Code <u>ANS I</u> Section XI Utilized fo	B31.1 19 67 Edition, Repairs or Replacements 19	A A Addenda	ddenda,			_Code Cases
6.	Identification	n of Compone	ents Repaired or Repl	aced and Replacement Comp	onents				
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufact	urer Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	5//- 3-03-0-24		DPC	NA	NA	NA	NA	☒ Repaired☐ Replaced☐ Replacement	
В		:						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

No Yes

No Yes

No Yes

☐ Repaired
☐ Replaced
☐ Replacement

Repaired Replaced Replacement

Repaired
Replaced
Replacement

	x 11 in. (2) infor d (3) each shee	mation in iten	ns 1 through 6	6 on this i	report is	included	on each
7. Description of Wor	rk Replaced	middle p	ipe champ	bolt o	n5/R3	<u>-03-0-2</u>	480A-HGB
8. Test Conducted:	Hydrostatic	☐ Pneumatic	☐ Nominal C	Operating P	ressure	Other	☐ Exempt
	Pressure	psig	Tes	st Temp.		°F	
	Pressure	psig	Tes	st Temp.		°F	
	Pressure	psig	Tes	st Temp.		°F	
9. Remarks							
				<u> </u>			
		<i></i>					
	(Ap	plicable Manufac	cturer's Data Reco	ords to be A	ttached)		_
of the ASME Code, Type Code Symbol S Certificate of Author Signed	Stamp N/A	r's Designee, Titl	le	Expiration Date <u>/</u> と			
						·	
Inspectors and the S Hartford Connectio to 12-1-98; and taken corrective mea Section XI.	d, holding a valid control of the co	ommission issue of	described in this edge and belief, to eport in accordation in this employer malescribed in this er for any person	al Board of and employ s Owner's I the Owner nce with the kes any wa s Owner's R al injury or	Boiler and red by HSI Report dui has perfor e requiren rranty, expertort. Fur property of	I and I Co ring the per med exami nents of the ressed or i thermore, r	ompany of riod /11-14-48/ nations and ASME Code, implied, neither the a loss of any
Inspector's'Sig	jnature /		National Boar	d, State, Pi	rovidence	and Endors	sements
Date /2 - / . 19	9 98						



1.	Owner Address	Duke Power Company 526 S. Church Street, Charlotte, NC 28201-1006	1a. Date 11-17-98
2.	Plant Address	Oconee Nuclear Station P.O. Box 1439, Seneca, S.C. 29679	Sheet $\underline{\mathcal{L}}$ of $\underline{\mathcal{L}}$
2a.	Unit	☐ 1 ☐ 2 ☐ 3 ☐ Shared (specify Units)	
3.	Address 52	rmed By Duke Power Company 6 S. Church Street, Charlotte, NC 28201-1006 Symbol Stamp N/A Authorization No. N/A Expiration Date N/A	3a. Work Order # 9809666 Repair Organization Job # 3b. NSM or MM # MA
4.	Identification	n of System RC Class L	
5.	(a) Applica (b) Applica	ble Construction Code ANSI B31,7 1949 Edition, August Addenda, ble Edition of Section XI Utilized for Repairs or Replacements 1989, No Addenda	Code Cases

6. Identification of Components Repaired or Replaced and Replacement Components

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	5nubber on 5/R 3-50-0-2479A-HIZ	Grinnell	18604	NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes
В							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D				·			☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
F							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

8 1/2 in. x	11 in. (2) ir	in form of lists, ske nformation in items heet is numbered	1 through 6 on th	nis report is inclu		
7. Description of World	k/nstali	led new res	ervoir cylu	nder body o	1 <i>5/R 3-5D-0-2479A</i> -H	Lē
8. Test Conducted:	☐ Hydrosta	tic Pneumatic	☐ Nominal Operatin	g Pressure 🔲 O	ther 🔀 Exempt	
	Pressure _	psig	Test Temp.	°F		
,	Pressure _	psig	Test Temp.	°F		
	Pressure _	psig	Test Temp.	°F		
9. Remarks				-		
·						
<u></u>						
•	ı	(Applicable Manufactur	er's Data Records to I	oe Attached)	_	
of the ASME Code, Some Code Symbol Some Code Symbol Some Certificate of Authorizations	Section XI. Stamp N/A zation No. N/A		Expira	tion Date N/A	omornis to the rules	
Inspectors and the S Hartford Connecticate to //-/-98; and taken corrective meas Section XI. By signing this cere concerning the exam Inspector nor his emplished arising from or construction. Inspector's Signature.	, holding a valitate or Provide ut have inspect state that to the sures describe rtificate, neither inations and coployer shall be connected with	Commissions	by the National Board and empescribed in this Owne be and belief, the Owr ort in accordance with employer makes any scribed in this Owner	of Boiler and Pressoloyed by HSBI and r's Report during the ner has performed en the requirements of warranty, expressed Report. Furthermor or property damage	e period 1/-7-98 examinations and of the ASME Code, d or implied, ore, neither the e or a loss of any	
Date //- /7 , 19	98				•	



1.	Owner Address	Duke Power Company 526 S. Church Street, Charlotte, NC 28201-1006	1a. Date 11-20-98
2.	Plant Address	Oconee Nuclear Station P.O. Box 1439, Seneca, S.C. 29679	Sheet of
2a.	Unit	1 2 X 3 Shared (specify Units)	000 00177
3.	Work Perfo	rmed By Duke Power Company 6 S. Church Street, Charlotte, NC 28201-1006	3a. Work Order # 980 99477 Repair Organization Job #
	Type Code	Symbol Stamp N/A Authorization No. N/A Expiration Date N/A	3b. NSM or MM # <u>12982</u>
		n of System_Lw,D Class	
5.	(a) Applica	ble Construction Code ANST 831.7 1949 Edition, Augus + Addenda, ble Edition of Section XI Utilized for Repairs or Replacements 1989, No Addenda	Code Cases
_			

6. Identification of Components Repaired or Replaced and Replacement Components

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	5/R 3-64-2435B-H5597	DPC	NA	NA	NA.	NA	Repaired Replaced Replacement	⊠ No ☐ Yes
В	·						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С		·					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D						·	☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

8 1/2 in. x	: 11 in. (2) info	ormation in item	ketches, or drawings is 1 through 6 on this d and the number of	report is included	on each
7. Description of World	KAdded ite	n#5 to S/R	3-44-2435B-14559	7 by welding	}
8. Test Conducted:		Pneumatic	☐ Nominal Operating	_ \	/ Exempt
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
9. Remarks					
					
	(A	pplicable Manufact	urer's Data Records to be	Attached)	
We certify that the of the ASME Code, S Type Code Symbol S Certificate of Authorities	Section XI. Stamp N/A zation No. N/A		Date_//-	n Date N/A	ms to the rules
I, the undersigned	, holding a valid	commission issued	NSERVICE INSPEC by the National Board o	f Boiler and Pressure	Vessel
Inspectors and the S Hartford Connecticuto to //- 20-98/; and taken corrective mea Section XI. By signing this cer concerning the exam	tate or Providence ut have inspected state that to the leasures described rtificate, neither the ployer shall be lia	the components best of my knowled in this Owner's Re the Inspector nor his rective measures dable in any manner	and employer makes any welescribed in this Owner's and belief, the Owner port in accordance with the semployer makes any welescribed in this Owner's for any personal injury or	yed by HSBI and I Co Report during the per r has performed examinate requirements of the arranty, expressed or in Report. Furthermore, in	mpany of riod //-/3-98 nations and e ASME Code, mplied, neither the
1 1	1		·		
Inspector's Sign	/ ////////////////////////////////////	Commissions	NC914 National Board, State, F	Providence and Endors	sements
Date <u>//- 20</u> , 19	98				



1.	Owner Address		uke Power Company 26 S. Church Street, Charlotte, NC 28201-1006							1a. Date 11~23				
2.	Plant Address	Oconee P.O. Box		Station neca, S.C. 2	29679					Sheet				
2a	. Unit	□ 1	□ 2	⊠ з	☐ Shared	l (specify Units	s)		300 117	700			
3.	Work Perfo Address 52 Type Code	26 S. Chur	ch Street	, Charlotte,	NC 28201-1	006 Expiration Date	e N/A		3a. Work Order # 3bNSM or MM #	Repair Organ	ization Job #			
4.	Identificatio	on of Syste	m	<u> </u>		Clas	ss	-						
5.	(a) Applica	able Constr able Edition	ruction Co n of Section	ode <u>ANS I</u> on XI Utilize	831.7 d for Repairs	19 <u>4</u> 9 Edi or Replaceme	ition, <u>Augus T</u> ents 1989, No Adder	Addenda, nda			Code Cases			
_										•				

6. Identification of Components Repaired or Replaced and Replacement Components

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
	Snubber on 5/R 3-50-0-1066A- RCPM-3A1-SSI Snubber on 5/R	Grinnell	34023	NA	·NA	NA	☐ Repaired ☐ Replaced ☒ Replacement	No □ Yes
_	3-50-0-1066A- RCPM-3AL-SSZ Snubber on 5/R	Grinnell	34025	NA	WA	NA	☐ Repaired ☐ Replaced ☒ Replacement	⊠ No □ Yes
С	3-50-0-1046A- RCPM-3A1-553	Grinnel	34017	NA	NA	NA	☐ Repaired ☐ Replaced ☒ Replacement	⊠ No □ Yes
D		·	-				☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F						·	☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes

	8 1/2 in. x sheet, and this form.	11 in. (2) I (3) each	inforn sheet	rm of lists, sl nation in item is numbered echanical A-RCPM-3	ns 1 throug d and the n	h 6 on this umber of	report i sheets is	s include s recorde	ed on each	ch top of
7. Descr	iption of Work	3-50-0	- 1066	A-RCPM-3	3AL-551	, SSZ, t	, SS3	per	DEIIZ	<u> 238</u>
		Hydros		☐ Pneumatic						
		Pressure		psig		Test Temp.		۰F		•
		Pressure		psig		Test Temp.				
		Pressure		psig		Геst Temp.		°F		
9. Rema	rks									
										
						·				
			(Appl	icable Manufact	turer's Data R	ecords to be	Attached)			
of the A	SME Code, Sode Symbol Some of Authorized	Section XI. tamp N/A zation No. I	made i	Designee, Title	e correct and	this repair c	on Date N /	′ A	orms to the	e rules
						,				
Inspector Hartford to ##=## taken co Section By sig concern Inspector kind aris	ors and the State Connecticuty states; and so corrective measured XI. If you have a state of the examination or his employing from or constant and the examination of the examination o	holding a vate or Provi thate or Provi thave inspectate that to sures descri tificate, neith nations and ployer shall to onnected wi	alid condence of ected the best bed in the correct be liable th this in	ricate of Inmission issued of	described in described in dge and belie eport in accor is employer n described in t	onal Board o _ and emplo this Owner's f, the Owner dance with the makes any we his Owner's onal injury o	f Boiler ar byed by H\$ Report d r has perfo he require arranty, ex Report, Fo r property	SBI and I uring the pormed examents of the pormed examents of the pormed examents of the pormed expressed expressed of the pormed expressed expr	company operiod <u>8-12</u> minations a he ASME (or implied, e, neither the a loss of	and Code, ne any
Date 4	<i>1-24</i> , 19	98				, Diano, 1	. 5		2.2300	ļ
		/\								



1.	Owner Address	Duke Power 526 S. Chur	^r Company ch Street, Charlotte	, NC 28201-1006					11-25-48
2.	Plant Address		clear Station 39, Seneca, S.C. 296	79				Sheet _	\perp of \perp
2a.	Unit	□ 1] 2	☐ Shared (specify Units		.)		0205	105
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, No p N/A Authorization	C 28201-1006 No. N/A Expiration Date N/A				r# <u>98050</u> Repair Organ M# <u>11486</u>	ization Job #
4.	Identificatio	n of System_	LP	Class	<u></u>	·			
5.	(a) Applica (b) Applica	ble Construct ble Edition of	ion Code ANSI Section XI Utilized fo	B31.7 19 <u>69</u> Edition, or Replacements 1 placed and Replacement Com	•	ddenda,			Code Cases
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufac	turer Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α	5/K 3-53A-0-24	81 <i>A-HWA-</i> 1728	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	No Yes
В								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С		Markey .	·					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F								Repaired Replaced	☐ No · ☐ Yes

8 1/2 in. >	x 11 in. (2) information in item d (3) each sheet is numbered	ketches, or drawings may be used, provided (1) size ins 1 through 6 on this report is included on each did and the number of sheets is recorded at the top of
7. Description of Wor	rk Madified SIR 3-53A-0-24	81A-HWA-1728 per 0E-11686
8. Test Conducted:	☐ Hydrostatic ☐ Pneumatic	☐ Nominal Operating Pressure ☐ Other ☐ Exempt
	Pressure psig	Test Temp°F
	Pressure psig	Test Temp °F
	Pressure psig	Test Temp°F
9. Remarks		
	(Applicable Manufact	urer's Data Records to be Attached)
of the ASME Code, Type Code Symuol S Certificate of Author	Section XI. Stamp N/A	Expiration Date N/A Date 11-25, 1998
Inspectors and the Shartford Connectic to //-25-98 ; and taken corrective measurements. By signing this ce concerning the examinspector nor his emission.	the holding a valid commission issued that or Providence of	NSERVICE INSPECTION In by the National Board of Boiler and Pressure Vessel In and employed by HSBI and I Company of described in this Owner's Report during the period 11-3-98 Independent of the Owner has performed examinations and port in accordance with the requirements of the ASME Code, as employer makes any warranty, expressed or implied, escribed in this Owner's Report. Furthermore, neither the for any personal injury or property damage or a loss of any
Inspector's Sig	nature Commissions	National Board, State, Providence and Endorsements
Date	98	



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section VI

		 	As ricquired	Dy The Flovisions	Of the ASIV	Section	XI				
1.	Owner Address	Duke Power 526 S. Churc	· Company ch Street, Charlotte, NC 282	201-1006					1-25-98		
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679					Sheet ₋	1 of 1		
2a.	Unit	_ 1	⊇	ed (specify Units)		^			
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 28201 p N/A Authorization No. N/A	-1006			•	r # <u>980501</u> Repair Organi M #11686	ization Job #		
4.	Identification of SystemRCClassL										
5.	(a) Applicable Construction Code ANSI B31.7 1969 Edition, August Addenda,Code Cases (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989; No Addenda										
6.	Identificatio	n of Compone	ents Repaired or Replaced ar	nd Replacement Compo	nents						
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8		
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)		
A	5/R 3-50-0-24		DPC	NA	NA	NA	NA	Repaired Replaced Replacement	No □ Yes		
В					·			☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes		
С								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes		
								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes		
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes		

☐ Repaired ☐ Replaced ☐ Replacement

> No Yes

8 1/2 in. x	11 in. (2) info d (3) each she	rmation in iter	ketches, or drawirns 1 through 6 on ed and the number	this report is	s included	on each
7. Description of Wor	k Modified	S/R 3-50-	0-2481A-46	per OE	- 11686	
8. Test Conducted:	Hydrostatic	☐ Pneumatic				☐ Exempt
	Pressure	psig	Test Ter	np.	°F	
		psig	Test Ter	•	°F	
	Pressure	psig	Test Ter	np	°F	
9. Remarks						
		,				
						
	(A ₁	oplicable Manufac	cturer's Data Records t	o be Attached)		
We certify that the of the ASME Code, Type Code Symbol Signed	Section XI. Stamp N/A ization No. N/A	e in the report ar er's Designee, Tit	Date	pair or replace diration Date N/ 16-25, 1	A	ms to the rules
1						
Inspectors and the S Hartford Connectic to 11-25-98; and taken corrective mea Section XI. By signing this ce concerning the exam	d, holding a valid of State or Providence out have inspected state that to the basures described entificate, neither the ninations and corruployer shall be lia	e of	INSERVICE INSERVICE INSERVICE INSERVICE INSERVICE INSERVICE INSERVICE AND ADDRESS AND ADDR	ard of Boiler an employed by HS (ner's Report do owner has perforwith the require any warranty, exper's Report. Fu	SBI and I Couring the per ormed examinates of the expressed or its urthermore, its	mpany of riod _//-3-98/_nations and e ASME Code, mplied, neither the
IMB Chapu	nau (Commissions	National Board, St			
Inspector's Sig	jnature		National Board, St	ate, Providence	e and Endors	sements
Date //- 35, 19	98					



										
1.	Owner Address	Duke Power 526 S. Chur	r Company ch Street, Charlotte	-	1a. Date	11-24-98				
2.	Plant Address		clear Station 39, Seneca, S.C. 29	Sheet ₋	of					
a.	Unit	_ 1 _	2 ⊠3	☐ Shared (specify Units		_)		9.20110) 	
3.	Address 52	Vork Performed By Duke Power Company Address 526 S. Church Street, Charlotte, NC 28201-1006 Sype Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A 3a. Work Order # _								
4.	Identificatio	on of System_	RC	Class	1					
5.	(a) Applica (b) Applica	able Construct able Edition of	ion Code <u>ANS I</u> Section XI Utilized f	B31.7 1969 Edition, or Repairs or Replacements	Augus + A 1989, No Addenda	ddenda,			Code Cases	
ŝ.	Identificatio	n of Compone	ents Repaired or Re	placed and Replacement Con	nponents					
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8	
			 	· · · · · · · · · · · · · · · · · · ·			1		1	

Γ								T
	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	Snubber on S/R 3-50-0-1066A- RCPM-382-551	Grinne 11	34015	NA	NA	NA	☐ Repaired ☐ Replaced ☑ Replacement	⊠ No □ Yes
В	Snubber on 5/R 3-50-0-1066A- RCPM-3BZ-SSZ	Grinne//	34011	NA	NA	NA	☐ Repaired ☐ Replaced ☒ Replacement	⊠ No □ Yes
С	Snubber an 5/R 350-0-1066A- RCPM-382-553	Grinne//	34012	NA	NA	N	☐ Repaired ☐ Replaced ☑ Replacement	⊠ No □ Yes
D							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F	·						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

8 1/2 in. x sheet, and this form.	11 in. (2) int I (3) each sh	formation in item neet is numbered	ketches, or drawings is 1 through 6 on thi d and the number of	s report is include sheets is recorde	ed on each ed at the top of
	Replaced	mechanical	snubbers with	hydraulic snul	bbers on %
7. Description of Work	3-50-0	1066A-RCPM-	snubbers with . 382-551, SS2,	+553 per 6	DE 11241
8. Test Conducted:	☐ Hydrostation		☐ Nominal Operating		
	Pressure _	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
	Pressure _	psig	Test Temp.	°F	
9. Remarks					
					, , , , , , , , , , , , , , , , , , , ,
	(/	Applicable Manufact	urer's Data Records to be	e Attached)	
We certify that the of the ASME Code, S Type Code Symbol St Certificate of Authoriz Signed	tamp N/A ration No. N/A		Date J		orms to the rules
	W-54	B111 4 1178			
Inspectors and the St. Hartford Connecticuto _//-24-98; and staken corrective meast Section XI. By signing this cert concerning the examination of the examination	holding a valid ate or Providen at have inspected state that to the sures described tificate, neither to nations and correloyer shall be li- connected with the	commission issued ce of	NSERVICE INSPECT In by the National Board of Communication and employer and belief, the Owner of the AC 914	of Boiler and Pressure oyed by HSBI and I (s Report during the p er has performed exal the requirements of t warranty, expressed o Report. Furthermore	company of period <u>8-/2-98</u> minations and he ASME Code, or implied, e, neither the
Inspector's Sign	ature		National Board, State,	Providence and Endo	orsements
Date <u>//- J-</u> /	98				



1.	Owner Address	Duke Pow 526 S. Ch			tte, NC 28201-1006	3			1a. Date 11-24-9		
2.	Plant Address	Oconee N P.O. Box 1			29679	,			Sheet of		
2a.	Unit	□ 1	□ 2	⊠3	Shared (speci	cify Units)	0. 14/ 1 0 1 "	98049049		
3.		6 S. Churc	h Street,	, Charlotte,	y NC 28201-1006 on No. N/A Expiration	ion Date N/A		3a. Work Order # 3b.—NSM or MM #	Repair Organization Job #		
4.	Identificatio	on of System	n <u>R</u> (<u> </u>		· Class					
5.	(a) Applica (b) Applica	able Construable Edition	iction Co of Sectio	de <u>ANS</u> n XI Utilize	1 B 31,7 19 d for Repairs or Rep	Edition, Augus + Diacements 1989, No Adde	_ Addenda, nda	·	Code Cases		

6. Identification of Components Repaired or Replaced and Replacement Components

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	Shubber on 5/R 3-50-0-1066A- RCPM-3AZ-5SI	Grinnell	34018	NA	NA		☐ Repaired ☐ Replaced ☒ Replacement	⊠ No □ Yes
	Snubber on S/R 3-50-0-1066A- RCPM-3AZ-SSZ	Grinne//	34024	NA	NA		☐ Repaired ☐ Replaced ☑ Replacement	⊠ No □ Yes
С	Snubber on 5/R 3-50-0-1046A - RCPM-3AZ-S53	Grinnell	34010	NA	NA	NA	☐ Repaired☐ Replaced☒ Replacement	⊠ No □ Yes
D							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
F							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

