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SUBJECT: Forwards Inservice Insp Rept for end of Cycle 10 refueling outage.

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January 20, 1988

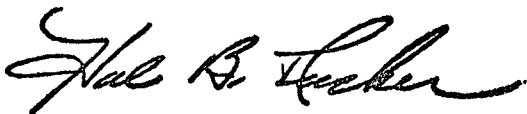
U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Subject: Oconee Nuclear Station, Unit 1  
Docket No. 50-269  
1987 Refueling Outage

Gentlemen:

Please find attached a copy of the Inservice Inspection Report for Oconee Unit 1 End of Cycle 10 Refueling Outage. This report is submitted pursuant to Oconee Technical Specification 4.2 and Section XI of the ASME Boiler and Pressure Vessel Code, Article IWA-6230.

Very truly yours,



Hal B. Tucker

PJN/272/jgc

xc: w/o attachment

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Oconee Nuclear Station

8801260156 880120  
PDR ADOCK 05000269  
Q PDR

*1047*  
*1/1*

**FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS**

As required by the Provisions of the ASME Code Rules

1. Owner Duke Power Company, Charlotte, N.C.  
(Name and Address of Owner)

2. Plant Oconee Nuclear Station, Highway 130/183, Seneca, SC 29679  
(Name and Address of Plant)

3. Plant Unit 2 4. Owner Certificate of Authorization (if required) N/A

5. Commercial Service Date 9-9-74 6. National Board Number for Unit N/A

7. Components Inspected

Component or Apparatus	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
See Section 1 Paragraph 1.4 in the attached report.				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
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_____	_____	_____	_____	_____

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 10-15-86 to 04-06-88 9. Inspection Interval from 03-01-84 to 03-01-94
10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval.
11. Abstract of Conditions Noted. See attached report.
12. Abstract of Corrective Measures Recommended and Taken. See attached report.

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

Date June 15 19 88 Signed Duke Power By [Signature]  
Owner

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

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of N. Carolina and employed by The HSB&I Co.\* of Hartford, Conn have inspected the components described in this Owners' Data Report during the period 10-15-86 to 04-06-88 and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owners' Data Report in accordance with the requirements of the ASME Code, Section XI.

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

Date June 15 19 88

Rayford F. Elain Commission NC 828  
Inspector's Signature National Board, State, Province and No.

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

## 1.0 Summary of Inservice Inspection

This report describes the Inservice Inspection of Duke Power Company's Oconee Nuclear Station Unit 1 during the 1987 Refueling Outage (also referred to as Outage 10).

Included in this report are the final inservice inspection plan, the inspection results for each item, a summary for each category of examination, certification data for all personnel, material and equipment and correction action taken when unacceptable conditions were found. In addition, there is a section included for repairs and replacements required since May 1, 1986.

### 1.1 Class 1 Inspections

The Class 1 Inservice Inspection included examinations on the Reactor Vessel (National Board No. N-101), Pressurizer (National Board No. N-102), Steam Generator 1A (National Board No. N-103), and Letdown Cooler 1A. In addition, circumferential butt welds of Primary Coolant, Pressurizer Spray, High Pressure Injection and Loop Drain Piping received examinations.

Reactor Vessel Closure Head Lugs, Reactor Vessel Internal Surfaces, CRDM Nozzle Penetrations and Incore Nozzle Penetrations were examined.

Reactor Coolant Pump 1A1 Main Flange Bolts and Lower Seal Housing Bolts, Steam Generator 1A Upper Head Manway and Inspection Cover Bolts, Pressurizer Relief and High Pressure Injection Valves Bolting received examinations. Also, Pressurizer Support Lug Welds and Low Pressure Injection System integrally welded attachment were examined.

Visual examinations were performed on the Class 1 Pressure Boundary during Inservice Leakage Tests. Also, visual examinations were performed on Class 1 Component Supports of the Pressurizer Spray, High Pressure Injection, Low Pressure Injection and Core Flood Systems.

