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 AUTH. NAME      AUTHOR AFFILIATION  
 TUCKER, H.B.      Duke Power Co.  
 RECIPIENT NAME      RECIPIENT AFFILIATION  
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SUBJECT: Provides info re Unit 2 steam generator inservice insp completed on 880320.

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**DUKE POWER COMPANY**

P.O. BOX 33189  
CHARLOTTE, N.C. 28242

HAL B. TUCKER  
VICE PRESIDENT  
NUCLEAR PRODUCTION

TELEPHONE  
(704) 373-4531

June 20, 1988

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

Subject: Oconee Nuclear Station, Unit 2  
Docket No. 50-270  
OTSG Tube Plugging and Repair

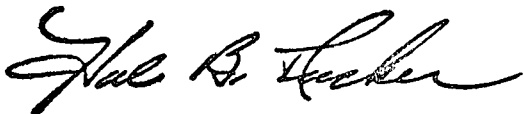
Gentlemen:

Pursuant to Oconee Nuclear Station Technical Specification 4.17.6(a), Duke Power Company is providing the following information concerning the Oconee Unit 2 steam generator inservice inspection. The inservice inspection and tube plugging/repair operation for the Unit 2 End of Cycle 9 refueling outage was completed on March 20, 1988.

There were approximately 9500 tubes inspected full length in the Unit 2 OTSG "A". For the Unit 2 OTSG "B", there were approximately 9495 tubes inspected full length.

Please find attached (Attachments 1 and 3) lists of tubes located in OTSGs "A" and "B" respectively which have eddy current indications of degraded tubes. Attachments 2 and 4 are lists of tubes plugged from the same OTSGs.

Very truly yours,



Hal B. Tucker

PJN/279/jgc

xc: Dr. J. Nelson Grace, Regional Administrator  
U.S. Nuclear Regulatory Commission - Region II  
101 Marietta Street, NW, Suite 2900  
Atlanta, GA. 30323

Ms. Helen Pastis  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Mr. P.H. Skinner  
NRC Resident Inspector  
Oconee Nuclear Station

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PDR ADOCK 05000270  
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**TABLE 1**  
**Oconee Nuclear Station Unit 2**  
**Steam Generators**  
**2/88 Inspection Reports**

	<u>"A" OTSG</u>		<u>"B" OTSG</u>	
	# of tubes	Attachment # for additional information	# of tubes	Attachment # for additional information
1. Tubes Inspected:				
Full Length:	9500	NA	9495	NA
2. Indications of imperfections:				
Degraded tubes (>20% TWD)	39	1	33	3
3. Tubes Repaired:				
Plugged Tubes:	13	2	20	4
Sleeved Tubes:	0	NA	0	NA
Pulled Tubes:	2	2	0	NA