8 1/2 in. > sheet, an this form.	x 11 in. (2) inform d (3) each sheet	ation in items is numbered	etches, or drawings 1 through 6 on this and the number of	s report is i sheets is re	ncluded ecorded	on each at the top of
	Replaced M	echanicals	anubbers with	Bydraulic	SAUBB	ers on 5H
7. Description of Wor	rk3-50-0-1066A-	RCPM-3AZ-	รกบbbers พ: th 1 - 551, 552, +S	S3 per	OE.	11239
8. Test Conducted:	☐ Hydrostatic [☐ Nominal Operating	,		☐ Exempt
	Pressure	psig	Test Temp.		°F	
	Pressure	psig	Test Temp.		_ _ °F	
	Pressure	psig	Test Temp.		_ °F	
9. Remarks						
	(Applie	cable Manufactur	rer's Data Records to be	Attached)		
We certify that the of the ASME Code,	e statements made in		OF COMPLIANCE correct and this repair of	or replaceme	ent conforn	ns to the rules
Type Code Symbol S	Stamp N/A					
Certificate of Authori	zation No. N/A		Expiration	on Date N/A		
Signed 28 N	lason	\		- Z4 . 19	78	
	Owner or Owner's I	Designee, Title	Date_ 77		1_0	
			SERVICE INSPEC			
I, the undersigned Inspectors and the S	, holding a valid com	mission issued b	by the National Board o	f Boiler and F	Pressure V	essel
Hartford Connectic	ut have inspected the	components de	escribed in this Owner's	Report durin	na the perio	od 8-12-98
to <u>//-24-98</u> ; and	state that to the best	of my knowledg	e and belief, the Owne	r has perform	ed examin	ations and
Section XI.	sures described in th	is Owner's Repo	ort in accordance with t	he requireme	nts of the	ASME Code,
By signing this cer	rtificate, neither the In	spector nor his	employer makes any w	arranty, expre	essed or in	nplied,
Inspector nor his emi	inations and correctively	/e measures des in anv manner fo	scribed in this Owner's or any personal injury o	Report. Furth	ermore, ne	either the
kind arising from or o	connected with this in	spection.	s.if poloonal injury c	i property ua	maye or a	ioss of ally
6-100						
This Chap	man Com		NC 914			
Inspector's 6 igr	nature	r	National Board, State, I	Providence ar	nd Endorse	ements \
Date <u>/2//-24</u> , 19	98					
11-84.98						



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

			7.0 1.0 40.00		71 THE AGII	E Ocac occion	<u> </u>			
1.	Owner Address	Duke Power 526 S. Chur	r Company ch Street, Charlotte, NC 28	3201-1006					8-11-98	
2.	Plant Address		clear Station 39, Seneca, S.C. 29679					Sheet _	<u></u>	
	Unit Work Perfo		☐ 2	ared (specify Units	· · · ·	.) 3a. W	ork Orde	r # <u>970 49</u> Repair Organi	<u>418</u> ·	
.	Address 52	Type Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A 3b. NSM or MM # ///								
4.	Identificatio	n of System_	MS	Class						
5.	(a) Applica (b) Applica	a) Applicable Construction Code ANSI B31.1 1967 Edition, July Addenda,Code Cases b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989, No Addenda								
6.	Identificatio	Identification of Components Repaired or Replaced and Replacement Components								
	Cot	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8	
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)	
Α	Snubber 3-01A-0-2	on 5/R 401B-R10	Grinnell	9460	NA	NA	NA	☐ Repaired ☑ Replaced ☐ Replacement	⊠ No □ Yes	
В	3-01A-0-2	on <i>5/R</i> 4018- <i>R</i> 10	Grinnell Grinnell	34193	NA	NA	NA	☐ Repaired ☐ Replaced ☑ Replacement	⊠ No □ Yes	
C								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
D								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
E _	,							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	

☐ Repaired ☐ Replaced ☐ Replacement

No

Yes

8 1/2 in. >	x 11 in. (2) information (3) each sheet is	ion in items	1 through 6 on this repo	be used, provided (1) size is ort is included on each its is recorded at the top of
7. Description of Wo	rkReplaced snu	bber on E	S/R 3-01A-0-24	401B-RLO
8. Test Conducted:	_			sure 🗌 Other 🔀 Exempt
	Pressure	psig	Test Temp.	°F
÷	Pressure			°F
	Pressure	psig	Test Temp.	°F
9. Remarks				
	//			
,	(Applicab	le Manufacture	er's Data Records to be Attacl	hed)
of the ASME Code, Type Code Symbol S Certificate of Authori Signed	Section XI. Stamp N/A		Expiration Date	
Inspectors and the S Hartford Connectic to <u>X-11-9%</u> ; and taken corrective mea Section XI. By signing this cer concerning the exam Inspector nor his em	d, holding a valid commis state or Providence of ut have inspected the constate that to the best of a sures described in this Contributed in the Inspensionations and corrective research in the Inspensionations and corrective research.	ssion issued by N.C. Imponents des my knowledge Owner's Repor ector nor his en measures descany manner for	e and belief, the Owner has p rt in accordance with the req employer makes any warrant cribed in this Owner's Repor	er and Pressure Vessel by HSBI and I Company of ort during the period 2-14-58 performed examinations and quirements of the ASME Code, by, expressed or implied.
Inspector's Sign	Commis		<u>C974</u> lational Board, State, Provide	ence and Endorsements
Date <i>8</i> //, 19	98			



			······································	·				· · · · · · · · · · · · · · · · · · ·	
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 282	201-1006					11-3-98
2.	Plant Address	Oconee Nuc P.O. Box 143	lear Station 9, Seneca, S.C. 29679					Sheet _	1_ of _/_
2a.	Unit		2 <u>3</u> Shar	red (specify Units) 3a W	ork Orde	r# 98032	2097
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 2820 ^o p N/A Authorization No. N/A					r# <u>98032</u> Repair Organi M# <u>WA</u>	zation Job #
4.	Identificatio	on of System_	M5	Class	<u> </u>				
5.	(a) Applica	able Constructi able Edition of	on Code <u>ANS/ B31.</u>] Section XI Utilized for Repai	1947 Edition, Jarrier 1989	Ac 9, No Addenda	ddenda,			_Code Cases
6.	Identificatio	on of Compone	ents Repaired or Replaced a	nd Replacement Compo	nents				
	Co	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	5nubber 3-01A-0-2	on 5/R	Grinne//	9455	NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes
В			,					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С		,			-	,		☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D	-						·	☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
F								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes

8 1/2 in. >	k 11 in. (2) infor d (3) each shee	mation in item	etches, or drawings noted in the second section in the second section in the second section in the second section in the second section in the section in th	report is included	on each
7. Description of Wor	rk Rebuilt 1	Tydraulic	Snubber on a	5/R 3-01A-	·D-2441-R9(A
8. Test Conducted:	Hydrostatic	Pneumatic	☐ Nominal Operating P		Exempt
	Pressure	psig psig psig	Test Temp. Test Temp. Test Temp.	°F °F	
9. Remarks					
	(App	olicable Manufactu	urer's Data Records to be A	ittached)	
of the ASME Code, Some Type Code Symbol Some Certificate of Authorical Certificate of Certificate Orical Certificate of Certificate Orical Certi	e statements made Section XI. Stamp N/A	in the report are	correct and this repair or Expiration Date //~		ms to the rules
Inspectors and the S Hartford Connectice to _//-3-98 ; and taken corrective mea Section XI. By signing this cer concerning the exam Inspector nor his em kind arising from or conservation.	I, holding a valid contate or Providence of the providence of the	mmission issued of	by the National Board of and employed described in this Owner's fige and belief, the Owner hoort in accordance with the employer makes any was escribed in this Owner's Refor any personal injury or AC914 National Board, State, Presserving States of the National Board, State, Presserving Action of the National Board, State, Presse	Boiler and Pressure Ved by HSBI and I Co Report during the perinas performed examine requirements of the rranty, expressed or in eport. Furthermore, no property damage or a	empany of iod 10-12-98 nations and ASME Code, mplied, neither the a loss of any
Date //- 3 19	98				

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

					10 OI THE AOIII	L Ocac Section	. AI		
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, N	C 28201-1006					11-3-98
2.	Plant Address	Oconee Nuc P.O. Box 143	elear Station 19, Seneca, S.C. 29679					Sheet	of
2a.	Unit	1] 2	Shared (specify Units		.)		0.0	^
3.	Address 52	26 S. Church S	e Power Company Street, Charlotte, NC p N/A Authorization No	28201-1006 b. N/A Expiration Date N/A				er # <u>98032</u> Repair Organ M # <u>NA</u>	zation Job #
4.	Identificatio	on of System_	M5	Class	2				
5.	(a) Applica	able Constructi able Edition of	ion Code <u>AUS J</u> Section XI Utilized for I	31.1 19.67 Edition, Repairs or Replacements 1	スプレン Ac 989, No Addenda	ddenda, <u>·</u>			_Code Cases
6.	Identificatio	on of Compone	ents Repaired or Replac	ced and Replacement Com	ponents				
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	,	Component	Name of Manufactu	rer Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	501A-0-2	r on S/R .441-89(C)	Grinnell	9453	NA	NA	NA	Repaired Replaced Replacement	No ☐ Yes
В							•	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С		W-10-10-1						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D	,							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

No

Yes

No

☐ Repaired ☐ Replaced ☐ Replacement

Repaired
Replaced
Replacement

Date //- 3 , 19 98

8 1/2 in. x	11 in. (2) informat	tion in items	etches, or drawings is 1 through 6 on this and the number of	s report is	included of	on each		
7. Description of Work	Rebuilt hy	draulic	snubber on	JR 3-	01A-0	-2441-R		
8. Test Conducted:			☐ Nominal Operating			Exempt		
	Pressure	psig	Test Temp.		°F			
	Pressure	psig	Test Temp.		°F			
	Pressure	psig	Test Temp.	-	°F			
9. Remarks								
-								
	(Applica	ble Manufactu	rer's Data Records to be	Attached)				
We certify that the of the ASME Code, S	statements made in the section XI.		OF COMPLIANCE correct and this repair of		ent conform	ns to the rules		
Certificate of Authoriz	ation No. N/A		Expiration	on Date N/A				
Signed & N	Owner or Owner's De	esignee, Title	Date_ <u>//</u> -	<u>~3</u> , 19	98			
						 		
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of								
1-2-200					•			
41/13 (Kap		issions	NC914					
Inspector's Sign	ature		National Board, State, I	^o rovidence a	and Endorse	ements		



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

1.	Owner Address	Duke Power 526 S. Churc	· Company ch Street, Charlotte, NC 28	3201-1006					11-3-98
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679					Sheet ₋	1 of 1
a.	Unit	1	ີ 2 📈 3 🗌 Sha	ared (specify Units		_)		9an 72a	0.7
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/	01-1006 A Expiration Date N/A				r# <u>980 320</u> Repair Organi M# <i>WA</i>	zation Job #
		n of System_		Class					
5.	(a) Applica (b) Applica	ble Constructi ble Edition of	ion Code <u>ANSI B3</u> Section XI Utilized for Repa	1. 19 6 7 Edition, cairs or Replacements 19	A A Addenda	ddenda,			_Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced a	and Replacement Comp	onents				
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α	Snubber 3-01A-24	on <i>S/R</i> 141- <i>R</i> 7	Grinne!	NA	NA	NA	NA	Repaired Replaced Replacement	No ☐ Yes
B 								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С —								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D				<i>3</i>				☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
Ε				·				☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

No Yes

Repaired Replaced Replacement

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in. (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form. 7. Description of Work Replaced end brackets on Lydraulic Snubber 3-01A-2441-R7 ☐ Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐ Other ☑ Exempt 8. Test Conducted: Pressure ____psiq Test Temp. Pressure _____ psig Test Temp. Pressure _____psig Test Temp. 9. Remarks (Applicable Manufacturer's Data Records to be Attached) CERTIFICATE OF COMPLIANCE We certify that the statements made in the report are correct and this repair or replacement conforms to the rules of the ASME Code, Section XI. Type Code Symbol Stamp N/A Certificate of Authorization No. N/A Expiration Date N/A Date 11-3 1998 Owner or Owner's Designee, Title CERTIFICATE OF INSERVICE INSPECTION I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of ______ and employed by HSBI and I Company of Hartford Connecticut have inspected the components described in this Owner's Report during the period 1/2-33-58 to //-3-98; and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied,

concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any

National Board, State, Providence and Endorsements

Commissions NC 914

kind arising from or connected with this inspection.

Inspector's Signature

Date //-3 , 1958

Page 2 of 2



	Name of (Component	Name of Manufac	Manufacturer	National Board	Other	Year	Repaired,	ASME Code
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
3.	Identification	n of Compone	ents Repaired or Rep	placed and Replacement Comp	ponents				
5.	(a) Applical (b) Applical	ole Constructi ole Edition of	on Code <u>ANSI</u> Section XI Utilized fo	831.7 19 69 Edition, A or Repairs or Replacements 19	Addenda Addenda	denda,	-		Code Cases
4.	Identification	n of System_	RC	Class				•	
3.	Address 520	S. Church S	Power Company Street, Charlotte, No N/A Authorization	C 28201-1006 No. N/A Expiration Date N/A				Repair Organ	nization Job #
a.	Unit	□ 1	2 🖾3	Shared (specify Units)	3a.	Work Order	# <u>98032</u>	097
2.		Oconee Nuc P.O. Box 143	lear Station 9, Seneca, S.C. 296	79				Sneet	<u></u> ਾ ਹਾ <u>-</u> -1
1.		Duke Power 526 S. Churc	Company ch Street, Charlotte	, NC 28201-1006					11-3-98 1 of 1
					<u> </u>				

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	Snubber on 5/R 3-50-0-2479A-H3A	Grinne/	Unavailable	NA	NA	NA	☐ Repaired ☑ Replaced ☐ Replacement	Ø No □ Yes
В	Snubber on 5/R 3-50-0-2479A·H3A Snubber on 5/R 3-50-0-2479A-H3A	Grinnell	34184	NA	NA	NA	☐ Repaired ☐ Replaced ☒ Replacement	Ǿ No ☐ Yes
С							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D	·			·			☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E	·	:					☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
F							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

8 1/2 in.:	x 11 in. (2) info nd (3) each she	rmation in items	ches, or drawings of this and the number of s	report is included	d on each
7. Description of Wo	rk Replaces	d snubber	on S/R 3-	50-0-247°	7A-H3A
8. Test Conducted:			Nominal Operating		
	Pressure	psig	Test Temp.	°F	•
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	•
9. Remarks					
	(Ap	plicable Manufacture	r's Data Records to be	Attached)	· · · · · · · · · · · · · · · · · · ·
				<u>, </u>	
We certify that the of the ASME Code, Type Code Symbol S Certificate of Author	Section XI. Stamp N/A		OF COMPLIANCE rrect and this repair o		rms to the rules
Signed 28 W		·		n Date N/A	
Signed 20 / V	Owner or Owner	's Designee, Title	Date_// >	<u>3</u> , 19 <u>98</u>	
Hartford Connectic to _//-3-98 ; and taken corrective mea Section XI. By signing this ce concerning the exam	d, holding a valid contact or Providence of the providence of the	ommission issued by of the components desert of my knowledge this Owner's Reported Inspector nor his erective measures describe in any manner for inspection.	cribed in this Owner's and belief, the Owner t in accordance with the mployer makes any waribed in this Owner's Fany personal injury or	Boiler and Pressure yed by HSBI and I C Report during the perhas performed exame requirements of the arranty, expressed or Report, Furthermore	ompany of riod 10-24-98 inations and e ASME Code, implied, neither the
Inspector's Sig	nature		ational Board, State, P	rovidence and Endor	sements
Date <u>//- ځ</u> , 19	98				



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

1.	Owner Address	Duke Power 526 S. Chur			11-10-98				
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679	ţ.				Sheet _	L of L
2a.	Unit	□ 1]2 🛂 🗆 Sh	ared (specify Units		.)		070 71	700
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/	01-1006 /A Expiration Date N/A				r # <u>970 36</u> Repair Organi M # <u>N A</u>	zation Job #
4.	Identificatio	n of System_	MS	Class	2			,	
5.	5. (a) Applicable Construction Code ANSI B31.1 1947 Edition, July Addenda,Code Case (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989, Nø Addenda						_Code Cases		
6.	Identificatio	n of Compone	ents Repaired or Replaced	and Replacement Compo	nents				
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α		2447-HTT	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	No Yes
В								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D					·			☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

No

Yes

No

Yes

☐ Repaired
☐ Replaced
☐ Replacement

☐ Repaired
☐ Replaced
☐ Replacement

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in. (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.									
7. Description of Wor	rk Replaced	Spring Co	an on S/R	3-01A-	0-244	1-411			
8. Test Conducted:			☐ Nominal Operat			Exempt			
	Pressure	psig	Test Tem	p	°F				
	Pressure	psig	Test Tem	p	°F				
	Pressure	psig	Test Tem	p	°F				
9. Remarks									
 									
	(An	nlicable Manufact	urer's Data Records to	ho Attached					
	(Ap	piicable Manuiaci	urer s Data Necords to	be Allached)	•	4			
We certify that the of the ASME Code, Type Code Symuol Signed	Section XI. Stamp N/A ization No. N/A	in the report are	Date A	ration Date N/	A	ns to the rules			
Inspectors and the Shartford Connectic to II-II-98; and taken corrective measurements. By signing this ce concerning the examinspector nor his emissing from or or the state of the state	d, holding a valid or state or Providence cut have inspected state that to the beasures described in crificate, neither the innations and corresployer shall be liab connected with this	the components of the componen	NSERVICE INSPI I by the National Boar 2. and endescribed in this Own dge and belief, the Ovn port in accordance with s employer makes an escribed in this Owner for any personal injur	rd of Boiler and apployed by HS er's Report duviner has perforth the required warranty, exer's Report. Fury or property	BI and I Co uring the per rmed examin ments of the pressed or in orthermore, r damage or a	impany of iod 5-15-57 nations and ASME Code, mplied, neither the a loss of any			
Inspector's Sig	nature Co	ommissions	National Board, Stat	te, Providence	and Endors	ements			
Date//_ // .19	98								



1.	Owner Address	Address 526 S. Church Street, Charlotte, NC 28201-1006								
2.	Plant Address	Oconee Nuc P.O. Box 143	lear Station 9, Seneca, S.C. 29679					Sheet _	of	
	Unit		V	red (specify Units) 3a. Work Order # 98834048 Repair Organization Job #				
	Address 52 Type Code	6 S. Church S Symbol Stamp	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/A	Repair Organization Job # 3b. NSM or MM #						
	4. Identification of SystemLPSClass									
5.	5. (a) Applicable Construction Code ANSI B31,1 1947 Edition, July Addenda,Code Cases (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989, No Addenda									
6.	Identificatio	n of Compone	ents Repaired or Replaced a	nd Replacement Compone	ents					
L.	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8	
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)	
A	3A K	RBLU	NA	NA	NA	NA	NA	☐ Repaired ☐ Replaced ☑ Replacement	⊠ No □ Yes	
В		·						☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes	
С							·	☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes	
D		·,						☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes	
E								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes	
F				· -				☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes	

8 1/2 in. x	ntal sheets in form on the form of the formation of the f	on in items 1 throu	gh 6 on this i	eport is included	on each
7. Description of Work	Replaced	bolting or	3A	RBCU	
8. Test Conducted:		'neumatic 🗡 Nomii			☑ Exempt
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
	Pressure	_ psig	Test Temp.	°F	
9. Remarks					
<u></u>					
,	(Applicable	e Manufacturer's Data	Records to be A	ttached)	
of the ASME Code, S Type Code Symbol St Certificate of Authoriz Signed	tamp N/A		Expiration	Date N/A	ns to the rules
Inspectors and the State Hartford Connecticut to; and staken corrective meas Section XI. By signing this cert concerning the examinal Inspector nor his employed.	CERTIFICA holding a valid commiss ate or Providence of thave inspected the constate that to the best of neures described in this Odificate, neither the Inspenditions and corrective mations are connected with this inspection.	mponents described in hy knowledge and believer's Report in accordance for nor his employer leasures described in my manner for any per	ional Board of E and employe this Owner's F ef, the Owner h ordance with the makes any war this Owner's Re	Boiler and Pressure Ved by HSBI and I Co seport during the perias performed examinate requirements of the ranty, expressed or insport. Furthermore, n	mpany of iod 10-15-58 nations and ASME Code, mplied, either the
M./3. Chap Inspector's Signa	Commiss		oard, State, Pro	ovidence and Endors	ements
Date //- // , 195	18				



1.	Owner Address	Duke Powe 526 S. Chu		any et, Charlotte, NC			1a. Date	1 of 1		
2.	Plant Address	Oconee Nu P.O. Box 14		ation eca, S.C. 29679			Sheet	_/_ of _/_		
2a.	Unit	□ 1 [2 :	⊠ 3 □	Shared (specify Units		_) _3a_'	Work Order	# <u>98036</u>	318
3.	Address 52	rmed By Duk 6 S. Church Symbol Stan	Street,				nization Job #			
4.	Identificatio	n of System_	LP.	5	Class			•		
5.	(a) Applica (b) Applica	ble Construction o	tion Cod f Section	le <u>ANS1_B</u> XI Utilized for R	31.1 1967 Edition, Jepairs or Replacements 1989	ر کاری No Addenda	Addenda,			Code Cases
6.	Identificatio	n of Compor	nents Re	paired or Replace	ed and Replacement Compor	nents				
	Col	lumn 1		Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
							-l			1

	Column 1	Column 2	Column 3 Column 4		Column 5	Col. 6	Column 7	Column 8	
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)	
A	3B RBCU	NA	NA	NA	NA	NA	☐ Repaired ☐ Replaced ☒ Replacement	I⊅ No ☐ Yes	
В							Repaired Replaced Replacement	☐ No ☐ Yes	
С							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
D							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes	
E							☐ Repaired ☐ Replaced ☐ Replacement	□ No □ Yes	
F							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	