The Inconel 600 Tubing in Steam Generators 1A and 1B was inspected by eddy current during Outage 10. The results of the inspections are shown in Section 5 of this report.

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

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

## 1.2 Class 2 Inspection

The Class 2 inspections included examination of a Steam Generator 1B Shell-to-Shell Weld and LP Cooler A Outlet Nozzle to Shell Weld. Steam Generator 1B Feedwater Header Support attachment welds and piping integrally welded attachments on Main Feedwater, High Pressure Injection, Reactor Building Spray and Main Steam Systems also received examination. In addition, circumferential pipe welds in the Decay Heat Removal, Core Flood, Reactor Building Spray, High Pressure Injection, Component Cooling, Main Steam and Main Feedwater Systems were examined. Longitudinal seam welds were also inspected the Decay Heat Removal, Reactor Building Spray and Main Steam Systems.

Visual examinations were performed on the Class 2 Pressure Boundary during system functional tests. Also, visual examinations were performed on Class 2 Component Supports of the Main Steam, Main Feedwater, Emergency Feedwater, High Pressure Injection, Decay Heat and Reactor Building Spray Systems.

Reportable indications were found on the Class 2 Inspections shown on the following pages. Inspection and evaluation data for each reportable indication found on Class 2 Items are shown in Section 6 of this report.

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

## 1.3 Augmented Inspections

No augmented inspections were performed during Outage 10.

PROGRAM: NISIRUNB-QAISI02  
FILE: C007133

DUKE POWER COMPANY  
QUALITY ASSURANCE DEPARTMENT  
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM  
MASTER REFERENCE LISTING  
REPORT BREAKS ON UNIT AND START OF ITEM NUMBER

PAGE 1  
DATE 12/29/87

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\*\*\* REPORT SELECTION CRITERIA IS LISTED BELOW \*\*\*  
\*\*\*\*\*

1 2 3 4 5 6 7  
1234567890123456789012345678901234567890123456789012345678901234567890

PLANT CARD: P=OCN 1  
TITLE CARD: T OCOONEE 1 CLASS 1 REPORTABLE ITEMS - OUTAGE 10  
INSPECTION CARD: I 10 REP

1234567890123456789012345678901234567890123456789012345678901234567890  
1 2 3 4 5 6 7

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\*\*\* REPORT BREAK TOTALS ARE LISTED BELOW \*\*\*  
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ITEM NUMBERS STARTING WITH B07 FOR UNIT 1	1
ITEM NUMBERS STARTING WITH B10 FOR UNIT 1	1
ITEM NUMBERS STARTING WITH B16 FOR UNIT 1	2
ITEM NUMBERS STARTING WITH C05 FOR UNIT 1	1
ITEM NUMBERS STARTING WITH F1. FOR UNIT 1	1
TOTAL RECORDS SELECTED FOR UNIT 1	----- 6
TOTAL RECORDS SELECTED FOR RUN	===== 6

PROGRAM: NISIRUNB-QAISI02  
FILE: C007133  
PLANT: OCONEE UNIT 1  
KEY: ITEM NUMBER B07

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

PAGE 1  
DATE 12/29/87

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B07.070.013	1-51A-HP127	OM-246-015		VT1	QCL-13	-----	02.50	-----	HIGH PRESSURE INJECTION , VLV. HP-127 BOLTING PIR # 1-087-0193



PROGRAM: NISIRUNB-QAISI02  
 FILE: C007133  
 PLANT: OCONEE UNIT 1  
 KEY: ITEM NUMBER B10

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

PAGE 2  
 DATE 12/29/87

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	INSP LOCS.	PROC. REQ.	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B10.010.001	1-53A-H8B	0-479A	PT	NDE-35	SS	0.250	-----	LOW PRESS. INJ. - SPRING 53A-0-479A-H8B PIR # 1-087-0214