OTSG = Once Through Steam Generator

TWD = Through Wall Depth

UTPF = Upper Tube Sheet Primary Face

TSP = Tube Support Plate

Plant: OCONEE UNIT 2  
 Outage: 2/88 RFO

Steam Generator: A

QUERY: ATTACHMENT 1 DEGRADED TUBES

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
2	19	2/88 RFO	OD (general)	27 % TW	0.82	10	
14	8	2/88 RFO	OD (general)	38 % TW	0.69	9	+25.00
51	117	2/88 RFO	OD Wear/Thin	41 % TW	1.08	13	
52	117	2/88 RFO	OD Wear/Thin	57 % TW	0.74	11	
53	116	2/88 RFO	OD Wear/Thin	46 % TW	0.96	13	
66	15	2/88 RFO	OD (general)	35 % TW	0.78	9	
70	53	2/88 RFO	OD (general)	57 % TW	0.92	6	
75	3	2/88 RFO	OD Wear/Thin	66 % TW	1.23	15	
75	4	2/88 RFO	OD Wear/Thin	58 % TW	2.97	15	
75	5	2/88 RFO	OD Wear/Thin	49 % TW	3.13	15	
75	7	2/88 RFO	OD Wear/Thin	41 % TW	1.12	15	
75	8	2/88 RFO	OD Wear/Thin	49 % TW	4.50	15	
75	9	2/88 RFO	OD Wear/Thin	76 % TW	1.71	15	
77	3	2/88 RFO	OD Wear/Thin	58 % TW	1.73	15	
77	21	2/88 RFO	OD (general)	32 % TW	0.72	15	
77	23	2/88 RFO	OD (general)	51 % TW	0.88	15	
96	127	2/88 RFO	OD Wear/Thin	42 % TW	1.44	14	
101	123	2/88 RFO	OD Wear/Thin	51 % TW	1.88	14	
101	124	2/88 RFO	OD Wear/Thin	51 % TW	1.48	14	
104	119	2/88 RFO	OD Wear/Thin	62 % TW	0.77	13	
		2/88 RFO	OD Wear/Thin	49 % TW	1.61	15	
105	119	2/88 RFO	OD Wear/Thin	58 % TW	0.84	14	
107	116	2/88 RFO	OD Wear/Thin	72 % TW	0.93	14	
107	119	2/88 RFO	OD Wear/Thin	58 % TW	1.03	11	
108	115	2/88 RFO	OD (general)	47 % TW	0.70	14	
108	118	2/88 RFO	OD Wear/Thin	52 % TW	1.63	14	
109	113	2/88 RFO	OD (general)	65 % TW	1.42	1	+35.50
109	116	2/88 RFO	OD Wear/Thin	53 % TW	0.69	14	
110	115	2/88 RFO	OD Wear/Thin	57 % TW	0.70	12	
		2/88 RFO	OD Wear/Thin	41 % TW	2.71	14	
111	111	2/88 RFO	OD Wear/Thin	43 % TW	0.68	14	
111	114	2/88 RFO	OD Wear/Thin	32 % TW	1.26	14	
111	115	2/88 RFO	OD Wear/Thin	27 % TW	1.35	14	
112	113	2/88 RFO	OD Wear/Thin	25 % TW	0.90	14	
113	113	2/88 RFO	OD Wear/Thin	60 % TW	2.09	14	
113	114	2/88 RFO	OD Wear/Thin	45 % TW	1.77	14	
114	111	2/88 RFO	OD Wear/Thin	55 % TW	2.22	14	
115	110	2/88 RFO	OD Wear/Thin	51 % TW	1.09	14	
115	111	2/88 RFO	OD Wear/Thin	54 % TW	1.33	14	
137	3	2/88 RFO	OD (general)	22 % TW	0.71	10	
141	62	2/88 RFO	OD (general)	44 % TW	0.68	12	+23.50

TOTAL TUBES FOUND = 39  
 TOTAL INDICATIONS FOUND = 41  
 TOTAL TUBES IN INPUT FILE = 15531  
 TOTAL TUBES INSPECTED = 9501

Plant: OCONEE UNIT 2  
 Outage: 2/88 RFO

Steam Generator: A

QUERY: ATTACHMENT 2 TUBES PLUGGED

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
2	19	2/88 RFO	PLUG	MECH		UTS-PF	
12	23	2/88 RFO	PLUG	MECH		UTS-PF	
41	113	2/88 RFO	PLUG	MECH		UTS-PF	
66	15	2/88 RFO	PLUG	MECH		UTS-PF	
70	53	2/88 RFO	PLUG	MECH		UTS-PF	
75	4	2/88 RFO	PLUG	MECH		UTS-PF	
75	5	2/88 RFO	PLUG	MECH		UTS-PF	
75	8	2/88 RFO	PLUG	MECH		UTS-PF	
77	16	2/88 RFO	PLUG	WELD-ST		UTS-PF	
77	23	2/88 RFO	PLUG	MECH		UTS-PF	
77	26	2/88 RFO	PLUG	WELD-ST		UTS-PF	
101	3	2/88 RFO	PLUG	MECH		UTS-PF	
108	115	2/88 RFO	PLUG	MECH		UTS-PF	
109	113	2/88 RFO	PLUG	MECH		UTS-PF	
141	62	2/88 RFO	PLUG	MECH		UTS-PF	