8 1/2 in. x sheet, and this form.	ntal sheets in for 11 in. (2) inform I (3) each sheet	ation in item	ns 1 through	6 on this	report is	included	on each
7. Description of Work	Replaced	bo/+1	ng on	_3B	RE	3CU	
8. Test Conducted:	Hydrostatic [Pneumatic	Nominal	Operating F	ressure	Other	⊠ Exempt
	Pressure	psig	To	est Temp.		°F	
	Pressure	psig		est Temp.		°F	
	Pressure	psig	· To	est Temp.		°F	
9. Remarks							
	(Applie	cable Manufact	urer's Data Re	cords to be	\ttachod\		
-	(//		uici s Data He	colus to be a	Attacheu)		4
of the ASME Code, So Type Code Symbol St Certificate of Authoriza	amp N/A				Date N/A		ns to the rules
I, the undersigned, Inspectors and the State Hartford Connecticut to II-II-GY; and staken corrective meas Section XI. By signing this certiconcerning the examination of the examinatio	holding a valid cominate or Providence of thave inspected the tate that to the best ures described in the ificate, neither the Influence and correctively shall be liable in the state of the shall be liable in the state of the	components of my knowled is Owner's Respector nor hive measures din any manner	by the Nation described in the lige and belief, port in accordance semployer materials.	nal Board of and employnis Owner's I the Owner I ance with the akes any wa	Boiler and red by HSE Report dur has perforde requirem rranty, expert. Fur	I and I Corring the perion med examinate the control of the correction of the correc	mpany of od 10-34-98 nations and ASME Code, nplied, either the
Inspector's Signa	Com ature	missions	N <i>C 91-</i> / National Boa	ırd, State, Pr	ovidence a	and Endorse	ements
Date //_ // 10.9	98						



E

F

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

			7.07.09404		Of The Aom	E Oode Occion	<u> </u>		
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 282	201-1006			. =		11-11-98
2.	Plant Address	Oconee Nuc P.O. Box 143	lear Station 9, Seneca, S.C. 29679					Sheet _	1 of 1
2a.	Unit	□ 1] 2	red (specify Units		.)		A A A B	- · ^
3.	Address 52	Work Performed By Duke Power Company Address 526 S. Church Street, Charlotte, NC 28201-1006 Type Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A 3a. Work Order # 480 36319 Repair Organization Job #							
4.	Identificatio	Identification of System <u>L.P.S</u> Class <u>Z</u>							
5.	(a) Applicable Construction Code ANSI R31.1 19 67 Edition, Joly Addenda, Code Cases (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989, No Addenda								
6.	Identificatio	n of Compone	ents Repaired or Replaced a	nd Replacement Compo	nents			,	
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	3C 1	RBCU	NA	NA	NA	NA	NA	☐ Repaired ☐ Replaced ☐ Replacement	⊠ No □ Yes
В								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С					z.			☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
	1	I			1				

No

Yes

☐ Repaired
☐ Replaced
☐ Replacement

NOTE: Supplement 8 1/2 in. x sheet, and this form.	11 in. (2) informat	of lists, sketches, tion in items 1 thro numbered and the	ugh 6 on this	report is included	on each
7. Description of Work	Replaced	bolting or	3C	RBCU	
8. Test Conducted:	/	Pneumatic Nom			Exempt
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
9. Remarks					
		•			
	(Applical	ble Manufacturer's Data	Records to be	Attached)	_
of the ASME Code, Some Code Symbol St Certificate of Authorizations Signed	ection XI.	ne report are correct ar	Expiration	n Date N/A -//, 19 <u></u> 98	·
Inspectors and the State Hartford Connecticut to; and staken corrective meas Section XI.	holding a valid comminate or Providence oft have inspected the contact that to the best of the ures described in this ifficate, neither the Inspections and corrective loyer shall be liable in	omponents described my knowledge and be Owner's Report in accordance for nor his employe measures described in any manner for any personners.	ational Board of and employ in this Owner's elief, the Owner cordance with the r makes any wan this Owner's F	Boiler and Pressure Noved by HSBI and I Co Report during the per has performed examine requirements of the arranty, expressed or in Report, Furthermore, re-	mpany of iod 10-22-98 nations and ASME Code, mplied, neither the
MB Chapma Inspector's Signa				rovidence and Endors	sements
Date, 19_5	78				

1.	Owner Address	Duke Power Company 526 S. Church Street, Charlotte, NC 28201-1006	1a. Date <u>//-/7-98</u>
2.	Plant Address	Oconee Nuclear Station P.O. Box 1439, Seneca, S.C. 29679	Sheet of
2a.	Unit	☐ 1 ☐ 2 ☐ 3 ☐ Shared (specify Units)	3a. Work Order # 980 91453
3.	Address 52	rmed By Duke Power Company 6 S. Church Street, Charlotte, NC 28201-1006 Symbol Stamp N/A Authorization No. N/A Expiration Date N/A	Repair Organization Job # 3b. NSM or MM #
4.	Identificatio	n of System Class	
5.	(a) Applica (b) Applica	ble Construction Code <u>ANSI B31.7</u> 19 <u>49</u> Edition, <u>A va Us</u> H Addenda, _ ble Edition of Section XI Utilized for Repairs or Replacements 1989, No Addenda	Code Cases
6.	Identificatio	n of Components Repaired or Replaced and Replacement Components	

	Column 1	Column 1 Column 2 Column 3 Column 4 Column 5 Col. 6		Column 7	Column 8			
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	3B Amp Hanger # Z	DPC	NA	NA	NA	NA	□ Repaired □ Replaced □ Replacement	⊠ No □ Yes
В	Piping	DPC	NA	NA	WA	NA	☐ Repaired ☐ Replaced ☐ Replacement	⊠ No □ Yes
С						·	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in. (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form. We lated shim to correct clearance on SR 3B Pump - Hanger the							
7. Description of Work Replaced downs tream block office associated w/ 3B HPI							
8. Test Conducted: Hydrostatic Pneumatic Nominal Operating Pressure Other Exempt							
Pressure psig Test Temp °F							
Pressure psig Test Temp °F							
Pressure psig Test Temp °F							
9. Remarks Tested IAW ASME Code Case N416-1							
(Applicable Manufacturer's Data Records to be Attached)							
CERTIFICATE OF COMPLIANCE We certify that the statements made in the report are correct and this repair or replacement conforms to the rules of the ASME Code, Section XI. Type Code Symbol Stamp N/A							
Certificate of Authorization No. N/A Expiration Date N/A							
Signed Date 1-11, 19 99 Owner or Owner's Designee, Title							
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of							
MB Chapman Commissions JC914 Inspector's Signature National Board, State, Providence and Endorsements							
Date							



1.	Owner Address		r Company ch Street, Charlotte, NC 2	8201-1006					2/22/97
2.	Plant Address		clear Station 39, Seneca, S.C. 29679					Sheet	of
2a.	Unit	□ 1	2 — 🔀 3 — Sh	ared (specify Units		.)		9502.7	n=/ = 77
3.			e Power Company		•	3a. W	ork Orde	r # 950770 Repair Organ	ization Job #
-			Street, Charlotte, NC 2820 np N/A Authorization No. N/					W# 3297	
4.	Identificatio	n of System_	51A	Class	9		,		
			tion Code <i>B3/.7</i> Section XI Utilized for Repa			ddenda,)/A	·····	_Code Cases
6.	Identificatio	n of Compon	ents Repaired or Replaced	and Replacement Compo	nents				
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	5/1 3-51A-0-2	12479A-H/B HZE	DPC	N/A	N/A	N/A	NA	☐ Repaired ☐ Replaced ☒ Replacement	
B	3-51A-0-7	HZE 479E-212E	· DPC	NA	N/A	N/A	NA	☒ Repaired☐ Replaced☐ Replacement	No Ses
C_	3-5/A-D-2	479 <i>E-342-E</i> 1413 479 <i>A-1</i> 13-E	B DPC	NA	N/A	NA	NA	☒ Repaired☐ Replaced☐ Replacement	☑ No ☐ Yes
D			·					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E				·				☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F			,				-	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

8 1/2 in. x sheet, and	t 11 in. (2) informat d (3) each sheet is <i>UmPoNeNT A ;</i>	ion in items 1 th numbered and	rough 6 on this repo the number of sheet	oe used, provided (1) size is ort is included on each s is recorded at the top of ONEW SUPPORT, ITEMS
7. Description of Wor	k / AND Z, R	EUSEO ITEM	3 (SPRING LAN)	
8. Test Conducted:	☐ Hydrostatic ☐	Pneumatic 🗌 N	ominal Operating Pressu	ure 🗌 Other 💢 Exempt
	Pressure	psig	Test Temp.	°F
	Pressure	psig	Test Temp.	°F
			Test Temp.	°F
9. Remarks <i>Comp</i>	PONENTS BZC.	SPRING (CAN SETTINGS	WERE RESET TO VALVE.
6RE	ATER VALUE	TO ACCOMO	DATE LARGER	VALUE.
····				
•			,	
	(Applicat	ole Manufacturer's D	ata Records to be Attach	ed)
We certify that the of the ASME Code, S Type Code Symuol S Certificate of Authorit Signed	e statements made in th Section XI. Stamp N/A	Ł		
	OFFICI			
Inspectors and the S Hartford Connecticuto 10-18-97; and staken corrective mea Section XI. By signing this cer concerning the exam Inspector nor his empty.	, holding a valid commitate or Providence of _ ut have inspected the c state that to the best of sures described in this rtificate, neither the Inspinations and corrective	ssion issued by the A.C. components describ my knowledge and Owner's Report in sector nor his employmeasures describe any manner for any	ed in this Owner's Report belief, the Owner has paccordance with the requested makes any warranty of in this Owner's Report	rt during the period _//-12-96_ erformed examinations and uirements of the ASME Code,
Inspector's Sign	nature	يمssionsيم Nation	૧૯૧૫ nal Board, State, Provide	ence and Endorsements
Date 1038 , 19	_ <i>I_(</i>			



1.	Owner Address	Duke Powe 526 S. Chu	r Company rch Street, Charlotte, N	C 28201-1006					2/22/97	
2.	Plant Address		clear Station 39, Seneca, S.C. 29679					Sheet _	of	
2a.	Unit	□ 1 [□2 🖂3 🗆	Shared (specify Units)	/- 1 0	" QLON ON	3/2/1/	
3.	Work Performed By Duke Power Company Address 526 S. Church Street, Charlotte, NC 28201-1006 Type Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A 3a. Work Order # 9600 9036 - 14 Repair Organization Job # 3b. NSM or MM# 329 79 A M.									
4.	Identificatio	n of System_	OIA	Class _	B		,	,	,	
5.	(a) Applica (b) Applica	ble Construc ble Edition o	tion Code <i>B3/,</i> f Section XI Utilized for F	19 <u>69</u> Edition, Repairs or Replacements 198 red and Replacement Compo	39, No Addenda	ddenda,	<u>L</u>		_Code Cases	
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8	
	Name of	Component	Name of Manufactur	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)	
Ą	5/R -0/A-3-0	<)-2403D-4	S DPC	N/A	N/A	ماله	1/4	☐ Repaired ☐ Replaced ☑ Replacement	No □ Yes	
В	3-01A-24) -2403D - A 03D -4434	B DPC	N/A	N/A	N/A	NA	☐ Repaired ☐ Replaced ※ Replacement		
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes	
D								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes	
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
F								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	

Inspector's Signature

Date_

Form NIS-2 (Back)

8 1/2 in. x	ntal sheets in form of 11 in. (2) information (3) each sheet is r	on in items 1 t	hrough 6 on this re	port is included	on each			
7. Description of Work	(SEE 9. Rem	ARKS						
8. Test Conducted:	☐ Hydrostatic ☐ P	Pneumatic 🗌 I	Nominal Operating Pre	ssure	⊠ Exempt			
	Pressure	psig	Test Temp	°F				
	Pressure	psig	Test Temp	°F				
	Pressure	psig	Test Temp	°F				
9. Remarks A.	TEMS # I TROUGH	SH #1 WE	RE REMOVED A	NO REPLACE	D WITH			
\mathcal{I}	TEMS # 11 TROUG	H # 19.			<u> </u>			
\mathcal{B} , \mathcal{N}	TEMS # 1 TRANC TEMS # 11 TROVO NEW S/R WAS	ADDED TO	THE SYSTEM	1 PER MODII	FICATION,			
	(Applicable Manufacturer's Data Records to be Attached)							
We certify that the of the ASME Code, S Type Code Symbol S Certificate of Authoriz Signed	statements made in the section XI. tamp N/A	report are corre	Expiration D		ns to the rules			
		·			.,			
Inspectors and the St Hartford Connecticu to; and s taken corrective meas Section XI. By signing this cert concerning the exami Inspector nor his emp	holding a valid commiss ate or Providence of it have inspected the constate that to the best of moures described in this Outficate, neither the Inspendions and corrective moloyer shall be liable in an onnected with this inspect	mponents descri ny knowledge an Owner's Report in ector nor his emp neasures describ ny manner for ar ction.	and employed bed in this Owner's Re d belief, the Owner has accordance with the reloyer makes any warraed in this Owner's Rep	oiler and Pressure V I by HSBI and I Con port during the peri- s performed examinated requirements of the conty, expressed or in	mpany of od nations and ASME Code, nplied, either the			
	Commiss	sions						

National Board, State, Providence and Endorsements



1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	201-1006					4/17/97
2.	Plant Address	Oconee Nuc P.O. Box 143	lear Station 9, Seneca, S.C. 29679					Sheet _	/of _/
2a.	. Unit	1] 2 🔀 3 🗆 Sha	red (specify Units)	laule Ouda	- 4 97p///	1920/
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/A	1-1006 Expiration Date N/A		3a. W	SM or MI	r # <u>970/44</u> Repair Organi M # <u>N/A</u>	zation Job #
4.	Identification	on of System_	OIA	Class	B			•	
5.	(a) Applica	able Constructi able Edition of	on Code	19 <i>69</i> Edition, rs or Replacements 198	9, No Addenda	ddenda,	N/A	· · · · · · · · · · · · · · · · · · ·	_Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced a	nd Replacement Compo	nents				
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	3/R 3-0/A-0-2	R 401B - R14	GRINNELL	22097	NA	NA	NA	☐ Repaired ☐ Replaced ☒ Replacement	☑ No ☐ Yes
В								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
Ε								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F				-				☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

•					_			
8 1/2 in. x	11 in. (2) informal (3) each sheet i	ation in item s numbered	etches, or drawings s 1 through 6 on this and the number of	report is included sheets is recorded	on each at the top of			
	KEFURBISHED	SNUBBE	R, BY REPLACING	- CYLINDER RES	ERVOIR			
7. Description of Work	BODY, SEALS	, AND VE	NT PLUG WITH ,	NEW PARTS.				
8. Test Conducted:	☐ Hydrostatic ☐	Pneumatic	☐ Nominal Operating	Pressure				
	Pressure	psig	Test Temp.	°F				
	Pressure	psig	Test Temp.	°F				
	Pressure	psig	Test Temp.	°F				
9. Remarks								
	(Applie		Data Dagarda As La					
	(Арриса	able Manutactu	ırer's Data Records to be	Attached)				
We certify that the of the ASME Code, S	statements made in tection XI.		OF COMPLIANCE correct and this repair of	r replacement confor	rms to the rules			
Certificate of Authoriz	ation No. N/A		Expiration	n Date N/A				
Signed	wmcleu	L THE	Date	Date 4/17, 19 <u>97</u>				
	Owner or Owner's D	esignee, Litle			·			
<u> </u>								
Inspectors and the State Hartford Connecticuto 4-21-57; and staken corrective meas Section XI. By signing this cert concerning the examination of the state of t	holding a valid commate or Providence of thave inspected the tate that to the best causes described in this difficate, neither the Installinations and corrective loyer shall be liable in	nission issued N. (components of my knowledges Owner's Repose the measures de many manner	by the National Board of and employer secribed in this Owner's ge and belief, the Owner bort in accordance with the employer makes any we escribed in this Owner's for any personal injury of the secribed in the secr	f Boiler and Pressure ' yed by HSBI and I Co Report during the per has performed examine requirements of the arranty, expressed or i Report. Furthermore, i	ompany of riod <u>2-16-97</u> inations and e ASME Code, implied, neither the			
M. B. Chap Inspector's Signa		missions	NC914 National Board, State, F	Providence and Endors	sements			
Date <u>+ - 21</u> , 19	97			and Endone				



_			M9 I	required	by the Provisions	Of the ASI	IL Code Section	XI		
1.			er Company rch Street, Charlo	otte, NC 28	201-1006	3				6/2/97
2.			clear Station 39, Seneca, S.C.	29679					Sheet	/ of _/
a.	Unit]1 [□ 2 ⋈ 3	☐ Sha	red (specify Units		_)	11- O 1	97039	576-01
3.	Address 526	6. Church	ke Power Compar Street, Charlotte np N/A Authorizat	NC 2820	1-1006 A Expiration Date N/A				er #	
4.	Identification of	f System_	HPI		Class _	<i>B</i>				
5.	(a) Applicable (b) Applicable	Construct Edition of	tion Code <i></i>	3/ .	19 <u>69</u> Edition, irs or Replacements 198	<i>NA</i> A 9, No Addenda	Addenda, //	a		Code Cases
3. —	Identification of	f Compon	ents Repaired or F	Replaced a	and Replacement Compo	nents		•		
	Colum	n 1	Column 2	2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Co	•	Name of Manu	facturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
	SUPPORT /RES	RAINT								+

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α	SUPPORT/RESTRAINT #/ AT 38 HP/ PUMP	DPC	NA	N/A	Na	NA	☒ Repaired☐ Replaced☒ Replacement	
В	SUPPORT/RESTRAINT #2 AT 3B HPI PUMP	DPC	NA	MA	NA	NA	☒ Repaired☐ Replaced☐ Replacement	☑ No ☐ Yes
С							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E		٠.					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F	·						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

sheet, and this form.	11 in. (2) inf I (3) each sh	ormation in iten eet is numbere	ns 1 through 6 d and the num	on this republic on the of she	oort is included ets is recorded	on each at the top of
•	TEMPORAR	Y REMOUAL O	F SUPPORTS.	WELDED	SUPPORTS B	ACK IN
7. Description of Work	POSITION.	SHIMED A.	S NECESSAR	Y. INSTAU	ED NEW ANCHO	RS ON S/R#
8. Test Conducted:	Hydrostatio	Pneumatic	☐ Nominal O	perating Pres	ssure Other	☑ Exempt
•	Pressure	psig	Tes	t Temp.	°F	
		psig			°F	
	Pressure	psig	Tes	t Temp.	°F	# ·
9. Remarks						•
	`		-			
·						
	(A	Applicable Manufac	turer's Data Reco	rds to be Atta	ched)	
We certify that the of the ASME Code, S Type Code Symuol St Certificate of Authoriz Signed	tection XI. tamp N/A ration No. N/A		[Expiration Da		ms to the rules
				····		
I, the undersigned, Inspectors and the St Hartford Connecticu to 4.23.97; and staken corrective meas Section XI. By signing this cert concerning the examilinspector nor his emplified arising from or confidence of the section of th	holding a valid ate or Providend at have inspecte state that to the sures described tificate, neither the nations and corologer shall be liable onnected with the	d the components best of my knowle in this Owner's Rethe Inspector nor harective measures cable in any manne	d by the National C'. a described in this dge and belief, the eport in accordant is employer mak described in this r for any persona	Board of Bo nd employed Owner's Rep ne Owner has nce with the re es any warra Owner's Rep al injury or pro	iler and Pressure to by HSBI and I Control of the sperior of the sperior of the equirements of the ort, expressed or it ort. Furthermore, it is perty damage or it is pressed or it is perty damage or it is pressed or it is perty damage or it is pressed or it is perty damage or it is perty damage or it is perty damage or it is perty damage or it is perty damage.	inations and e ASME Code, implied, neither the a loss of any
Date <u>4-23</u> , 19						



1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	201-1006					6/11/97
2.	Plant Address	Oconee Nuc P.O. Box 143	lear Station 9, Seneca, S.C. 29679					Sheet ₋	of /
2a.	Unit] 2	red (specify Units		.)	la ula Ouala	Q7127	PARU - 1
	Address 52 Type Code	6 S. Church S Symbol Stamp	Power Company Street, Charlotte, NC 2820 N/A Authorization No. N/A	Expiration Date N/A	_	3a. w	SM or Mi	r # <u>9703 7</u> Repair Organi M #	zation Job #
4.	Identification	n of System	53B	Class				_	
			on Code <u>831.7</u> Section XI Utilized for Repai ents Repaired or Replaced a			ddenda,	•		_Code Cases
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	-/-	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
ج ق	5/N 3-538-243	%É-DE033	DPC	N/A	N/A	N/A	N/A	☐ Repaired ☐ Replaced ※ Replacement	☑ No ☐ Yes
В								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
Ε								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
F								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

NOTE: Supplemer 8 1/2 in. x sheet, and this form.	11 in. (2) infor (3) each shee	mation in item et is numbered	s 1 through 6 d and the num	wings may be used on this report is ber of sheets is	s included a recorded a	on each at the top of
7. Description of Work	REPLACEN	NENT OF	S/R INTO	POSITION.		
8. Test Conducted:	Hydrostatic	☐ Pneumatic	☐ Nominal Op	perating Pressure	Other	
	Pressure	psig	Test	Temp	°F	
	Pressure	psig	Test	Temp	°F	
	Pressure	psig	Test	Temp	°F	
9. Remarks						
* * * * *	(App	olicable Manufact	urer's Data Recor	ds to be Attached)		
of the ASME Code, Se Type Code Symuol Sta Certificate of Authoriza Signed	amp N/A	Cluu 's Designee, Title	D	Expiration Date N /		
I, the undersigned, Inspectors and the State Hartford Connecticut to 6-//-97; and staken corrective meast Section XI. By signing this certiconcerning the examination of the examinatio	holding a valid co ate or Providence t have inspected t tate that to the be ures described in ficate, neither the nations and correc- oyer shall be liable innected with this	of N. C. the components of st of my knowled this Owner's Reported Inspector nor his citive measures defined in any manner inspection.	by the National ar described in this lge and belief, the port in accordances employer make escribed in this Control for any personal	Board of Boiler and employed by HS Owner's Report due Owner has perfoce with the requirer any warranty, ex Owner's Report. Furniyury or property	GBI and I Cor uring the peri- ermed examin ments of the pressed or in urthermore, no damage or a	mpany of od 5-15-97 nations and ASME Code, nplied, either the loss of any
Inspector's Signa	ature		National Board,	State, Providence	and Endorse	ements
Date <u>6~11</u> , 19 <u>9</u>			,	,		