PROGRAM: NISIRUNB-QAISI02  
 FILE: C007133  
 PLANT: OCONEE UNIT 1  
 KEY: ITEM NUMBER B16

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

PAGE 3  
 DATE 12/29/87

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
B16.011.001	ISGA-TUBES	B&W 129309E7	_____	ET	ISI-418	INCØ	00.62 00.040	*****	CAL.BLOCKS - 49154 , 49155 , B&W-1170027B AND B&W-1170096B PIR 1-087-0276
B16.011.002	ISGB-TUBES	B&W 129309E7	_____	ET	ISI-418	INCØ	00.62 00.040	*****	CAL.BLOCKS - 49154 , 49155 , B&W-1170027B AND B&W-1170096B PIR 1-087-0276

PROGRAM: NISIRUNB-QAISI02  
FILE: C007133

DUKE POWER COMPANY  
QUALITY ASSURANCE DEPARTMENT  
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM  
MASTER REFERENCE LISTING  
REPORT BREAKS ON UNIT AND START OF ITEM NUMBER

PAGE 1  
DATE 12/29/87

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\*\*\* REPORT SELECTION CRITERIA IS LISTED BELOW \*\*\*  
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1 2 3 4 5 6 7  
1234567890123456789012345678901234567890123456789012345678901234567890

PLANT CARD: P=OCN 1  
TITLE CARD: T OCONEE 1 CLASS 2 REPORTABLE ITEMS - OUTAGE 10  
INSPECTION CARD: I 10 REP

1234567890123456789012345678901234567890123456789012345678901234567890  
1 2 3 4 5 6 7

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\*\*\* REPORT BREAK TOTALS ARE LISTED BELOW \*\*\*  
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ITEM NUMBERS STARTING WITH B07 FOR UNIT 1 1  
ITEM NUMBERS STARTING WITH B10 FOR UNIT 1 1  
ITEM NUMBERS STARTING WITH B16 FOR UNIT 1 2  
ITEM NUMBERS STARTING WITH C05 FOR UNIT 1 1  
ITEM NUMBERS STARTING WITH F1. FOR UNIT 1 1  
TOTAL RECORDS SELECTED FOR UNIT 1 ----- 6  
=====

TOTAL RECORDS SELECTED FOR RUN 6

PROGRAM: NISIRUNB-QAISI02  
FILE: C007133  
PLANT: OCONEE UNIT 1  
KEY: ITEM NUMBER C05

DUKE POWER COMPANY  
QUALITY ASSURANCE DEPARTMENT  
PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM  
OCONEE 1 CLASS 2 REPORTABLE ITEMS - OUTAGE 10

PAGE 4  
DATE 12/29/87

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./ THICK	CALIB BLOCK	COMMENTS
C05.021.104	1-03-3-30B	SYS 03 ISO 3		RT	NDE-12	CS	14.00 00.750		SELECTION CRITERIA 5.2 PIR # 1-087-0223

PROGRAM: NISIRUNB-QAISI02  
 FILE: C007133  
 PLANT: OCONEE UNIT 1  
 KEY: ITEM NUMBER F1.

DUKE POWER COMPANY  
 QUALITY ASSURANCE DEPARTMENT  
 PRE-SERVICE AND IN-SERVICE INSPECTION SYSTEM  
 OCONEE 1 CLASS 2 REPORTABLE ITEMS - OUTAGE 10

PAGE 5  
 DATE 12/29/87

ITEM NUMBER	ID. NUMBER	DRAWING NUMBERS	LOCS.	INSP. REQ.	PROC. NUMBERS	MATERIAL TYPE/GRADE	DIAM./THICK	CALIB BLOCK	COMMENTS
F1.02.402	1-53B-2601	0-435B		VT	QCL-14		14.00		DECAY HEAT - RIGID 1-53B-435B-DM-2601 PIR 1-087-0160