			AS Required	By The Provisions	Of The ASIV	IE Code Section	XI		Lett-
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 2	8201-1006					3-4-1-8
2.	Plant Address	Oconee Nuc P.O. Box 143	lear Station 9, Seneca, S.C. 29679					Sheet _	of
	Unit			ared (specify Units		_) 3a. Wo	ork Orde	er# <u>97//2</u> Repair Organi	10-01
3 .	Address 52	26 S. Church S	e Power Company Street, Charlotte, NC 2820 o N/A Authorization No. N/	01-1006 A Expiration Date N/A				Répair Organi M # カ 己	zation Job #
4.	Identificatio	on of System_	OIA (MS)	Class	·				
5.	(a) Applica (b) Applica	able Constructi able Edition of	on Code [3_3]. 	19 <u>6</u> 7 Edition,	7-67 A , No Addenda	ddenda,	0		_Code Cases
3. —	Identificatio	n of Compone	ents Repaired or Replaced	and Replacement Compon	ents				
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
4	Snub	i	<i>0</i> . :	///	n/	'n/	54	☐ Repaired ☐ Replaced	Ø No
	5-01/7-4-1	5-2403D-R8	Grinne/	10.354	7/2	יין	7/2	Replacement	☐ Yes
	1 1 M 1 . M h	<i>-</i>	·		1			(. —

		Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
		Snubber 3-01A-4-0-2403D-R8	Grinnell	10354	7/2	かっ	2/2	Repaired Replaced Replacement	✓ No ☐ Yes
		Snubber 3-01A-4-02163D-R8	Grinnell	336/3	ツュ	z	7/2	☐ Repaired ☐ Replaced ☑ Replacement	☐ No ☐ Yes
	С							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
	D							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
-	E							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
	F		,			·		☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

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

7. Description of Work	Kemoved AND	Replaced Snubbe	γ								
8. Test Conducted:	☐ Hydrostatic ☐ Pneumatic	Nominal Operating Pressure	/								
	Pressure psig	Test Temp.	°F								
	Pressure psig	Test Temp.	°F								
	Pressure psig	Test Temp.	°F								
9. Remarks Reo)	Trement Snuhl	ner was tested o	Dex								
Sm	10/A/8/10/00/	per was tested p									
	(Applicable Manufact	urer's Data Records to be Attached)									
	(Applicable Matidiact	urer's bata necords to be Attached)									
		OF COMPLIANCE									
We certify that the of the ASME Code, S		correct and this repair or replacem	ent conforms to the rules								
Type Code Symbol St	tamp N/A										
Certificate of Authoriz	Certificate of Authorization No. N/A Expiration Date N/A										
Signed P L	wen OASPECIALI	57 Date 4-/ , 19	98								
	Owner or Owner's Designee, Title										
l Alea condension and		NSERVICE INSPECTION									
		d by the National Board of Boiler and <u>C</u> and employed by HSE									
Hartford Connecticu	It have inspected the components	described in this Owner's Report dur	ring the period 3-11-98								
to 3.4-1-98; and s	state that to the best of my knowled	dge and belief, the Owner has perform port in accordance with the requirem	med examinations and								
Section XI.	sures described in this Owners he	port in accordance with the requirem	ients of the Asivie Code,								
		s employer makes any warranty, exp									
		lescribed in this Owner's Report. Furt for any personal injury or property d									
	onnected with this inspection.	ioi any personal injury or property u	amage of a loss of any								
		•									
MB Chapme	Commissions	ਮਟੰਗਮ National Board, State, Providence a									
Inspector's Sign		National Board, State, Providence a	and Endorsements								
Date	98										
			Page 2 of 2								



FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

		·							
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	201-1006					8-6-98 1 of 1
2.	Plant Address	Oconee Nuc P.O. Box 143	elear Station 39, Seneca, S.C. 29679					Sheet _	<u> </u>
2a.	Unit	1 [] 2	red (specify Units) 3a W	/ork Orde	r# 9804/30	43
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/A	1-1006 A Expiration Date N/A				r# <u>9804/30</u> Repair Organi 1 # <u>NA</u>	
4.	Identificatio	n of System_	LP	Class2	<u> </u>				
5.	(a) Applica (b) Applica	able Constructi able Edition of	ion Code <u>ANSI</u> <u>B31.</u> Section XI Utilized for Repa	7 19 <u>69</u> Edition, <u>Ac</u> irs or Replacements 198	<u>rqus</u> Ac 3,No Addenda	ddenda,			_Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced a	nd Replacement Compo	nents				
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	Snubber 3-538-5-0-	en 5/R 24358-5R39	Grinnel/		NA	NA	NA	Repaired Replaced Replacement	⊠ No □ Yes
В								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D							·	☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
Ε							-	☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
F							,	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ ·Yes

8 1/2 in. x	(11 in. (2) infoi d (3) each she	rmation in item	tetches, or drawings is 1 through 6 on this diand the number of s	report is	s included	on each
7. Description of Wor	k/nstalled	new reser	voir cylinder b	ody on	S/R 3-53	B-5-0-2435B- <i>SF</i>
8. Test Conducted:	Hydrostatic		☐ Nominal Operating			
	Pressure	psig	Test Temp.		°F	
	Pressure	psig	Test Temp.		°F	
	Pressure	psig	Test Temp.		°F	
9. Remarks						
	(Ap	plicable Manufact	urer's Data Records to be	Attached)		
			OF COMPLIANCE			
of the ASME Code, S Type Code Symbol S	e statements made Section XI. Stamp N/A		correct and this repair of	r replacer	ment confor	ms to the rules
Certificate of Authori			Expiratio	n Date N/	A	
Signed & N	lason	T.U.	Date <u>8</u> -	<u>6</u> , 19	98	
	Owner or Owner	's Designee, Title	· · · · · · · · · · · · · · · · · · ·			
		· · · · · · · · · · · · · · · · · · ·				
Inspectors and the S Hartford Connecticuto to <u>\$\mathbb{S}-10-9\mathbb{S}</u> ; and taken corrective mea Section XI. By signing this cerconcerning the exam	I, holding a valid contains a valid contains a valid contains a valid contains a valid contains a valid contains and corresployer shall be liable connected with this	enmmission issued to of	NSERVICE INSPECT by the National Board of 2 and employer and employer makes any was escribed in this Owner's for any personal injury of the National Research of the National Research of the National Research of the National Research of the National Research of the National Research of the National Research of the National Research of the National Research of the National Research of the National Research of the National Research of the National Research of the National Research of the National Research of the National Board of the National Boar	f Boiler and yed by HS Report du has perfone requirer arranty, ex Report. Fu	BI and I Co uring the per rmed examin ments of the pressed or in orthermore, n	mpany of iod 4-30-98 nations and ASME Code, mplied, neither the
Inspector's Sign		-	National Board, State, F	rovidence	and Endors	ements
Date <u>8 - 10</u> , 19	98					



1.	Owner Address	Duke Pow 526 S. Chu			tte, NC 282	01-1006								3-10-9	
2.	Plant Address	Oconee N P.O. Box 1			29679							S	heet	$\frac{1}{4}$ of $\frac{1}{4}$	
a.	Unit	□ 1	_ 2	⋈ 3	Share	ed (specify Units		_)			C) O N	1 5 4	004	
3.	Work Perfor	rmed By D u	ke Powe	r Compan	y NC 29201	1000			3a. Wo	ork Orde	r# F	7 <i>00</i> Repair (<u>」</u> ひと Organiz	286 ation Job #	 #
	Type Code	Symbol Sta	mp N/A	Authorizati	on No. N/A	Expiration Date N/A			3b. NS	SM or MN	√l#	NA			
4.	Identificatio	n of System	MS	5		Class	, ————————————————————————————————————								
5.	(a) Applica (b) Applica	ble Constru ble Edition (ction Cod of Section	de <u>ANS</u> n XI Utilize	1 B31. d for Repair	19 <u>67</u> Edition, <u>T</u> s or Replacements 1989	9, Mo Addend	Addenda, a						_Code Cas	es
6.	Identificatio	n of Compo	nents Re	paired or F	Replaced an	d Replacement Compor	nents		-						
	Col	umn 1		Column 2	,	Column 2	Calumn 4	0-1							_

	Column 1	Column 2	_ Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	S/R 3-01A-1-1-0-2401B-1442	DPC	NA	NA	NA	NA	Repaired Replaced Replacement	No Yes
В						·	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
F			` 				☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

	11 in. (2)	s in form of lists, sh information in item sheet is numbered	ns 1 through 6	on this report i	s included	on each
7. Description of World	« Well	ded shim	to S/R 3	-01A-1-1-2	D-2401	B-H4Z
8. Test Conducted:	☐ Hydrosta	atic Pneumatic	☐ Nominal Ope	erating Pressure	Other	Exempt Ex
	Pressure	psig	Test 1	Temp	°F	
	Pressure	psig	Test 1	Тетр	°F	
	Pressure	psig	Test 1	Temp	°F	
9. Remarks						
						
<u></u>	· · · · · · · · · · · · · · · · · · ·					
		(Applicable Manufact	urer's Data Record	is to be Attached)		
We certify that the of the ASME Code, Some Code Symbol Some Certificate of Authorities Signed	Section XI. Stamp N/A zation No. N.	made in the report are	E 		′ A	ns to the rules
Inspectors and the S Hartford Connecticuto 8-10-98; and staken corrective mea Section XI. By signing this cer concerning the exam Inspector nor his empty kind arising from or constant of the section o	, holding a va tate or Provid at have inspectate that to the sures describ tificate, neither inations and coloyer shall be onnected with	cted the components he best of my knowled led in this Owner's Re er the Inspector nor hi corrective measures de liable in any manner	d by the National E 2	Board of Boiler ard employed by Hs Owner's Report de Owner has perfore with the require any warranty, expenses Report. Further, or property	SBI and I Co uring the peri ormed examinements of the expressed or in urthermore, no damage or a	mpany of iod 6-1-98 nations and ASME Code, mplied, neither the a loss of any
Inspector's Sign	nature		National Board,	State, Providence	e and Endors	ements
Date <u>8-70</u> , 19	98					



F

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

						0000 00011011	/ \		
1.	Owner Address	Duke Power 526 S. Chur	r Company ch Street, Charlotte, NC 28	201-1006			77	1a. Date	<u>6-18-96</u> of
2.	Plant Address		clear Station 39, Seneca, S.C. 29679					Sheet	<u>/</u> of <u>/</u>
a.	Unit	□ 1	☐ 2	red (specify Units		_)		97021	7661/
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/A	1-1006 Expiration Date N/A				er # <u> </u>	ization Job #
			HPT	Class	2				
5 .	(a). Applica (b) Applica	ble Construct ble Edition of	ion Code <u>B37. 7</u> Section XI Utilized for Repai	19 <u>6</u> Edition, rs or Replacements 198	<u>8-69</u> A 39, No Addenda	ddenda,	10		_Code Cases
3.	Identificatio	n of Compone	ents Repaired or Replaced a	nd Replacement Compo	onents				
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
4	3B HP.	I Pump	INGERSOLL-RAND	43339	NA	NA	NA	Repaired Replaced Replacement	No Ques
3	3B HPI	Pump	INGERSOLL-RAND Ingersoll-RAND	68332	NA	AT 6-18-96 UTC 962476	N/A	☐ Repaired ☐ Replaced ☑ Replacement	✓ No □ Yes
)							•	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
)								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
=	1	,						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

No

Yes

Repaired
Replaced
Replacement

Date <u>8-4</u>, 19<u>97</u>

8 1/2 in. x	11 in. (2) info	ormation in items	etches, or drawings m s 1 through 6 on this and the number of sl	eport is included	l on each
7. Description of Wor	Replaced	3B HPT P	ump, CASING	boH5, and	Flanse bo
8. Test Conducted:		☐ Pneumatic			
	Pressure	psig	Test Temp.	· °F	•
		psig	Test Temp.		
	Pressure		·	°F	
9. Remarks		. •	·		*
3. Fieliarks					

		···			
	(A	pplicable Manufactu	rer's Data Records to be A	ttached)	
We certify that the of the ASME Code, Someon Support of Authorical Signed	Section XI. Stamp N/A zation No. N/A	e in the report are	Date_ &	replacement conformal Date N/A	rms to the rules
	CER	TIFICATE OF II	NSERVICE INSPECT	ION	······································
Inspectors and the S Hartford Connectice to <u>8-4-97</u> ; and taken corrective mea Section XI. By signing this cer concerning the exam	tate or Providence of have inspected state that to the testines described rtificate, neither the inations and correlations and correlations.	the of A.C. If the components of the components	by the National Board of and employ and employ described in this Owner's I ge and belief, the Owner boort in accordance with the employer makes any was escribed in this Owner's Refor any personal injury or	ed by HSBI and I C Report during the penas performed exame requirements of the rranty, expressed or eport. Furthermore,	ompany of priod <u>3-4-97</u> inations and e ASME Code, implied, neither the
M,B Chay Inspector's Sign	onture (Commissions	NCG14 National Board, State, Pr	ovidence and Endor	reamante



1.	Owner	Duke Power	Company						/ 220
•	Address	526 S. Chur	ch Street, Charlotte, NC 28	201-1006					6-23-9,
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679					Sheet ₋	of
2a.	Unit	□ 1] 2	red (specify Units		_)		0 h = 1	
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 2820 ⁻ p N/A Authorization No. N/A	1-1006 Expiration Date N/A				r # <u> </u>	
4.	Identificatio	n of System_	HPI	Class2) -				_
			ion Code <u>B31. 7</u> Section XI Utilized for Repai			ddenda,	0		_Code Cases
6.	Identification	n of Compone	ents Repaired or Replaced a	nd Replacement Compo	nents				
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of 6	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	HPI PU	000/	INGENSON-RAND	28/0/	NA		NA	☐ Repaired ☐ Replaced ☐ Replacement	No Yes
В	HPT PU	0001	INGERSON-RAND	43408	NA	UTC # 962133	NA	☐ Repaired ☐ Replaced ☐ Replacement	✓ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D						-		☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

8 1/2 in. x sheet, an this form.	x 11 in. (2) information in items id (3) each sheet is numbered	etches, or drawings may be used, provided (1) size is s 1 through 6 on this report is included on each and the number of sheets is recorded at the top of
7. Description of Wor	rk Replaced 3A	"HPI PUMP
8. Test Conducted:		Nominal Operating Pressure Other Exempt
	Pressure psig	Test Temp°F
	Pressurepsig	Test Temp °F
	Pressure psig	Test Temp°F
9. Remarks		•
		· · · · · · · · · · · · · · · · · · ·
	(Applicable Manufactu	urer's Data Records to be Attached)
of the ASME Code, Type Code Symuol S Certificate of Author	Section XI. Stamp N/A rization No. N/A	Expiration Date N/A Date 4-4, 1977
	055550475.051	
Inspectors and the S Hartford Connectic to <u>8-4-91</u> ; and taken corrective mea Section XI. By signing this ce concerning the exan Inspector nor his em	d, holding a valid commission issued State or Providence of	NSERVICE INSPECTION by the National Board of Boiler and Pressure Vessel and employed by HSBI and I Company of described in this Owner's Report during the period 5-5-97 lige and belief, the Owner has performed examinations and port in accordance with the requirements of the ASME Code, semployer makes any warranty, expressed or implied, escribed in this Owner's Report. Furthermore, neither the for any personal injury or property damage or a loss of any
MB Afra	Lacad . Commissions	1/29//
Inspector's Sig	gnature	National Board, State, Providence and Endorsements
Date <u> </u>	9 <u>97</u>	



1.	Owner Address	Duke Pow 526 S. Chu	er Com urch Str	pany eet, Charlotte, N(C 28201-1006				-	//-7-97
2.	Plant Address	Oconee No P.O. Box 1		Station neca, S.C. 29679					Sheet _.	of
2a.	Unit	□ 1	_ 2	≠ 3 □	Shared (specify Units		_)		05.45	
3.	Address 52	6 S. Church	Street	er Company , Charlotte, NC 2	8201-1006				er# <u>97065</u> Repair Organ	フタ&-ジ ization Job #
4.				_	N/A Expiration Date N/		3b. NS	SM or MI	M#	
5.	(a) Applica (b) Applica	ble Constru ble Edition o	ction Co of Section	ode <u>83/. 7</u> on XI Utilized for R	19 <u>6</u> Edition epairs or Replacements	, <u> </u>	Addenda,	0		Code Cases
6.	Identificatio	n of Compo	nents R	epaired or Replace	ed and Replacement Cor	mponents				
	Col	umn 1		Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Nan	ne of Manufacture	er Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	3B HPI	Pump	In	ersoll-RAW	0 68332	NA	HPI PU 0002	N/A	☐ Repaired ☐ Replaced ☐ Replacement	✓ No
В	3B HPI	Pump	Ive	ersoll-RANI jensoll-RANI	43339	NA	HPI Pu 0002 HPI Pu 0002	M/A-	☐ Repaired ☐ Replaced ☑ Replacement	☑ No ☐ Yes
С									☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D					,				☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E	,		·						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F									☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

Date 1/- 7 , 19 97

8 1/2 in. x	11 in. (2) information in ite	sketches, or drawings may be in ms 1 through 6 on this report in ed and the number of sheets is	s included on each
7. Description of Wor	K Replaced 3B.	HPI Pump	
8. Test Conducted:	•	Nominal Operating Pressure	Other Exempt
	Pressure 3080 psig	Test Temp.	·
•	Pressure psig	Test Temp.	°F
	Pressure psig	Test Temp.	' °F
9. Remarks	paig	rost femp.	'
·			
	(Applicable Manufa	cturer's Data Records to be Attached)	
of the ASME Code, S Type Code Symuol S Certificate of Authori	e statements made in the report a Section XI. Stamp N/A (zation No. N/A	TE OF COMPLIANCE The correct and this repair or replace Expiration Date N/ Date 1/- 7- , 1	A
Inspectors and the S Hartford Connectic to 11-7-97; and taken corrective mea Section XI. By signing this ce- concerning the exam Inspector nor his em	I, holding a valid commission issues tate or Providence of	ed by the National Board of Boiler and employed by HS and employed by HS is described in this Owner's Report diedge and belief, the Owner has performed in accordance with the requires this employer makes any warranty, exist described in this Owner's Report. Further for any personal injury or property	SBI and I Company of uring the period 9-27-97 ormed examinations and ments of the ASME Code, apressed or implied, urthermore, neither the
Inspector's Sig		National Board, State, Providence	and Endorsements



F

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

		··	As nequired	by the Provisions	Of the ASI	WE Code Section	Χi		
1.	Owner Address	Duke Power 526 S. Chur	r Company ch Street, Charlotte, NC 282	201-1006					1-6-98
2.	Plant Address		clear Station 39, Seneca, S.C. 29679		· ,			Sheet	_/ of _/
2a.	Unit	1	ີ 2 📈 3 🗆 Shar	red (specify Units		_)	anda Ouala	9746	716.41
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 28201 p N/A Authorization No. N/A	I-1006 Expiration Date N/A				r # <u>97/08</u> Repair Organ M #	
		n of System_		Class					
5.	(a) Applica (b) Applica	ble Construct ble Edition of	ion Code <u> <i>B31.7</i></u> Section XI Utilized for Repair	19 <u>69</u> Edition, rs or Replacements 198	8-69 89, No Addenda	Addenda,a		0	_Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced ar	nd Replacement Compo	onents				
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α	VAIV.		VELAN	NA	NA	Model B9-314B-13MS	W _A	☐ Repaired ☐ Replaced ☐ Replacement	✓ No ☐ Yes
В		•					·	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
Ε								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

No ☐ Yes

☐ Repaired ☐ Replaced ☐ Replacement

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

	x 11 in. (2) inford (3) each she						
7. Description of Wor	rk Replaced	body to e	bonnet	balting	VA	lve	3HP-122
8. Test Conducted:	Hydrostatic			al Operating P			
)	Pressure	psig		Test Temp.		°F	
	Pressure	psig		Test Temp.		°F	
	Pressure	psig		Test Temp.		°F	
9. Remarks							
	(Ap	plicable Manufact	urer's Data R	lecords to be A	ttached)		
We certify that the of the ASME Code, Type Code Symbol Sertificate of Author Signed All	Stamp N/A		•	Expiration	Date N/A	A	forms to the rules
							
Inspectors and the Section XI.	d, holding a valid of State or Providence out have inspected state that to the beasures described in ertificate, neither the ninations and corresployer shall be liab connected with this	the components est of my knowled this Owner's Re e Inspector nor his ective measures dole in any manner	d by the Nation described in described in accordance is employer a described in the for any personal described in the for any personal described in the for any personal described in the for any personal described in the for any personal described in the for any personal described in the for any personal described in the formal described in	onal Board of and employ this Owner's Fef, the Owner I rdance with the makes any was this Owner's Resonal injury or	Boiler and ed by HS Report dunas perfore requirer rranty, expending the property	BI and I iring the p rmed examents of the oressed of rthermore damage of	Company of period 12-17-57 iminations and the ASME Code, or implied, e, neither the or a loss of any
Date /- 6 , 19	9 <u>48</u>						



1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	3201-1006			,		10/21/98
2.	Plant Address	Oconee Nuc P.O. Box 143	elear Station 19, Seneca, S.C. 29679				·	Sheet	<u> </u>
2a.	Unit	□ 1] 2 🔀 3 🗆 Sha	ared (specify Units		.)	ta ala Osala	r# <u>98042</u> ¢	121-04
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/A	01-1006 A Expiration Date N/A				Repair Organ	ization Job #
4.	Identificatio	n of System_	m\$	Class	2		•		
	(b) Applica	ble Edition of	on CodeB31.1 Section XI Utilized for Repa	airs or Replacements 198	9, No Addenda	ddenda,			_Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced a	and Replacement Compo	nents			`	
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
~	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α	Valve		Crane	Unknown	N/A	N/A	NA	☐ Repaired ☐ Replaced ※ Replacement	X No ☐ Yes
В								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

8 1/2 in. x	: 11 in. (2) infor	mation in item	etches, or drawings s 1 through 6 on this I and the number of	s report is	included	on each
7. Description of Wor	k Replaced	Body / Bo	onnet studs in	Valve 3	3m\$ - 3	33
8. Test Conducted:	Hydrostatic	Pneumatic	☐ Nominal Operating	Pressure	Other	X Exempt
	Pressure	psig	Test Temp.		°F	
	Pressure	psig	Test Temp.			
	Pressure	psig	Test Temp.		°F	
9. Remarks						
						-
	(App	olicable Manufacti	urer's Data Records to be	Attached)		
we certify that the of the ASME Code, Someon State of Authorical Signed	Section XI. Stamp N/A	secialist	Date 10	or replacen on Date N/A - <u>21</u> , 19		ns to the rules
Inspectors and the S Hartford Connectice to 10-32-98; and taken corrective mea Section XI. By signing this cereconcerning the exam	I, holding a valid co tate or Providence ut have inspected t state that to the be sures described in rtificate, neither the inations and correct ployer shall be liable	ommission issued of	by the National Board of and employers and belief, the Owner's cort in accordance with the semployer makes any wescribed in this Owner's for any personal injury of	of Boiler and by HS by H	BI and I Co ring the peri med examin nents of the pressed or in thermore, n	mpany of iod 10-32-98 nations and ASME Code, mplied, neither the
MB Chaps Inspector's Sign		ommissions	NC 9/リ National Board, State,	Providence	and Endors	ements
Date <u>/0-22</u> , 19						23



1.	Owner Address	Duke Power 526 S. Chur	· Company ch Street, Charlotte, NC 2	8201-1006				1a. Date	11-19-98
2.	Plant Address	Oconee Nuc						Sheet _	1_ of 1
2a.	Unit	□ 1]2 🛛 3 🔲 Sh	ared (specify Units		_)		00	.
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/	01-1006 'A Expiration Date N/A				r# <u>980114</u> Repair Organ	ization Job #
4.	Identificatio	n of System_	<u></u>	Class	2				
	(b) Applica	ible Edition of	ion Code <u>B31.1</u> Section XI Utilized for Repa	airs or Replacements 1989	, No Addenda	ddenda,			_Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced	and Replacement Compon	ents				
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
•	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α	Valve 3CS-1	12	Anchor/Darling	£1581-55-2	712	NIA	1986	☐ Repaired ☐ Replaced ☒ Replacement	☐ No Yes
В			J					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
C								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D						•		☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
Ε								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

	ntal sheets in f 11 in. (2) infor I (3) each she	mation in iten	ns 1 throug	h 6 on this	s report is	included	on each
7. Description of Work	Replaced	Bonnet	Nut on	Valve	3C\$ -	12	
8. Test Conducted:	Hydrostatic	Pneumatic	☐ Nomina	al Operating	Pressure	Other	X Exempt
	Pressure	psig		Test Temp.		°F	
	Pressure	psig		Test Temp.		°F	
	Pressure	psig	•	Test Temp.	 	°F	
9. Remarks							
-							
	(Ар	plicable Manufact	turer's Data R	ecords to be	Attached)		
We certify that the of the ASME Code, S Type Code Symbol St Certificate of Authoriz	ection XI. tamp N/A	Speciali	đ		on Date N/A		ms to the rules
I, the undersigned, Inspectors and the St. Hartford Connecticut to _//-/9-98; and staken corrective meast Section XI. By signing this cert concerning the examination of the examination of the section	holding a valid co ate or Providence it have inspected state that to the be sures described in tificate, neither the nations and corre- loyer shall be liab onnected with this	the components est of my knowled this Owner's Reset Inspector nor hoctive measures of the in any manners inspection.	d by the Nation described in dge and belie eport in accordise employer in described in the for any persistence of the second se	onal Board of and employ this Owner's of, the Owned dance with the makes any whis Owner's	of Boiler and by HSI is Report during that perfor he required rarranty, exp. Report. Fur	BI and I Co ring the peri med examin nents of the pressed or in	mpany of iod //- 3 - 98 nations and ASME Code, mplied, neither the
Inspector's Sign	ature Co	ommissions^	<i>VC 914</i> National Bo	ard, State, I	Providence	and Endara	omente
Date //- /9 , 19			rianonal Du	aru, State, I	TOVIDENCE	anu Enuors	ements S



1.	Owner Address	Duke Power 526 S. Churc	· Company ch Street, Charlotte, NC 28	3201-1006				1a. Date	12-3-98		
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679					Sheet _.	1 of 1		
2a.	Unit	<u> </u>] 2 📉 3 🗆 Sha	ared (specify Units		.)		0	20		
3.	3a. Work Order # 97039973 - Repair Organization Job # Type Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A 3a. Work Order # 97039973 - Repair Organization Job # 3b. NSM or MM #										
4.	Identificatio	n of System_	LP	Class 🥏							
	(-)		ion Code <u>B31.7</u> Section XI Utilized for Repa ents Repaired or Replaced a	and of Fiopiacements 100	o, No Addenda	ddenda,	-		_Code Cases		
	T	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8		
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)		
A	Valve 3LP-	21	Powell	62546	Alu	N/A	A/A	☐ Repaired ☐ Replaced ☒ Replacement	No □ Yes		
В		·				·		☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes		
C								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes		
D				·				☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes		
E			-					☐ Repaired ☐ Replaced ☐ Replacement	·□ No □ Yes		
F			-					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes		

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in. (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.									
7. Description of Work	Replaced	2 Body	/Bonnet	Nutson	valve 3	LP-al			
8. Test Conducted:			Nominal Ope						
	Pressure	psig	Test To	emp	°F				
	Pressure	psig	Test Te	emp	°F				
	Pressure	psig	Test Te	emp	°F				
9. Remarks									
	(Applica	able Manufactur	er's Data Records	s to be Attached	i)				
We certify that the of the ASME Code, Some of the ASME Code, Some of Some of Some of Authorization of Authorizations of	tamp N/A	ecialist	Ex	epair or replace principle	N/A	ms to the rules			
Inspectors and the St Hartford Connecticuto 12.3-98; and staken corrective meast Section XI. By signing this cert concerning the examilinspector nor his emp	holding a valid commate or Providence of _ It have inspected the obtate that to the best of sures described in this tificate, neither the Instantions and corrective ployer shall be liable in pronnected with this inspected.	components de A.C. components de f my knowledge Owner's Reporter nor his e measures des any manner for pection.	and escribed in this O e and belief, the ort in accordance employer makes scribed in this Ov	oard of Boiler a employed by In employed by In owner's Report with the require any warranty, a wner's Report. In	dSBI and I Co during the per formed examinatements of the expressed or in furthermore, n	mpany of iod 10-29-98 nations and ASME Code, mplied, teither the			
Inspector's Sign	ature		2 9/ √ National Board, S	State, Providence	ce and Endors	ements			
	a./		, -	,					



1.	Owner Address	ess 526 S. Church Street, Charlotte, NC 28201-1006									
2.	Plant Address										
2a.	Unit	_ 1	2 🛚 3	Shar	ed (specify Units		.)		000100		
3.	3a. Work Order # 980133 26 -01 Repair Organization Job # Type Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A 3a. Work Order # 980133 26 -01 Repair Organization Job # 3b. NSM or MM #										
4.	Identificatio	n of System_	CF		Class						
	(b) Applica	ible Edition of	Section XI Utilize	d for Repair	19 <u>69</u> Edition, s or Replacements 198	9, No Addenda	ddenda,			Code Cases	
6.	Identificatio	n of Compone	ents Repaired or I	Replaced ar	nd Replacement Compo	nents					
	Col	umn 1	Column	2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8	
	Name of	Component	Name of Manu	facturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)	
Α	Valve 3CF-	13	Crane	·	7913	NIA	NA	NA	☐ Repaired ☐ Replaced ☒ Replacement	⊠ No □ Yes	
В									☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
С	-			-					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
D				•					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
Ε									☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
F									Repaired Replaced	☐ No Yes	

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

7. Description of Work Replaced Disc in Valve 3CF-13	
8. Test Conducted: Hydrostatic Pneumatic Nominal Operating Pressure Other Exemp	ot
Pressure psig Test Temp °F	
Pressure psig Test Temp °F	
Pressure psig Test Temp °F	
9. Remarks	
(Applicable Manufacturer's Data Records to be Attached)	
CERTIFICATE OF COMPLIANCE	-
We certify that the statements made in the report are correct and this repair or replacement conforms to the rul of the ASME Code, Section XI.	es
Type Code Symbol Stamp N/A	
Certificate of Authorization No. N/A Expiration Date N/A	
Signed Atooh OC Specialist Date 11-18 1998	
Owner or Owner's Designee, Title	
CERTIFICATE OF INSERVICE INSPECTION	
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of and employed by HSBI and I Company of	
Hartford Connecticut have inspected the components described in this Owner's Report during the period _//-3-98	,
to 4/-19-98; and state that to the best of my knowledge and belief, the Owner has performed examinations and	
taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code Section XI.	Э,
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied,	
concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the	
Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.	
2	
MB Chapman Commissions NC914	
Inspector's Signature National Board, State, Providence and Endorsements	—
Date //- /9 , 19 98	



									····			
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	3201-1006				1a. Date	12-9-98			
2.	Plant Address	Oconee Nuc						Sheet ₋	<u>l</u> of <u>l</u>			
2a.	Unit	<u> </u>] 2 🔀 3 🗆 Sha	ared (specify Units)		00.445	11.7 61			
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 2820 o N/A Authorization No. N/A	A Expiration Date N/A				Repair Organi	zation Job #			
4.	. Identification of System CF Class											
5.	5. (a) Applicable Construction Code B31.7 1969 Edition, — Addenda, Code Cases (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1989, No Addenda											
6.	Identificatio	n of Compone	ents Repaired or Replaced a	and Replacement Compo	nents				•			
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8			
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)			
A	Valve BCF-	12	Crane	Unavailable	Unavailable	NA	NA	☐ Repaired ☐ Replaced ☒ Replacement	☐ No ဩ Yes			
В								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes			
C								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes			
D								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes			
E			·					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes			
F	. ,.							☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes			

Date 12-14, 1998

8 1/2 in. x	11 in. (2) informati	ion in items 1 th	s, or drawings may be un rough 6 on this report is the number of sheets is	s included on each
7. Description of World	Replaced di	sc in value	3CF-12	,
8. Test Conducted:	☐ Hydrostatic ☐	Pneumatic 🗌 N	ominal Operating Pressure	☐ Other
	Pressure	psig	Test Temp.	°F
	Pressure		Test Temp.	 °F
	Pressure		Test Temp.	~F
9. Remarks				
	(Applicat	ole Manufacturer's C	Pata Records to be Attached)	
We certify that the of the ASME Code, S	statements made in th	RTIFICATE OF (e report are correc	COMPLIANCE tand this repair or replacer	ment conforms to the rules
Type Code Sym⊍ol S	tamp N/A			
Certificate of Authoriz	zation No. N/A		Expiration Date N/	4
Signed P	to moc.	ecialist esignee, Title	Date 12 - 9 , 19	
Inspectors and the St Hartford Connecticute to 12-14-98; and staken corrective measurements Section XI. By signing this cere concerning the examinspector nor his empty.	holding a valid commistate or Providence of	ssion issued by the N.C. omponents describ my knowledge and Owner's Report in sector nor his employeector nor his employeector describe any manner for any	National Board of Boiler and employed by HS ed in this Owner's Report du belief, the Owner has perfoaccordance with the requirer over makes any warranty, exed in this Owner's Report. Fur personal injury or property	rmed examinations and ments of the ASME Code, pressed or implied, rthermore, neither the
MB Chapus	Commi	ssions NC9	14	(
Inspector's Sign			nal Board, State, Providence	and Endorsements



1.	Owner Address	Duke Power 526 S. Chur	· Company ch Street, Charlotte, NC 2	8201-1006					12-9-98
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679					Sheet _	l_ of
2a.	Unit	□ 1]2 🕅 3 ☐ Sh	ared (specify Units				00.15	11 .
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 282 p N/A Authorization No. N	01-1006 /A Expiration Date N/A				r# <u>980133</u> Repair Organ M#	ization Job #
4.	Identification	on of System_	CF	Class					
	(b) Applica	ible Edition of	Section XI Utilized for Rep.	19 <u>69</u> Edition, airs or Replacements 1989 and Replacement Compor), No Addenda	ddenda,			Code Cases
		lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	Valve 3CF-	-11	Crane	Unavailable	Unavailable	N/A	N/A	☐ Repaired ☐ Replaced ☑ Replacement	☐ No Yes
В								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D							·	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E		· ·						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

Date 12-14, 19 98

8 1/2 in. x	< 11 in. (2) infor d (3) each shee	mation in item	etches, or drawings may be s 1 through 6 on this report is and the number of sheets is	s included	on each
7. Description of Wor	k <u>Replaced</u>	discinu	alve 3CF-11		
8. Test Conducted:	Hydrostatic	Pneumatic	☐ Nominal Operating Pressure	☐ Other	X Exempt
	Pressure	psig	Test Temp.	°F	
		psig	Test Temp.		
•		psig	Test Temp.	· °F	
O Domorko		I U		<u> </u>	
9. Remarks					
 	·				
	(Ap _l	plicable Manufactu	urer's Data Records to be Attached)		
We certify that the of the ASME Code, Type Code Symbol Some Certificate of Authority Signed	e statements made Section XI. Stamp N/A	in the report are	COF COMPLIANCE correct and this repair or replace Expiration Date No.	′ A	ns to the rules
		TEIOATE OF II	NOEDWOE WODERTON		
Inspectors and the S Hartford Connectic to /2-/4-98/; and taken corrective mea Section XI. By signing this ce concerning the exam	d, holding a valid contains a valid contains a valid contains a valid contains a valid contains a valid contains and correct ployer shall be liab	the components of the componen	NSERVICE INSPECTION by the National Board of Boiler are and employed by High described in this Owner's Report of ge and belief, the Owner has perfector in accordance with the requires employer makes any warranty, expescribed in this Owner's Report. For any personal injury or property	SBI and I Con uring the peri ormed examin ements of the expressed or in urthermore, n	mpany of od _// nations and ASME Code, mplied, either the
Inn AP	0.		1		
Inspector's Sig		ommissions	National Board, State, Providence	e and Endorse	ements



1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 2	8201-1006				1a. Date	•
2.	Plant Address	Oconee Nuc P.O. Box 143	elear Station 19, Seneca, S.C. 29679					Sheet	1 of <u> </u>
2a.	Unit	1	2 🛛 3 🗆 Sh	ared (specify Units		.)		Goalla	10 AL
3.	Address 52	6 S. Church 9	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/	01-1006 A Expiration Date N/A				r# <u>98042</u> Repair Organ M#	
4.	Identificatio	n of System_	M\$	Class	2				7
•	(b) Applica	ble Edition of	on Code <u>B31.1</u> Section XI Utilized for Repa	airs or Replacements 198	39, No Addenda	ddenda,			Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced	and Replacement Compo	onents				
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α	Valve 3ms	-24	Crane	Unavailable	NA	NA	NA	☐ Repaired ☐ Replaced ☒ Replacement	⊠ No ☐ Yes
В								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
E		-				-		☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

	ental sheets in fo 11 in. (2) inforr d (3) each shee	nation in item	ns 1 through	6 on this	report is	included	on each
7. Description of Work	Replaced B	ody/Bonnet	bolting c	and dis	c in Va	ilve 3m	15-24
8. Test Conducted:	☐ Hydrostatic	Pneumatic	☐ Nominal	Operating I	Pressure	Other	🔀 Exempt
	Pressure	psig	Te	est Temp.		°F	
	Pressure	psig	T	est Temp.		°F	
	Pressure	psig	Te	est Temp.		°F	
9. Remarks							

	(App	licable Manufact	urer's Data Re	cords to be	Attached)	,	
We certify that the of the ASME Code, S Type Code Symbol S Certificate of Authoriz Signed	tamp N/A	pecialist			n Date N/	A	ms to the rules
	CEDII	FICATE OF I	NCEDVICE	MCDEO	TION.		
I, the undersigned, Inspectors and the St Hartford Connecticuto _/-7-99; and staken corrective measurements. By signing this cere concerning the examins linspector nor his empth kind arising from or cere.	holding a valid contate or Providence of the tate or Providence of the tate that to the best sures described in the tificate, neither the inations and correct ployer shall be liable	of	d by the Nation 2. described in the dge and belief, port in accord s employer materials escribed in the described in the des	nal Board of and emploins Owner's the Owner ance with the akes any was is Owner's F	Boiler and yed by HS Report du has perfor le requirer arranty, expression de la report. Fui	BI and I Co ring the per med exami nents of the pressed or i	mpany of jidd _//> 98
Inspector's Sign	nature	mmissions	<i>SC914</i> National Boa	ard, State, P	rovidence	and Endors	sements



1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 2	8201-1006					11-24-9
2.	Plant Address	Oconee Nuc P.O. Box 143	elear Station 19, Seneca, S.C. 29679					Sileet _	<u> </u>
2a.	. Unit	<u> </u>]2 💢3 🗆 Sh	ared (specify Units)	raula Quala	980097	15
3.	Address 52	6 S. Church S	e Power Company Street, Charlotte, NC 282 p N/A Authorization No. N	01-1006 /A Expiration Date N/A		3a. w	ork Orde SM or Mi	r# <u>980097.</u> Repair Organi D#	ization Job #
4. 5.	Identificatio (a) Applica (b) Applica	n of System_ ble Constructi ble Edition of	on Code ASME TIL Section XI Utilized for Rep	Class	//////////////////////////////////////	(7 ddenda, <u>/332-2</u> /336//	3591	1/1339-/	Code Cases 3
6.	Identificatio	n of Compone	ents Repaired or Replaced	and Replacement Compor	nents	, 507		, , , , , , ,	
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α	38	0756	BAW	620-0009-55-2	N128		1971	Repaired Replaced Replacement	□ No ※ Yes
В								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D		1						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E			:			·		☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F								Repaired Replaced	☐ No

8 1/2 in. x	: 11 in. (2) i	information in it	ems 1 through 6 on th	s may be used, provided his report is included on f sheets is recorded at t	each
			/ 45		
7. Description of Wor	k KEPAII	RED lube	SIN 38 OTS	<i>G</i> .	
8. Test Conducted:	Hydrosta	atic 🗀 Pneumat	ic	g Pressure $\;\;\Box$ Other $\;\;m{\chi}$	Exempt
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
9. Remarks					
- 		(Applicable Manuf	acturer's Data Records to t	pe Attached)	
of the ASME Code, S Type Code Symuol S Certificate of Authori	Section XI. Stamp N/A zation No. N	ià, /	Expira DA SPECIALIST de la companya de la companya de la companya de la companya de la companya de la companya de la c De la companya de la companya de la companya de la companya de la companya de la companya de la companya de la	tion Date N/A	o the rules
Inspectors and the S Hartford Connecticuto //- 25-98/; and staken corrective mea Section XI. By signing this cer concerning the exam	, holding a valuate or Provident have inspected that to the sures describing tificate, neither inations and coloyer shall be	lid commission ission ence of	and empts described in this Owner ledge and belief, the Own Report in accordance with this employer makes any sidescribed in this Owner'	of Boiler and Pressure Vess bloyed by HSBI and I Compa r's Report during the period er has performed examination the requirements of the ASI warranty, expressed or implies s Report. Furthermore, neith or property damage or a los	any of //-3-98 ons and ME Code, ed, er the
M.B. Chap	man	Commissions	NC914		
Inspector's Sign	nature			Providence and Endorseme	ents
Date //- 35 , 19	94				



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section VI

			As nequired	a by the Provisions	Of the ASM	E Code Section	ΧI						
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 2	8201-1006				1a. Date 🗸	11-24-98 1 of 1				
2.	Plant Address	Oconee Nuc P.O. Box 143	lear Station 9, Seneca, S.C. 29679					Sheet ₋	of				
2a.	Unit	1] 2	ared (specify Units		.)		900.0	720				
3.	Work Performed By Duke Power Company Address 526 S. Church Street, Charlotte, NC 28201-1006 Type Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A 3a. Work Order # 98009730 Repair Organization Job # 11460												
4.	Identificatio	n of System	Re	Class					·				
5.	(a) Applica (b) Applica	ble Constructi ble Edition of	on Code ASME 777 Section XI Utilized for Repa	1965 Edition Surairs or Replacements 1989	No Addenda	ddenda, <u>/332-2</u> / 3 36 /	, 3,4	1339-1	_Code Cases				
6.	Identificatio	n of Compone	ents Repaired or Replaced	and Replacement Compor	nents	1550/	, 50	1 1 / / 550	5477161.				
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8				
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)				
A	3A 0	756	B+W	620-0009-55	-1 N127	/	971	Repaired Replaced Replacement	☐ No ▶ Yes				
В			-					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes				
С								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes				
D								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes				
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes				

No

Yes

☐ Repaired ☐ Replaced ☐ Replacement

8 1/2 in. x	11 in. (2) info	rmation in item	tetches, or drawings in a second second thing the second sec	report is	included	on each
7. Description of Wor	k KEPRIKED	3A OTS	G TUBES.			
8. Test Conducted:	Hydrostatic	Pneumatic	☐ Nominal Operating	Pressure	Other	Exempt
	Pressure	psig	Test Temp.		°F	
	Pressure	psig	Test Temp.		°F	
	Pressure	psig	Test Temp.		°F	
9. Remarks		•				
5. Hemarks						
	(An	inlicable Manufact	urer's Data Records to be	Attached)	· · · · · · · · · · · · · · · · · · ·	
	(44)	phoable Maridiact	diei 3 Data necolus to be	Attacheu)		
We certify that the of the ASME Code, S Type Code Symbol S Certificate of Authori Signed	Section XI. Stamp N/A zation No. N/A	2	versist Date 11-	n Date N/A		ms to the rules
						. 1
Inspectors and the S Hartford Connectice to //-ay-98 ; and taken corrective mea Section XI. By signing this cer concerning the exam	, holding a valid contate or Providence of the have inspected state that to the besures described in tificate, neither the inations and corresployer shall be liable connected with this connected with this connected with the second corresponding to the high connected with the connected with the connected with this connected with this connected with the connected with this connected with this connected with this connected with this connected with this connected with this connected with this connected with this connected with this connected with the connected with the connected with this connected with this connected with the connected with this connected with the connected with the connected with this connected with the connect	ommission issued to of	by the National Board of and employer makes any water borred in this Owner's I for any personal injury of National Board, State, F	f Boiler and yed by HSI Report du has perfor ne requiren arranty, expReport. Fur r property o	BI and I Co ring the per med exami nents of the pressed or i rthermore, r damage or a	ompany of riod /1-3-98 nations and e ASME Code, mplied, neither the a loss of any
,			Tanona Dourd, Orale, 1	TOVIGORIOE	and Endois	JOHIGHIG (
Date //- 14 19	48					į



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

			7.0 7.04404	by file i levisions	Of the Aon	in odde occilon	Λi							
1.	Owner Address	Duke Power 526 S. Chur	Company ch Street, Charlotte, NC 28	201-1006					//-30-98					
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679					Sheet _	<u>/</u> of <u>/</u>					
	Address 52	rmed By Duk e 6 S. Church :	e Power Company Street, Charlotte, NC 2820					r# <u>980923</u> Repair Organi						
4. 5.	Identificatio (a) Applica	Type Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A dentification of System												
6.	Identificatio	n of Compone	ents Repaired or Replaced a	and Replacement Compo	nents									
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8					
•	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)					
A	BOLT BOLT	7NG	NX	N/A	NX	NA	NA	☐ Repaired ※ Replaced ☐ Replacement	⊠ No □ Yes					
В.	BOLT	TNG	NA	NA	NA	NX	MA	☐ Repaired ☐ Replaced ☒ Replacement	☑ No ☐ Yes					
C						-		☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes					
כ		·						☐ Repaired ☐ Replaced ☐ Replacement	☐ No☐ Yes					
= '								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes					

Yes

No

☐ Repaired
☐ Replaced
☐ Replacement

8 1/2 in. x	ental sheets in form of 11 in. (2) information d (3) each sheet is n	n in items 1	through 6 on this	report is include	ded on each
				MEDID	
7. Description of Wor	K KEPLACED	BOLTING	(ON) 3A O	561 RISA	ER # 20
8. Test Conducted:	☐ Hydrostatic ☐ P		Nominal Operating	/	
	Pressure	_ psig	Test Temp.	°F	,
	Pressure	psig	Test Temp.	°F	
	Pressure	_ psig	 Test Temp. 	°F	
9. Remarks					
	(Applicable	Manufacturer'	s Data Records to be	Attached)	
We certify that the of the ASME Code, Some Code Symbol Some Certificate of Authorical Signed Certificate Actions Signed Certificate Of Authorical Signed Certificate	e statements made in the Section XI. Stamp N/A	report are com		n Date N/A	·
Inspectors and the S Hartford Connectice to	, holding a valid commiss tate or Providence of ut have inspected the corstate that to the best of mosures described in this Outlificate, neither the Insperinations and corrective moloyer shall be liable in an acconnected with this inspectation.	mponents description issued by the monents description is a monent in the monent is a monent in the monent is a monent in the monent is a monent in the monent is a monent in the monent is a monent in the monent is a monent in the monent is a monent in the monent is a monent in the	and emplo ribed in this Owner's and belief, the Owner in accordance with the policyer makes any waibed in this Owner's I	Boiler and Press yed by HSBI and Report during the has performed experienced requirements of the property damage	e period //-5-98 caminations and f the ASME Code, or implied, ore, neither the e or a loss of any
Date <u>//- 30</u> , 19	98		•		Ì



1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlot	te, NC 28201-1006	;			•		12-2-98
2.	Plant Address	Oconee Nuc P.O. Box 143	elear Station 39, Seneca, S.C. 29	9679					Sheet	of
a.	Unit	□ 1 □	2 🔀 3	Shared (spec	cify Units		_)		agna.	707/
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, I p N/A Authorizatio	NC 28201-1006	ion Date N/A				# <u>98092</u> Repair Organ	
4.	Identificatio	n of System_	MFDW	- A 1 7	Class	<u></u>				
5.	(a) Applica (b) Applica	ble Constructi ble Edition of	ion Code #/5/ Section XI Utilized	for Repairs or Rep	Edition, placements 198	Nø Addenda	.ddenda,			_Code Cases
6.	Identificatio	n of Compone	ents Repaired or Re	eplaced and Repla	cement Compo	onents				
	Col	umn 1	Column 2		Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufa		nufacturer ial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α '	PIPINO	6	D.P.Co	•	NA	NA	MFDW RISER FLANG # ZO	12/74	Repaired Replaced Replacement	☑ No ☐ Yes
B 							77 20		☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
C									☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
)									☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
=	, , , , , , , , , , , , , , , , , , ,					·			☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
=				•					Repaired Replaced	☐ No ☐ Yes

8 1/2 in. x	11 in. (2) inforr	nation in items	1 through 6 on this rep	be used, provided (1) size ort is included on each ets is recorded at the top of
7. Description of Wor	KIERFORMO FLANGE	ED BMRT TO OBTAIN	O SEATING SURF ORIGINAL THICK	PACE ON MFOW RIS
8. Test Conducted:	☐ Hydrostatic	☐ Pneumatic	☐ Nominal Operating Press	sure Other 🔀 Exempt
	Pressure	psig	Test Temp.	°F
	Pressure	psig	Test Temp.	°F
	Pressure	psig	Test Temp.	°F
9. Remarks				
	(Арр	licable Manufactur	er's Data Records to be Attac	hed)
		-, -		
We certify that the of the ASME Code, S	statements made i		OF COMPLIANCE correct and this repair or rep	lacement conforms to the rules
Type Code Symbol S	Stamp N/A	α		
Certificate of Authori	zation No. N/A,	, //	Expiration Date	te N/A
Signed Getter	12 Buly	who or	PENCK Date 12-2	
Olgineu /	Owner or Owner's	esignee, Title	784786772Date 78 2	
	<i>G</i>			
Inspectors and the S Hartford Connectice to _/2-2-98/; and taken corrective mea Section XI. By signing this cer concerning the exam	, holding a valid contate or Providence out have inspected the state that to the bessures described in tificate, neither the inations and correctloyer shall be liable.	mmission issued to M. C. ne components de st of my knowledge this Owner's Reportive measures de e in any manner for the structure measures de e in any measures d	e and belief, the Owner has ort in accordance with the re- employer makes any warran scribed in this Owner's Repo	er and Pressure Vessel by HSBI and I Company of ort during the period 10-22-98 performed examinations and quirements of the ASME Code, ty, expressed or implied.
MB Chaps	nan Co	mmissions	10914	1
Inspector's Sign			National Board, State, Provide	lance and Endorsements



1.	Owner Address	Duke Powe 526 S. Chui		y Charlotte, NC 2	8201-1006					12.8.98
2.	Plant Address	Oconee Nu	clear Stati						Sheet	/ of _/_
?a.	Unit	□ 1	2	X 3 □ Sh	ared (specify Units)	Manda Quala	94011	1931
3.	Address 52	rmed By Duk 6 S. Church Symbol Stan	Street, Ch	arlotte, NC 2820	01-1006 'A Expiration Date N/A				r# <u>98014</u> Repair Organ //#	
5.	(a) Applica (b) Applica	DIE Edition.O	tion Code f Section X	ASME TITE I Utilized for Repa	Class	MMER 67 Ac 39, No Addenda	ddenda,			Code Cases
	Col	umn 1		Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name o	f Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A		TSG PRIMAR LE BOSTI	y B	tW	STEAM GEN. S/N 6Z0-0009-5	S.GEN. #N128 5-Z		1971	☐ Repaired ☐ Replaced ☑ Replacement	☐ No ☒ Yes
В									☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
C							·		☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D									☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E									☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F									☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

8 1/2 in. x	11 in. (2) inform	nation in item:	etches, or drawings may be s 1 through 6 on this report and the number of sheets	is included	on each
7. Description of Wor	K REPLACED	BOLTING	ON UPPER PRIMAR	Y HANDA	HOLE.
8. Test Conducted:	/ <i>NSTALLE</i> ☐ Hydrostatic	D(/) NEW Pneumatic	NUT ON STUD No. /, Nominal Operating Pressure	FIRST NO Other	Exempt
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
	Pressure	psig	Test Temp.	°F	
9. Remarks					
	(App	licable Manufactu	urer's Data Records to be Attached	1)	
We certify that the of the ASME Code, S	e statements made i Section XI.		OF COMPLIANCE correct and this repair or replace	ement confor	ms to the rules
Certificate of Authori	zation No. N/A		Expiration Date I	N/A	
Signed Author	Owner or Owner's	<i>DA SPEC</i> Designee, Title	IACIST Date 12-8,	19 <i>98</i>	
Inspectors and the S Hartford Connectic to 12-9-98; and taken corrective mea Section XI. By signing this ce	I, holding a valid constate or Providence out have inspected the state that to the best sures described in the state, neither the	mmission issued of N.C. ne components of this Owner's Republic Components of this Owner's Republic Components of this Owner's Republic Components of the com	by the National Board of Boiler a and employed by I described in this Owner's Report ge and belief, the Owner has perport in accordance with the requises employer makes any warranty, escribed in this Owner's Report.	HSBI and I Co during the per formed exami rements of the expressed or in	inpany of iod 10-29-98 nations and ASME Code,

Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any

NC 914

National Board, State, Providence and Endorsements

Commissions

kind arising from or connected with this inspection.

Inspector's Signature

Date 12-9, 19-89



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The A

_			As nequired	by the Provisions	Of the ASIV	ie Code Section	וא ר		
1.	Owner Address	Duke Power 526 S. Chur	r Company ch Street, Charlotte, NC 28	201-1006		·			12-1-98
2.	Plant Address		clear Station 39, Seneca, S.C. 29679					Sheet ₋	<u>/</u> of <u>/</u>
	Unit			red (specify Units		.) 3a \	Nork Orde	r# <u>98095</u>	37/0
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 2820 ⁻ p N/A Authorization No. N/A	1-1006 Expiration Date N/A				Repair Organ	ization Job #
4.	Identificatio	n of System_	MFOW	Class	- -				
5.	(a) Applica (b) Applica	ble Construct ble Edition of	ion Code #NSI B31./ Section XI Utilized for Repai	19 67 Edition, rs or Replacements 198	<i>luly</i> A 89, N o Addenda	ddenda,			_Code Cases
3.	Identificatio	n of Compone	ents Repaired or Replaced a	nd Replacement Compo	onents				
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
4	BOLTI.	NG	NA	NS	NA	NA	NA	☐ Repaired Replaced ☐ Replacement	No □ Yes
3	BOLTI	NG	NA	NX	NA	NA	NA	☐ Repaired☐ Replaced☐ Replacement	No Yes
)	/	- Address of the Control of the Cont						☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
)					·	·		☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
=								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

☐ Repaired
☐ Replaced
☐ Replacement

No

Yes



1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC	28201-1006					12-9-98 1 of 1
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679					Sneet	OT
2a.	Unit	□ 1	2 🛚 🗷 3 🗀 S	hared (specify Units)	Mark Orda	r# <u>98047</u>	357
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 28 p N/A Authorization No. I	201-1006 V/A Expiration Date N/A				Repair Organ	ization Job #
4.	Identification	n of System_	KC	Class2	<u> </u>				
	(b) Applica	ible Edition of	Section XI Utilized for Re	pairs or Replacements 1989 d and Replacement Compon	, No Addenda	ddenda,			Code Cases
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacture	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	COVER	NDHOLE ON 3B.OT ECONDARY	56 B+W	S/G S/N. 620-0009-55-2	S/6# N-128		1971	☐ Repaired ☐ Replaced ☑ Replacement	☐ No ☑ Yes
В								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes
D								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F						-		Repaired Replaced	☐ No ☐ Yes

NOTE: Suppleme 8 1/2 in. x sheet, and this form.	: 11 in. (2) info d (3) each sh	form of lists, s ormation in iten eet is numbere	ກຣ 1 throug	gh 6 on thi	s report is	s included	on ea	ach
		- 1.10 ···			, _ 1			
7. Description of Wor	k NEPLAC	E LWK. SEC	C. HANDA	INE Ca	IER ON	3B-07	156,	HANDH
8. Test Conducted:	☐ Hydrostatic	: Pneumatic	Nomin	al Operating	Pressure	Other	ΧE	exempt
	Pressure	psig		Test Temp.	<u> </u>	°F		
	Pressure	psig		Test Temp.	-	°F		
	Pressure	psig		Test Temp.		°F		
9. Remarks								
v 								
			•					
					···			
	(A	pplicable Manufac	turer's Data F	Records to be	Attached)			
		CERTIFICAT						
We certify that the of the ASME Code, S Type Code Symuol S Certificate of Authori Signed	Section XI. Stamp N/A zation No. N/A	2	ALIST	Expirati	on Date N//	A	ms to t	ne ruies
I, the undersigned Inspectors and the S Hartford Connectice to 12-9-98; and taken corrective mea Section XI. By signing this cer concerning the exam Inspector nor his empth kind arising from or concerning the concerning the exam less than the section of the se	, holding a valid of tate or Providence of the tate of Providence of the tate	the of	d by the Nati C. described in dege and belie eport in accor nis employer in described in the	onal Board on and employer, the Owner ordance with makes any withis Owner's	of Boiler and oyed by HS s Report du er has perfo the requirer varranty, exp Report. Fu	BI and I Co uring the per rmed exami ments of the pressed or i rthermore, i	ompany riod _// inations ASME implied neither	s and Code,
Inspector's Sign	nature (Commissions	NC914 National Bo	oard, State,	Providence	and Endors	sement	s
Date <u>/2 - 9</u> , 19	98							



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

				-					
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 282	201-1006				1a. Date	1-13-99
2.	Plant Address	Oconee Nuc P.O. Box 143	lear Station 9, Seneca, S.C. 29679					Sheet _	
2a.	Unit	□ 1]2	red (specify Units		.)		0	
3.	Address 52	6 S. Church S	Power Company Street, Charlotte, NC 28201 N/A Authorization No. N/A	1-1006 Expiration Date N/A				r # <u>98093</u> Repair Organi M # <u>///////////////////////////////////</u>	
4.	Identificatio	n of System_	MFDW	Class	2				
5.	(a) Applica (b) Applica	ble Constructi ble Edition of	on Code ANS / B31. Section XI Utilized for Repai	19 <u>67</u> Edition And rs or Replacements 198	19, No Addenda	ddenda,			_Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced a	nd Replacement Compo	onents				
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	MFW Z8 ON	RISEK# 07363A	BAW	NA	NX	#28	1971	☐ Repaired ☐ Replaced ☒ Replacement	☑ No ☐ Yes
В		,					,	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
C			,					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D							-	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E			· .					Repaired Replaced Replacement	☐ No ☐ Yes

☐ No

Yes

☐ Repaired ☐ Replaced ☐ Replacement

′ 8 1/2 in. >	c 11 in. (2) info d (3) each she	rmation in items	tches, or drawings 1 through 6 on thi and the number of	s report is	sincluded	on each
7. Description of Wor8. Test Conducted:	rk NEPLACE ON KISE Hydrostatic	R# 28 ON	SON NSER OTSG 3A. Nominal Operating			KINUGES D Exempt
	Pressure	psig	Test Temp.	-	°F	
	Pressure	psig	Test Temp.		°F	
	Pressure	psig	Test Temp.		°F	
9. Remarks			, , , , , , , , , , , , , , , , , , ,			
	(Ap	plicable Manufactur	er's Data Records to be	Attached)		
We certify that the of the ASME Code, Type Code Symbol S Certificate of Author Signed	Section XI. Stamp N/A ization No. N/A Sludwyf	e in the report are c	//. /		4	ms to the rules
	CER.	TIFICATE OF IN	SERVICE INSPEC	TION		
Inspectors and the S Hartford Connectic to 1-13-99; and taken corrective mea Section XI. By signing this ce concerning the exam	d, holding a valid contact or Providence of the providence of the	ommission issued be of	y the National Board	of Boiler and oyed by HS is Report du ir has perfor the requirer warranty, exp Report, Fu	BI and I Co tring the per rmed examit ments of the pressed or in rthermore.	empany of jobseps of j
1, 01)					
MB Ckay	man C	ommissions	NC914			
Inspector's Sig	nature		National Board, State,	Providence	and Endors	sements
Date <u>/-/3</u> , 19	99					



1.	Owner Address	Duke Power 526 S. Chur	r Company ch Street, Charlo	tte, NC 282	201-1006					1a. Date	12-11-96
2.	Plant Address		clear Station 39, Seneca, S.C. 2	29679						Sheet	of
a.	Unit	1 · ·	2 💢 3	Shar	ed (specify Units		_)	20 Mork (Ordor #	9502	7076
3.	Address 52	6 S. Church	e Power Compan Street, Charlotte, p N/A Authorizati	NC 28201	-1006 Expiration Date N/A					Repair Orga	7076 nization Job #
		n of System_			Class/	(A)			•		
5.	(a) Applica (b) Applica	ble Construct ble Edition of	tion Code #1/5/ Section XI Utilized	<i>B31.</i> 7 d for Repair	19 <u>69</u> Edition, <u>///</u> s or Replacements 1989	<i>GUST</i> A , No Addenda	ddenda,		NA	•	Code Cases
6.	Identificatio	n of Compone	ents Repaired or F	Replaced ar	nd Replacement Compor	nents					
	Col	umn 1	Column 2	2	Column 3	Column 4	Column 5	Co	ol. 6	Column 7	Column 8

	Column 1 Column 2		Column 3 Column 4 Column 4		Column 5	Col. 6	Column 7	Column 8	
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)	
Α	3HP-486	ANCHOR DAKLING	EZ 496-1-7	1913		1996	Repaired Replaced Replacement	No	
В	3HY-126	VEZAN	962103-3	NA		NA	☐ Repaired ☐ Replaced ☒ Replacement	I No ☐ Yes	
С	VLV. 3HP-487	ANCHOR DARLING	EZ496-1-9	1915		1996	☐ Repaired ☐ Replaced ☐ Replacement	☑ No ☐ Yes	
D	YLV 3HP-127	VELAN	962103-4	NA		NS	☐ Repaired ☐ Replaced ☑ Replacement	No ☐ Yes	
E	VLV. 3HP-489	ANCHOR DARLING	EZ496-1-6	1912		1996	Renaired	⊠ No □ Yes	
F	VLV. 3HP-152	VELAN	962103-7	NA		NX	☐ Repaired ☐ Replaced ☑ Replacement	⊠ No □ Yes	

she	/2 in. x eet, and s form.	11 in. (2) (3) each	information sheet is no	n in items umbered a	1 through the SHP.	gh 6 on th number o	is repor f sheets 3 <i>HP-</i> /2	t is inc is rec	cluded orded a	on each at the top (152, 3)	of YP-1.
7. Description	of Work		712000	7000.		,,,,,		,			
8. Test Condu	ucted:	Hydros	tatic 🗌 Pn	eumatic	Nomi	nal Operatin	g Pressui	re 🗌	Other	☐ Exempt	:
		Pressure		_ psig		Test Temp.			°F		
		Pressure		psig		Test Temp.			°F		
		Pressure		_ psig		Test Temp.			Ϋ́F		
9. Remarks _	Tes	fed I	AW A	SME	Cod	e Gse	N4	16-1			
_											
_									•		
			(Applicable	Manufacture	er's Data	Records to b	e Attache	ed)			
We certify of the ASME Type Code Some Certificate of Signed	Code, Sombol St	ection XI. amp N/A ation No. N	Made in the r	A Sae	orrect and	Expirat	or repla ion Date <u>の-2 こ</u>	N/A		ns to the rule	es T
					_						
Inspectors an Hartford Con to 10-28-97 taken correcti Section XI.	nd the Stannecticus; and sive meas this certifie examination this employed.	holding a value or Provide thave inspetted that to fures describilities, neitheations and oyer shall be	ected the com the best of my bed in this Ow er the Inspec corrective me e liable in any h this inspect	pon issued be a considered by knowledge wher's Reportor nor his exacures design manner for a considered by manner for a considered by manner for a considered by manner for a considered by manner for a considered by manner for a considered by manner for a considered by manner for a considered by manner for a considered by manner for a considered by manner for a considered by the considere	y the Nat scribed in e and bel rt in acco employer cribed in r any per	ional Board and emp n this Owner lef, the Own ordance with makes any this Owner's sonal injury	of Boiler loyed by s's Report the requirements warranty, so Report.	HSBI all during erformed irement express Further	nd I Cor the perion l examin s of the sed or in more, no	npany of od <u>//-/2-94</u> ations and ASME Code oplied, either the	,
Inspecto	or's Signa	ature	C 0.1.1111001		lational E	oard, State,	Provider	nce and	Endorse	ements	
Date_ <u>/0-28</u>	, 19_	7									



1.	Owner Address	Duke Power Company 526 S. Church Street, Charlotte, NC 28201-1006		1a. Date 12-11-96
2.	Plant Address	Oconee Nuclear Station P.O. Box 1439, Seneca, S.C. 29679		Sheet $\frac{Z}{2}$ of $\frac{3}{2}$
2a.	Unit	☐ 1 ☐ 2 ☐ 3 ☐ Shared (specify Units)		95027016
3.		med By Duke Power Company	3a. Work Order # _	Repair Organization Job #
	Type Code	6 S. Church Street, Charlotte, NC 28201-1006 Symbol Stamp N/A Authorization No. N/A Expiration Date N/A	3b. NSM or MM #	32975
4.	Identificatio	n of System Class/ (A)		
5.	(a) Applica (b) Applica	ble Construction Code <u>ANS / B3/. 7</u> 19 <u>69</u> Edition, <u>AUGUST</u> Addenda,	NA	Code Cases
6.	Identificatio	n of Components Repaired or Replaced and Replacement Components		

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	VLV. 3HP-488	ANCHOR DARLING	EZ496-1-8	1914		1996	☐ Repaired ☐ Replaced ☑ Replacement	No □ Yes
В	VLV. 3HP-153	VELAN	962103-1	NA		M	☐ Repaired ☐ Replaced ☒ Replacement	No Yes
С	PIPING	D.P.C.	NA	NX		12/74	☐ Repaired ☐ Replaced ☑ Replacement	· ☒ No ☐ Yes
D							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
Е							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size 8 1/2 in. x 11 in. (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.
7. Description of Work See Page 1
8. Test Conducted: Hydrostatic Pneumatic Nominal Operating Pressure Other Exempt
Pressure psig Test Temp °F
Pressure psig Test Temp °F
Pressure psig Test Temp °F
9. Remarks See Page 1
(Applicable Manufacturer's Data Records to be Attached)
CERTIFICATE OF COMPLIANCE We certify that the statements made in the report are correct and this repair or replacement conforms to the rules of the ASME Code, Section XI. Type Code Symbol Stamp N/A Certificate of Authorization No. N/A Signed Owner or Owner's Designee, Title
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of
Date 10-28 . 19 97



1.	Owner Address	Duke Power Company 526 S. Church Street, Charlotte, NC 28201-1006		1a. Date <u>//-/2-9/2</u> Sheet 3 of 3
2.	Plant Address	Oconee Nuclear Station P.O. Box 1439, Seneca, S.C. 29679		Sheet O of O
2a.	Unit	1 Shared (specify Units)	3a Work Order #	95027076-01
3.	Address 52	rmed By Duke Power Company 6 S. Church Street, Charlotte, NC 28201-1006 Symbol Stamp N/A Authorization No. N/A Expiration Date N/A	3b. NSM or MM #	Repair Organization Job # 32975
4.	Identificatio	n of SystemClass(A)		
5.	(a) Applica	ble Construction Code #1/51 B31.7 19 69 Edition, MUSI Addenda, ble Edition of Section XI Utilized for Repairs or Replacements 1989, No Addenda		Code Cases

6. Identification of Components Repaired or Replaced and Replacement Components

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	VLV. 3HP-1Z7	VELAN ENGINEERING	NA	NA		:	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☑ Yes
В	VLV. 3HP-126	. n	34	NA			☐ Repaired Replaced ☐ Replacement	□ No ➤ Yes
С	VLV 3HP-153	n	31	WA			☐ Repaired ★ Replaced ☐ Replacement	□ No ✓ Yes
D	VLV. 3HP-15Z	4	32	NA			Repaired Replaced Replacement	☐ No 🔀 Yes
E							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

7. Description of Work 8. Test Conducted:	NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in. (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.
8. Test Conducted: Hydrostatic Pneumatic Nominal Operating Pressure Other Exempt	7. Description of Work See page 1
Pressure	
Pressure	Pressure psig Test Temp °F
(Applicable Manufacturer's Data Records to be Attached) CERTIFICATE OF COMPLIANCE We certify that the statements made in the report are correct and this repair or replacement conforms to the rules of the ASME Code, Section XI. Type Code Symuol Stamp N/A Certificate of Authorization No. N/A Signed CERTIFICATE OF INSERVICE INSPECTION I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of and employed by HSBI and I Company of Hartford Connecticut have inspected the components described in this Owner's Report during the period Inspector 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 any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. ACSING SECTION 2014 Commissions Commissions COMPLIANCE CERTIFICATE OF COMPLIANCE Expiration Date N/A Expirati	Pressure psig Test Temp °F
CERTIFICATE OF COMPLIANCE We certify that the statements made in the report are correct and this repair or replacement conforms to the rules of the ASME Code, Section XI. Type Code Sym.ol Stamp N/A Certificate of Authorization No. N/A Signed CERTIFICATE OF INSERVICE INSPECTION I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of A.C. and employed by HSBI and I Company of Hartford Connecticut have inspected the components described in this Owner's Report during the period 1/2-91 to 1/2-91 and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 in this Owner's Report during the period 1/2-91 to 1/2-91 t	Pressure psig Test Temp °F
CERTIFICATE OF COMPLIANCE We certify that the statements made in the report are correct and this repair or replacement conforms to the rules of the ASME Code, Section XI. Type Code Symuol Stamp N/A Certificate of Authorization No. N/A Signed CERTIFICATE OF INSERVICE INSPECTION I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of A.C. and employed by HSBI and I Company of Hartford Connecticut have inspected the components described in this Owner's Report during the period 1/-12-91 to 2-28-91; and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Commissions Commissions	9. Remarks See page 1
We certify that the statements made in the report are correct and this repair or replacement conforms to the rules of the ASME Code, Section XI. Type Code Symuol Stamp N/A Certificate of Authorization No. N/A Signed CERTIFICATE OF INSERVICE INSPECTION I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of	(Applicable Manufacturer's Data Records to be Attached)
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of	We certify that the statements made in the report are correct and this repair or replacement conforms to the rules of the ASME Code, Section XI. Type Code Symbol Stamp N/A Certificate of Authorization No. N/A Signed Date 10-22.1977
rational board, State, Floridence and Endoisements	I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of



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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

			As ricquired	a by the Flovisions (JI THE ASIV	ie Code Section	ı Ai		•
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 20	8201-1006			,	1a. Date	2-25-9
2.	Plant Address	Oconee Nuc P.O. Box 143	lear Station 9, Seneca, S.C. 29679					Sheet	of
a.	Unit	1] 2 📈 3 🗆 Sha	ared (specify Units		.)		QL rus	109
3.	Address 52	6 S. Church S	Power Company Street, Charlotte, NC 2820 N/A Authorization No. N/	01-1006 A Expiration Date N/A		3a. v 3b. N	Vork Orde ISM or MN	r # <u>96084</u> Repair Organ M #	ization Job #
4.	Identificatio	on of System	FDW	Class					
5.	(a) Applica (b) Applica	able Construction of	on Code #SME Section XI Utilized for Repa	19 <u>65</u> Edition, <u>Sy</u> airs or Replacements 1989	MER 67A No Addenda	ddenda,	N.	×	_Code Cases
3.	Identificatio	n of Compone	nts Repaired or Replaced	and Replacement Compon	ents				
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
4	A STI	M.GEN. Nozzle	BABCOCK & WILCOX	620-0009-55	1/N-127	7	1971	Repaired Replaced Replacement	☐ No ※ Yes
3	,							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
) _	-							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
)								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

No

Yes

No Yes

Repaired
Replaced
Replacement

Repaired
Replaced
Replacement

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in. (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form. MADE WELD REPAIR TO NO. 3A OTSG-MFDW 7. Description of Work RISER No. 20 GASKET SEXTING SURFACE.								
7. Description of Work	RISER	No. 20 C	SASKET SEX	TING	SURF	ACE.		
,	☐ Hydrostatic		Nominal Operating			☐ Exempt		
F	Pressure	psig	Test Temp.		°F	•		
F	_	psig	Test Temp.	-				
F	_	psig	Test Temp.					
9. Remarks		Po.9	root tomp.	-	'			
J. Hemarks								
-								
	(Ap	pplicable Manufact	urer's Data Records to b	e Attached)				
of the ASME Code, Sed Type Code Symbol State Certificate of Authorizate Signed	ction XI. Imp N/A tion No. N/A		Date /		A	ms to the rules		
CERTIFICATE OF INSERVICE INSPECTION I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of								



F

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

			7.0 Hoquicu	By The Fredricions	Of the Adm	in ocac occiton	/ 1			
1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	201-1006					2-26-91	
2.	Plant Address	Oconee Nuc P.O. Box 143	elear Station 39, Seneca, S.C. 29679					Sheet _	_/ of _/	
a.	Unit .	□ 1] 2	red (specify Units		.) 3a. W	ork Orde	r# <i>960138</i>	'80	
								r # <u>960/38</u> Repair Organi M # <u>3298</u>		
4. 5.	(a) Applica	dentification of System								
3.	Identificatio	n of Compone	ents Repaired or Replaced a	nd Replacement Compo	onents	٤				
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8	
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)	
A	TIPIN	16	D.P.C.	NA	NA		12/74	☐ Repaired ☐ Replaced ★ Replacement	⊠ No ☐ Yes	
В								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
C								☐ Repaired☐ Replaced☐ Replacement	☐ No ☐ Yes	
D								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
E			•					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	

No

☐ Repaired
☐ Replaced
☐ Replacement

	(11 in. (2) infor d (3) each shee	mation in item	etches, or drawir s 1 through 6 on I and the number	this report is	s included o	on each
7. Description of Wor	k INSTALL	EDTHER	ZMOWELL	A REIN	FORCIA)6 COLLAR.
8. Test Conducted:	☐ Hydrostatic	☐ Pneumatic	Nominal Opera	iting Pressure	Other	☐ Exempt
	Pressure	psig	Test Ten	np	°F	
	Pressure	psig	Test Ten	np	°F	
	Pressure	psig	Test Ten	np	°F	
	CFORMED 416-1,) TESTING	S & NDE	PER XS	MEG	DE CASE
	(Ap	plicable Manufacti	urer's Data Records t	o be Attached)		
We certify that the of the ASME Code,	e statements made Section XI.		OF COMPLIAN correct and this rep		ment conform	as to the rules
Certificate of Authori	zation No. N/A		Exp	iration Date N//	Α _	
Signed	Owner or Owner	`s Designee, Title	Date	1-18,19	9 <u>99</u>	
<u>.</u>	OFDI	TELOATE OF I	NOEDWOE INOE			
Inspectors and the Shartford Connectic to 1-18-99; and taken corrective measurements.	I, holding a valid contains a valid contains a valid contains a valid contains a valid contains a valid contains and corresployer shall be liab	ommission issued of	described in this Ow ge and belief, the O port in accordance we semployer makes a escribed in this Own	ard of Boiler and imployed by HS ner's Report duwner has perfor with the requirer ny warranty, exper's Report. Fu	BI and I Con uring the perior rmed examination ments of the A pressed or im- inthermore, ne	npany of od 12-8-86 ations and ASME Code, oplied, bither the

NC914

National Board, State, Providence and Endorsements

Commissions___

Inspector's Signature

Date /- /8 , 1999



1.	Owner Duke Power Company Address 526 S. Church Street, Charlotte, NC 28201-1006					1a. Date 6-2-97				
2.	Plant Address	Oconee Nuclear Station P.O. Box 1439, Seneca, S.C. 29679								
2a.	Unit		2 🔀 3	Shared (specify Units		_)		94220	2-4/	
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, No p N/A Authorization	28201-1006 No. N/A Expiration Date N/A		3a. Work Order # 97039576 Repair Organization Job # 3b. NSM or MM #				
		n of System_		Class	2					
	(b) Applica	Die Edition of	Section At Offized to	19 <u>9</u> Edition, or Repairs or Replacements 1	989, No Addenda	ddenda,			Code Cases	
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8	
	Name of	Component	Name of Manufac	turer Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)	
A	PIPIL)6	DP.Co.	NX	NX	NA	12/14	☐ Repaired ☐ Replaced ☑ Replacement	☑ No ☐ Yes	
В		·						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
C						:		☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
D	·							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
E								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes	
F								Repaired Replaced	☐ No	

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in. (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form. 7. Description of Work KEMOUED & INSPECTED 3B HPI PUMP MIN. FLOW ORFICES AND ☐ Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐ Other 8. Test Conducted: Test Temp. Pressure psig Pressure __ psig Test Temp. _____psig Pressure Test Temp. IAW ASME Code Case N416-1 9. Remarks (Applicable Manufacturer's Data Records to be Attached) CERTIFICATE OF COMPLIANCE We certify that the statements made in the report are correct and this repair or replacement conforms to the rules of the ASME Code, Section XI. Type Code Symbol Stamp N/A Certificate of Authorization No. N/A Expiration Date N/A <u>ec</u> Date <u>6-/9</u>, 19<u>97</u> Signed Owner or Owner's Designee, Title CERTIFICATE OF INSERVICE INSPECTION I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of ______ N.C. and employed by HSBI and I Company of Hartford Connecticut have inspected the components described in this Owner's Report during the period 5-75-97 to 6-33-57; and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Commissions NC914 Inspector's Signature National Board, State, Providence and Endorsements Date <u>6-33</u>, 19<u>57</u>



1.	Owner Duke Power Company Address 526 S. Church Street, Charlotte, NC 28201-1006								1a. Date <u>5-26-9/</u>		
2.	Plant Address	Oconee Nuc P.O. Box 143	elear Station 39, Seneca, S.C. 29679					Sheet ₋	<u>/</u> of <u>/</u>		
2a.	Unit	□ 1] 2	ared (specify Units	· · · · · · · · · · · · · · · · · · ·	.)		97625			
3a. Work Order # 9703756 Work Performed By Duke Power Company Address 526 S. Church Street, Charlotte, NC 28201-1006 Type Code Symbol Stamp N/A Authorization No. N/A Expiration Date N/A 3b. NSM or MM #											
4.	Identificatio	Identification of System Class/									
5.	(a) Applica (b) Applica	ble Constructi ble Edition of	ion Code	19 <u>6</u> Edition, irs or Replacements 198		ddenda,	NO		_Code Cases		
6.	Identificatio	n of Compone	ents Repaired or Replaced a	and Replacement Compo	nents						
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8		
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)		
A	Pipi	vs	DPC	MA	MA		12-1574	☐ Repaired ☐ Replaced ☑ Replacement	No Yes		
В			·					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes		
С								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes		
D								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes		
E				•				☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes		
F								Repaired Replaced Replacement	☐ No ☐ Yes		

NOTE: Supplemental sheets in form of lists, sketches, 6 8 1/2 in. x 11 in. (2) information in items 1 throusheet, and (3) each sheet is numbered and the this form.	igh 6 on this report is included on each
7. Description of Work Replaced piping and	thormal Sleeve 3Al Nosale
	•
·	· · · · · · · · · · · · · · · · · · ·
_	•
· · · · · · · · · · · · · · · · · · ·	
(Applicable Manufacturer's Data	Records to be Attached)
of the ASME Code, Section XI. Type Code Symbol Stamp N/A Certificate of Authorization No. N/A Signed	Expiration Date N/A Date
8 1/2 in. x 11 in. (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form. Description of Work	
Date_8-4, 19.5.7_	



FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

1.	Owner Address	Duke Power 526 S. Chur	Company ch Street, Charlotte, NC	28201-1006				1a. Date	10-17-97
2.	Plant Address	Oconee Nuc		20201 1000				Sheet	/ of /
2a.	Unit	□ 1]2) ⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄	Shared (specify Units		_)		000	
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 28 p N/A Authorization No. I	201-1006 N/A Expiration Date N/A				r # <u>97087/</u> Repair Organ M #	ization Job #
4.	Identificatio	n of System_	LPS	Class	7	•			
	(b) Applica	ble Edition of	Section XI Utilized for Re	pairs or Replacements 198	39, N ø Addenda	ddenda,	No		_Code Cases
	Col	umn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
		Component	Name of Manufacture	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	FLEX	HOSE	PARKER HANNIKAN	030	NA		1991	☐ Repaired ☐ Replaced ☐ Replacement	☐ No Yes
В	3LPS-P FLEX	X-0009 HOSE	UNKOWN	UNKOWN	NA		NA	Repaired Replaced Replacement	No □ Yes
C	PPIN		D.P.C.	NA	NX		NA	☐ Repaired ☐ Replaced ▼ Replacement	X No ☐ Yes
D __	Flex lie	PH 10/17/97	DPC	NA .	NA_	1		☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E	5/R 1-148-0-24	18A-H24A	DPC	NA	N/A		NA	Repaired Replaced Replacement	⊠ No □ Yes
F	Į và	im 1/12/98						Replaced Replaced	☐ No

8 1/2 in. x sheet, and	(11 in. (2) information in item d (3) each sheet is numbered	ketches, or drawings may be used, provided (1) size is an size is a size of the size is the size of th						
7. Description of Work REPLACED FLEX HOSE, and flange bolting								
8. Test Conducted:		☐ Nominal Operating Pressure ☐ Other ☐ Exempt						
	Pressure 130 psig	Test Temp. 92,0 °F						
	Pressure psig	Test Temp°F						
	Pressure psig	Test Temp°F						
9. Remarks		·						
	(Applicable Manufact	turer's Data Records to be Attached)						
We certify that the of the ASME Code, S	e statements made in the report are Section XI.	E OF COMPLIANCE e correct and this repair or replacement conforms to the rules						
	·							
Certificate of Authoriz	zation No. N/A	Expiration Date N/A						
Signed & DU	Owner or Owner's Designee, Title	Date 10-21, 19 9)						
		7						
CERTIFICATE OF INSERVICE INSPECTION I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Providence of								
Inspector's Sign	Commissions	National Board, State, Providence and Endorsements						
Date <i>10 - 21</i> _, 19		Sala, State, Frontierio and Endorsements						



FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

1.	Owner Address	Duke Power 526 S. Churc	Company ch Street, Charlotte, NC 28	3201-1006					10-17-9 1 of 2
2.	Plant Address	Oconee Nuc P.O. Box 143	clear Station 39, Seneca, S.C. 29679					Sheet ₋	of
2a.	Unit	□ 1] 2 . 🛛 3	ared (specify Units)		041070	0/.2
3.	Address 52	6 S. Church	e Power Company Street, Charlotte, NC 2820 p N/A Authorization No. N/.	D1-1006 A Expiration Date N/A				r # <u>910879</u> Repair Organi // #	
4.	Identificatio	n of System_	LPS	Class	2				
5.	(a) Applica (b) Applica	ble Constructible Edition of	ion Code <u>ANS / BS / .</u> Section XI Utilized for Repa	19 <u>67</u> Edition Edition 198	MULY Ac 39, No Addenda	idenda, M			Code Cases
6.	Identificatio	n of Compone	ents Repaired or Replaced	and Replacement Compo	onents				
	Col	lumn 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	FIEX IPS FI	HOSE '	TARKER HANNIFIN	035	NA		1991	☐ Repaired ☐ Replaced ☑ Replacement	☐ No ✓ Yes
В	PAPIN	G Hose	D.P.C.	NA	NA		12/74	☐ Repaired☐ Replaced☒ Replacement	No Yes
С	FLEX	HOSE	UNKOWN	UNKOWN	NA		NA	☐ Repaired☒ Replaced☐ Replacement	No Yes
D		2						☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
Ε								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F								☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

Form 401463 (2-95)

8 1/2 in. x	11 in. (2) information in item	ketches, or drawings may be used, provided (1) size as 1 through 6 on this report is included on each d and the number of sheets is recorded at the top of							
7 5	. Description of Work KEPLACED FLEX HOSE LPS FX 0005								
7. Description of World	« REPLACED TEEN 9	PUSE ZPS PX COUS							
8. Test Conducted:	Hydrostatic Pneumatic	☐ Nominal Operating Pressure ☐ Other ☐ Exempt							
	Pressure 130 psig	Test Temp. <u> </u>							
	Pressure psig	Test Temp°F							
	Pressure psig	Test Temp°F							
9. Remarks									
	(Applicable Manufacto	urer's Data Records to be Attached)							
We certify that the of the ASME Code, Some of the ASME Code Symuol Some of Authority Signed	statements made in the report are Section XI.	E OF COMPLIANCE correct and this repair or replacement conforms to the rules Expiration Date N/A Date 10-21, 1997							
		l .							
Inspectors and the Si Hartford Connecticuto 10-21-97; and staken corrective measurements. By signing this certiconcerning the examinspector nor his empty.	n, holding a valid commission issued tate or Providence of N.C. It have inspected the components of the state that to the best of my knowled sures described in this Owner's Reputificate, neither the Inspector nor his inations and corrective measures described in the sures d	NSERVICE INSPECTION If by the National Board of Boiler and Pressure Vessel and employed by HSBI and I Company of described in this Owner's Report during the period 10-9-97 dige and belief, the Owner has performed examinations and port in accordance with the requirements of the ASME Code, as employer makes any warranty, expressed or implied, escribed in this Owner's Report. Furthermore, neither the for any personal injury or property damage or a loss of any							
MB Chape	Commissions	NC 914							
Inspector's Sign	nature	National Board, State, Providence and Endorsements							
Date 10 - 31, 19	97	·							



FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

1.	Owner Address	Duke Power 526 S. Chur			otte, NC 28	201-1006			·		10-17-97
2.	Plant Address	Oconee Nuc P.O. Box 143			29679					Sheet ₋	<u></u>
2a.	Unit	1] 2	Z 3	Sha	red (specify Units		_)		974G79	1201
3.	Address 52	rmed By Duk 6 S. Church Symbol Stam	Street, C	harlotte,	, NC 2820	1-1006 Expiration Date N/A				er # <u>970879</u> Repair Organ M #	
4.	Identificatio	n of System_		PS	•	Class	2	•			
5.	(a) Applica	ble Construct ble Edition of	tion Code Section	, <u>B</u> XI Utilize	3/. / d for Repai	197 Edition, rs or Replacements 19	7-67 A 89, No Addenda	Addenda,	<u> </u>		_Code Cases
6.	Identificatio	n of Compon	ents Rep	aired or f	Replaced a	nd Replacement Comp	onents				
	Col	lumn 1		Column :	2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of	Component	Name	of Manu	facturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
Α	Flex.	live	01	pc		NA	N/A	LPS FX 0005	1974	Repaired Replaced Replacement	✓ No ☐ Yes
В	5/R 1-148-0-7	4804-UZ	100	PC		NA	NA		NA	☐ Repaired ☐ Replaced	⊠ No
С				<i>/ L</i>						Replacement Repaired Replaced Replacement	☐ Yes☐ No☐ Yes
D	·		·			·				☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E							·			☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F										☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes

NOTE: Suppleme 8 1/2 in. x			ketches, or drawi ns 1 through 6 or			
			d and the numbe			
thic form						
	B) REPLACE	OU BOLT O	N SUPPORT/	RESTRAM	17. Wim	1/12/90
7. Description of Wor	Replaced	balting o	ON FEX line	· LPS	FX 005	Flanges
8. Test Conducted:	Hydrostatic	Pneumatic	☐ Nominal Opera	ating Pressur	e 🗌 Other	Exempt
	Pressure	psig	Test Te	mp	°F	
	Pressure	psig	Test Tei	mp	°F	
	Pressure	psig	Test Ter	mp	°F	
9. Remarks						
			-			
	(A	pplicable Manufac	turer's Data Records	to be Attache	d)	
		CERTIFICAT	E OF COMPLIAN	105	<u> </u>	
We certify that the	statements mac		E OF COMPLIAN correct and this rep		cement confor	ms to the rules
of the ASME Code,		ie in the report an	correct and this rep	van or replac	Sement Comor	ins to the fules
Type Code Sympol S	Stamn N/A					
	·					
Certificate of Authori	zation No. N/A		Exp	oiration Date I	N/A	
Signed	nson G	DA Specia	Date	10-17	19 97	
	Owner or Owne	er's Designee, Titl	e 			
	CER	TIFICATE OF	INSERVICE INSI	PECTION		
			d by the National Bo			
Inspectors and the S Hartford Connectic	tate or Providenc	the components	$\frac{C}{C}$ and ϵ	employed by i	HSBI and I Co	mpany of
to 10.21.97; and	state that to the t	est of my knowle	dge and belief the C	mers neport	during the per	100 <u>/0~9-97</u> nations and
taken corrective mea	sures described	in this Owner's Re	eport in accordance	with the requi	rements of the	ASME Code.
Section XI.						
By signing this cer	rtificate, neither th	ne Inspector nor h	is employer makes a	ıny warranty,	expressed or i	mplied,
concerning the exam	inations and corr	ective measures (described in this Owr	ner's Report.	Furthermore, r	neither the
Inspector nor his em	connected with th	is inspection.	r ior any personal inj	ury or proper	ty damage or a	a loss of any
		,				
MBAR		2 a ma mai a a i a - a -	142 /			
Inspector's Sign	nature (Commissions	National Board, St	ate Providen	ce and Endors	rements
			Hadonal Doald, St	ate, r iovideli	oo anu Enuors	penients
Date <u>/0 - 2/</u> , 19	97					



FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required By The Provisions Of The ASME Code Section XI

1.	Owner Address	Duke Power Company 526 S. Church Street, Charlotte, NC 28201-1006		1a. Date <u>//-3-98</u>
2.	Plant Address	Oconee Nuclear Station P.O. Box 1439, Seneca, S.C. 29679		Sheet/ of/_
2a.	Unit	☐ 1 ☐ 2 🔀 3 ☐ Shared (specify Units)	30 Work Order #	98077760
3.	Address 52	rmed By Duke Power Company 6 S. Church Street, Charlotte, NC 28201-1006 Symbol Stamp N/A Authorization No. N/A Expiration Date N/A	3b. NSM or MM # _	Repair Organization Job #
4.	Identificatio	n of System Class		
5.	(a) Applica (b) Applica	ble Construction Code #15/ B3/. 1967 Edition, Tuly Addenda, Addenda, ble Edition of Section XI Utilized for Repairs or Replacements 1989, No Addenda		Code Cases

6.	Identification o	f Components	Repaired or	Replaced ar	nd Replacement	Components
----	------------------	--------------	-------------	-------------	----------------	------------

	Column 1	Column 2	Column 3	Column 4	Column 5	Col. 6	Column 7	Column 8
	Name of Component	Name of Manufacturer	Manufacturer Serial Number	National Board Number	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (yes or no)
A	PIPING	D.P.Co.	NA	NÄ		12/74	☐ Repaired ☐ Replaced ☒ Replacement	No Yes
В							☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
С			• .			-	☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
D					•		☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
E	L'	·					☐ Repaired ☐ Replaced ☐ Replacement	☐ No ☐ Yes
F							☐ Repaired ☐ Replaced ☐ Replacement	□ No . □ Yes

8 1/2 in. x									
7. Description of Wor	k REPLACED	FLANGE	5 ON SPARE O	IL CoolER	FOR K	3A-1 CP MOTOR			
8. Test Conducted:	X Hydrostatic	Pneumatic	☐ Nominal Opera	ting Pressure	Other	☐ Exempt			
	Pressure	psig		np. <u>71,1</u>	°F				
	Pressure	psig	Test Ten		· °F				
	Pressure	psig	Test Tem	•	°F				
9. Remarks						•			
-									
		0							
-									
	(Applic	cable Manufact	turer's Data Records to	be Attached)					
we certify that the of the ASME Code, Some of the Asme Code Symuol Some Certificate of Authority Signed	Stamp N/A		Expi Date	ration Date N/	A	ms to the rules			
					<u> </u>				
Inspectors and the S Hartford Connecticuto	, holding a valid comitate or Providence of ut have inspected the state that to the best sures described in the ctificate, neither the In- inations and corrective ployer shall be liable in connected with this instant	mission issued N. components of my knowled is Owner's Re aspector nor hive measures of in any manner spection.	and endescribed in this Owndge and belief, the Owngort in accordance was employer makes are lescribed in this Owngr for any personal injuries.	rd of Boiler and mployed by HS ner's Report du wner has perfoith the requirer by warranty, exper's Report. Fu	BI and I Co tring the per rmed exami- ments of the pressed or in rthermore, r	mpany of iod 10-13-58 nations and ASME Code, mplied, neither the			
Inspector's Sign	nature Com	missions	<i>NC 9/4</i> National Board, Sta	te, Providence	and Endors	sements			
Date <u>//- /ø</u> , 19	98		·						

11.0 Pressure Testing

There are three refueling outages scheduled for the second period of the third inspection interval for Duke Power Company's Oconee Nuclear Station Unit 3. This section describes Pressure Tests performed during the 1998 refueling outage (also referred to as EOC-17).

Examination Category			Total Examinations Credited For This Period	(%) Examinations Complete For This Period
B-E System Hydrostatic Test (IWB-5222)		0	0	0%
B-P	System Leakage Test (IWB-5221)	3	1	33.3%
B-P			0	0%
4.04 (Fig. 17)				
С-Н	System Inservice/Functional Test (IWC-5221)	38	2	5.3%
С-Н	System Hydrostatic Test (IWC-5222)	7	1	1.4%

A detailed description of each Examination Category listed above is located in subsection 11.1 of this report. Results of each examination category are located in subsection 11.2 of this report.

11.1 Required Examinations This Outage:

A listing of each VT-2 Visual Examination required for EOC-17 is included in this section.

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

Item No.

= ASME Section XI Tables IWB-2500-1 (Class 1) and

IWC-2500-1 (Class 2)

Flow Drawing

Detail Drawing of Inspection Boundary

Required Test

= Type of Pressure Test

System Name

= Name of Pressure Retaining Component System

Required Inspection

Type of Visual Examination Required

Required Procedure

Required Inspection Procedure

Comments

General and/or Detail Description

Outage 17

Item Number	Flow Drawing	Required Test	System Name	Required Inspection	Required Procedure	Comments
B15.050.001	SEE COMMENTS	LEAK	RC SYSTEM	VT-2	QAL-15	Drawings that make up the Class A Leakage Boundary: OFDL-100A-3.1/0, OFDL-100A-3.2/0, OFDL-100A-3.3/0, OFDL-101A-3.1/0, OFDL-101A-3.4/0, OFDL-101A-3.5/0, OFDL-102A-3.1/0, OFDL-102A-3.2/0, OFDL-102A-3.2/0, OFDL-110A-3.1/0, OFDL-110A-3.1/0, OFDL-127B-3.2/0

Outage 17

Item Number	Flow Drawing	Required Test	System Name	Required Inspection	Required Procedure	Comments
C07.030.001	OFD-101A-3.1	INS/FUN	HPI SYSTEM	VT-2	QAL-15	Penetrations 6 and 7 - Test Pkg. #31L-300. EOC#16 station pkg #33S-301, #32FRN-352, 32SI-401. EOC-17 Station Pkg #32S-451.
C07.030.002	OFD-101A-3.2	INSER	HPI SYSTEM	VT-2	QAL-15	Test Pkg. #32FRN-329. EOC-16 Station Pkg.# 32F-354, 32F-355, 32F-356A, 32F-356B, # 32F-361B
C07.030.003	OFD-101A-3.3	INSER	HPI SYSTEM	VT-2	QAL-15	Test Pkg. #32F-331, #32F-332, #32FRN-342. EOC-16 Station Pkg.# 32F-356A, 32SI-404, 32FI-405, 32FI-407, 32FI-408, 32SI-401, 32SI-406
C07.030.004	OFD-101A-3.4	INS/FUN	HPI SYSTEM	VT-2	QAL-15	Penetrations 8, 9, 10, 23 and 52 - Test Pkg. #32S-324, #32FRN-342, #32FRN-326. EOC-16 Station Pkg.# 33S-301, 32SI-401. EOC-17 Station Pkg.#32S-451.
C07.030.005	OFD-101A-3.5	INSER	HPI SYSTEM	VT-2	QAL-15	Station Pkg. #32F-359, #31LRN-351
C07.030.006	OFD-102A-3.1	INS/FUN	LPI SYSTEM	VT-2	QAL-15	This test shall include VT-2 for Telltale hole of Item No. C02.033.001 - Test Pkg. #32F-331, #32F-332. EOC-16 Station Pkg.# 32F-361A, # 32F-361B. EOC-17 Station Pkg.#32FI-409, 32FI-410, 32IDPT-306, 32SI-406
C07.030.007	OFD-102A-3.2	INS/FUN	LPI SYSTEM	VT-2	QAL-15	Penetrations 15 and 16 - Test Pkg. #32FRN-333, #32F-331, #32F-332. EOC-16 Station Pkg. # 32F-361B, # 32F-362A, #32F-362B, 32HR-438. EOC-17 Station Pkg.# 32F-462, 32F-463. C02.033.002 & C02.033.003.

Date: 01/28/99

Outage 17

Item Number	Flow Drawing	Required <u>Test</u>	System Name	Required Inspection	Required Procedure	Comments
C07.030.008	OFD-102A-3.3	FUNCT	LPI SYSTEM	VT-2	QAL-15	Penetrations 39 and 59 - Test Pkg. #32F-305, #32S-304, #32IDPT-307. EOC-17 Station Pkg.#32S-464.
C07.030.010	OFD-104A-3.1	FUNCT	SF SYSTEM	VT-2	QAL-15	Penetration 56. EOC-16 Station Pkg.# 32F-359, #32F-363, #32SI-406. EOC-17 Station Pkg.#32F-465.
C07.030.031	OFD-124B-3.2	FUNCT	LPSW SYSTEM	VT-2	QAL-15	Penetrations 30, 31, 32, 33, 34 and 35 - Test Pkg. #32S-320, #33SI-425
C07.030.032	OFD-124B-3.4	INSER	LPSW SYSTEM	VT-2	QAL-15	Penetrations 21 and 22 - Test Pkg. #32S-321, #33SI-425
C07.040.002	OFD-101A-3.2	HYDRO	HPI SYSTEM	VT-2	QAL-15	· ·
C07.040.003	OFD-101A-3.3	HYDRO	HPI SYSTEM	VT-2	QAL-15	
C07.040.006	OFD-102A-3.1	HYDRO	LPI SYSTEM	VT-2	QAL-15	This test shall include VT-2 for Telltale hole of Item No. C02.033.001. EOC-17 Station Pkg.#32SN-460.
C07.040.007	OFD-102A-3.2	HYDRO	LPI SYSTEM	VT-2	QAL-15	Penetrations 15 and 16
C07.040.011	OFD-104A-3.2	HYDRO	SF SYSTEM	VT-2	QAL-15	

Outage 17

Item Number	Flow <u>Drawing</u>	Required <u>Test</u>	System Name	Required <u>Inspection</u>	Required Procedure	Comments
D01.011.001	OFD-100A-3.3	INSER	RC SYSTEM	VT-2	QAL-15	EOC-17 Station Pkg.#32S-451
D01.011.002	OFD-101A-3.1	INSER	HPI SYSTEM	VT-2	QAL-15	EOC-16 Station Pkg.# 33S-301. EOC-17 Station Pkg.#32S-451
D01.011.005	OFD-101A-3.4	INSER	HPI SYSTEM	VT-2	QAL-15	EOC-16 Station Pkg.# 33S-301, 32SI-401. EOC-17 Station Pkg.#32S-451
D01.011.006	OFD-101A-3.5	INSER	HPI SYSTEM	VT-2	QAL-15	EOC-16 Station Pkg.# 33S-301. EOC-17 Station Pkg.# 32S-451
D02.011.002	OFD-121A-3.3	FUNCT	C SYSTEM	VT-2	QAL-15	Station Pkg. # 33F-374
D02.011.004	OFD-121A-3.8	FUNCT	C SYSTEM	VT-2	QAL-15	Station Pkg. # 33F-374, 32FI-421
D02.011.007	OFD-121D-3.1	FUNCT	EFW SYSTEM	VT-2	QAL-15	Test Pkg. #33FRN-316A, #33FRN-317A, #33FRN-318, #32SRN-311, # 32F-364, # 33F-365, # 33F-366, #32FI-421
D02.011.013	OFD-124B-3.1	FUNCT	LPSW SYSTEM	VT-2	QAL-15	Test Pkg. #33S-339, #33S-340, 32SI-427, #33FI-425. EOC-17 Station Pkg.#33FRN-490

11.2 Examination Results For This Outage:

The results of each VT-2 Visual Examination required for EOC-17 are included in this section.

The information shown below is a field description for the Class 1, Class 2, and Class 3 listing format included in this section of the report:

Item No.

= ASME Section XI Tables IWB-2500-1 (Class 1), IWC-

2500-1 (Class 2), and IWD-2500-1 (Class 3)

Flow Drawing

Detail Drawing of Inspection Boundary

Examination Date

VT-2 Examination Date

Required Test

Type of Pressure Test Required

Test Status

Complete, Partial, Not Tested, or Not Required

Test Result

= Clear, Recordable, or Reportable

VT-2 Date

= Date of VT-2 visual examination

Comments

= General and/or Detail Description

Item Number	Flow Drawing	Required <u>Test</u>	Test Status	Test Result	VT-2 Date	Comments
B15.050.001	SEE COMMENTS	LEAK	PARTIAL .	CLEAR 3	12/05/98	Drawings that make up the Class A Leakage Boundary: OFDL-100A-3.1/0, OFDL-100A-3.2/0, OFDL-100A-3.3/0, OFDL-101A-3.1/0, OFDL-101A-3.1/0, OFDL-101A-3.5/0, OFDL-102A-3.1/0, OFDL-102A-3.2/0, OFDL-102A-3.3/0, OFDL-110A-3.1/0, OFDL-110A-3.1/0, OFDL-127B-3.2/0

Item Number	Flow Drawing	Required <u>Test</u>	Test Status	Test Result	VT-2 Date	Comments
C07.030.001	OFD-101A-3.1	INS/FUN	PARTIAL	CLEAR	12/05/98	Penetrations 6 and 7 - Test Pkg. #31L-300. EOC#16 station pkg #33S-301, #32FRN-352, 32SI-401. EOC-17 Station Pkg #32S-451.
C07.030.002	OFD-101A-3.2	INSER	PARTIAL	CLEAR	11/30/98	Test Pkg. #32FRN-329. EOC-16 Station Pkg.# 32F-354, 32F-355, 32F-356A, 32F-356B, # 32F-361B
C07.030.003	OFD-101A-3.3	INSER	PARTIAL	CLEAR	12/04/98	Test Pkg. #32F-331, #32F-332, #32FRN-342. EOC-16 Station Pkg.# 32F-356A, 32SI-404, 32FI-405, 32FI-407, 32FI-408, 32SI-401, 32SI-406
C07.030.004	OFD-101A-3.4 -	INS/FUN	PARTIAL	CLEAR	12/05/98	Penetrations 8, 9, 10, 23 and 52 - Test Pkg. #32S-324, #32FRN-342, #32FRN-326. EOC-16 Station Pkg.# 33S-301, 32SI-401. EOC-17 Station Pkg.#32S-451.
C07.030.005	OFD-101A-3.5	INSER	COMPLETE	RECORDABLE	11/18/98	Station Pkg. #32F-359, #31LRN-351
C07.030.006	OFD-102A-3.1	INS/FUN	PARTIAL	CLEAR	11/30/98	This test shall include VT-2 for Telltale hole of Item No. C02.033.001 - Test Pkg. #32F-331, #32F-332. EOC-16 Station Pkg.# 32F-361A, # 32F-361B. EOC-17 Station Pkg.#32FI-409, 32FI-410, 32IDPT-306, 32SI-406
C07.030.007	OFD-102A-3.2	INS/FUN	PARTIAL	CLEAR	11/30/98	Penetrations 15 and 16 - Test Pkg. #32FRN-333, #32F-331, #32F-332. EOC-16 Station Pkg. # 32F-361B, # 32F-362A, #32F-362B, 32HR-438. EOC-17 Station Pkg.# 32F-462, 32F-463. C02.033.002 & C02.033.003.

Item Number	Flow Drawing	Required Test	Test Status	_Test Result	VT-2 Date	Comments
C07.030.008	OFD-102A-3.3	FUNCT	PARTIAL	CLEAR	10/08/98	Penetrations 39 and 59 - Test Pkg. #32F-305, #32S-304, #32IDPT-307. EOC-17 Station Pkg.#32S-464.
C07.030.010	OFD-104A-3.1	FUNCT	PARTIAL	RECORDABLE	11/18/98	Penetration 56. EOC-16 Station Pkg.# 32F-359, #32F-363, #32SI-406. EOC-17 Station Pkg.#32F-465.
C07.030.031	OFD-124B-3.2	FUNCT	PARTIAL	CLEAR	11/16/98	Penetrations 30, 31, 32, 33, 34 and 35 - Test Pkg. #32S-320, #33SI-425
C07.030.032	OFD-124B-3.4	INSER	COMPLETE	RECORDABLE	11/15/98	Penetrations 21 and 22 - Test Pkg. #32S-321, #33SI-425
C07.040.002	OFD-101A-3.2	HYDRO	PARTIAL	CLEAR	11/30/98	
C07.040.003	OFD-101A-3.3	HYDRO	PARTIAL	CLEAR	11/30/98	
C07.040.006	OFD-102A-3.1	HYDRO	PARTIAL	CLEAR	11/30/98	This test shall include VT-2 for Telltale hole of Item No. C02.033.001. EOC-17 Station Pkg.#32SN-460.
C07.040.007	OFD-102A-3.2	HYDRO	PARTIAL	CLEAR	11/30/98	Penetrations 15 and 16
C07.040.011	OFD-104A-3.2	HYDRO	COMPLETE	CLEAR	11/30/98	,

Item Number	Flow <u>Drawing</u>	Required <u>Test</u>	Test Status	Test Result	VT-2 Date	Comments
D01.011.001	OFD-100A-3.3	INSER	COMPLETE	CLEAR	10/08/98	EOC-17 Station Pkg.#32S-451
D01.011.002	OFD-101A-3.1	INSER	COMPLETE	CLEAR	10/08/98	EOC-16 Station Pkg.# 33S-301. EOC-17 Station Pkg.#32S-451
D01.011.005	OFD-101A-3.4	INSER	PARTIAL	CLEAR	10/08/98	EOC-16 Station Pkg.# 33S-301, 32SI-401. EOC-17 Station Pkg.#32S-451
D01.011.006	OFD-101A-3.5	INSER	COMPLETE	CLEAR	10/08/98	EOC-16 Station Pkg.# 33S-301. EOC-17 Station Pkg.# 32S-451
D02.011.002	OFD-121A-3.3	FUNCT	COMPLETE	CLEAR	11/18/98	Station Pkg. # 33F-374
D02.011.004	OFD-121A-3.8	FUNCT	PARTIAL	CLEAR	11/18/98	Station Pkg. # 33F-374, 32FI-421
D02.011.007	OFD-121D-3.1	FUNCT	PARTIAL	CLEAR	11/29/98	Test Pkg. #33FRN-316A, #33FRN-317A, #33FRN-318, #32SRN-311, # 32F-364, # 33F-365, # 33F-366, #32FI-421
D02.011.013	OFD-124B-3.1	FUNCT	PARTIAL	CLEAR	11/03/98	Test Pkg. #33S-339, #33S-340, 32SI-427, #33FI-425. EOC-17 Station Pkg.#33FRN-490

11.3 Reportable Indications:

None