Pulled

Pulled

TOTAL TUBES FOUND = 15  
 TOTAL INDICATIONS FOUND = 15

TOTAL TUBES IN INPUT FILE = 15531  
 TOTAL TUBES INSPECTED = 9501

Plant: OCONEE UNIT 2  
 Outage: 2/88 RFO

Steam Generator: B

QUERY: ATTACHMENT 3 DEGRADED TUBES

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
25	4	2/88 RFO	OD (general)	25 % TW	1.32	9	
27	6	2/88 RFO	OD (general)	44 % TW	0.73	9	- 0.20
29	6	2/88 RFO	OD (general)	44 % TW	2.00	9	
48	39	2/88 RFO	OD (general)	38 % TW	0.96	4	- 1.70
49	51	2/88 RFO	OD (general)	34 % TW	0.73	12	
61	33	2/88 RFO	OD (general)	27 % TW	0.92	12	
63	127	2/88 RFO	OD (general)	36 % TW	0.75	9	
63	128	2/88 RFO	OD (general)	29 % TW	0.70	9	
64	126	2/88 RFO	OD (general)	31 % TW	0.55	9	
65	128	2/88 RFO	OD (general)	37 % TW	0.63	9	- 0.20
66	1	2/88 RFO	OD (general)	51 % TW	1.08	14	+ 0.40
66	129	2/88 RFO	OD (general)	32 % TW	0.58	9	
69	128	2/88 RFO	OD (general)	62 % TW	1.51	15	- 0.80
72	128	2/88 RFO	OD (general)	41 % TW	0.84	15	
		2/88 RFO	OD (general)	37 % TW	0.91	15	
75	13	2/88 RFO	OD Wear/Thin	43 % TW	0.88	15	
75	14	2/88 RFO	OD Wear/Thin	39 % TW	1.05	15	
75	16	2/88 RFO	OD Wear/Thin	39 % TW	0.61	14	
75	20	2/88 RFO	OD (general)	32 % TW	0.80	15	
76	102	2/88 RFO	OD (general)	25 % TW	0.81	15	
77	3	2/88 RFO	OD Wear/Thin	49 % TW	2.48	15	
77	7	2/88 RFO	OD Wear/Thin	42 % TW	1.45	15	
77	8	2/88 RFO	OD Wear/Thin	67 % TW	1.75	15	
77	17	2/88 RFO	OD (general)	53 % TW	1.08	15	
96	95	2/88 RFO	OD (general)	43 % TW	1.10	12	
		2/88 RFO	OD (general)	44 % TW	0.81	12	- 0.70
96	127	2/88 RFO	OD (general)	29 % TW	0.55	8	
109	82	2/88 RFO	OD (general)	54 % TW	0.78	12	
114	4	2/88 RFO	OD (general)	89 % TW	0.87	4	+ 1.10
114	44	2/88 RFO	OD (general)	60 % TW	1.68	12	- 0.30
115	37	2/88 RFO	OD (general)	49 % TW	1.08	12	
118	52	2/88 RFO	OD (general)	60 % TW	0.71	12	- 1.30
		2/88 RFO	OD (general)	69 % TW	0.64	12	- 1.40
122	70	2/88 RFO	OD (general)	37 % TW	0.80	12	
123	98	2/88 RFO	OD (general)	48 % TW	1.97	5	+12.00
133	5	2/88 RFO	OD (general)	20 % TW	3.48	6	+15.30

TOTAL TUBES FOUND = 33  
 TOTAL INDICATIONS FOUND = 36  
 TOTAL TUBES IN INPUT FILE = 15531  
 TOTAL TUBES INSPECTED = 9498

Plant: OCONEE UNIT 2  
 Outage: 2/88 RFO

Steam Generator: B

QUERY: ATTACHMENT 4 TUBES PLUGGED

ROW	TUBE	OUTAGE	INDICATION	VALUE	VOLTS	ELEVATION	INCHES
27	6	2/88 RFO	PLUG	MECH		UTS-PF	
29	6	2/88 RFO	PLUG	MECH		UTS-PF	
63	127	2/88 RFO	PLUG	MECH		UTS-PF	
66	1	2/88 RFO	PLUG	MECH		UTS-PF	
69	128	2/88 RFO	PLUG	MECH		UTS-PF	
70	131	2/88 RFO	PLUG	MECH		UTS-PF	
72	128	2/88 RFO	PLUG	MECH		UTS-PF	
75	11	2/88 RFO	PLUG	MECH		UTS-PF	
75	19	2/88 RFO	PLUG	MECH		UTS-PF	
77	17	2/88 RFO	PLUG	MECH		UTS-PF	
77	28	2/88 RFO	PLUG	MECH		UTS-PF	
96	95	2/88 RFO	PLUG	MECH		UTS-PF	
109	82	2/88 RFO	PLUG	MECH		UTS-PF	
114	4	2/88 RFO	PLUG	MECH		UTS-PF	
114	44	2/88 RFO	PLUG	MECH		UTS-PF	
115	37	2/88 RFO	PLUG	MECH		UTS-PF	
118	52	2/88 RFO	PLUG	MECH		UTS-PF	
123	98	2/88 RFO	PLUG	MECH		UTS-PF	
132	6	2/88 RFO	PLUG	MECH		UTS-PF	
135	62	2/88 RFO	PLUG	MECH		UTS-PF	

TOTAL TUBES FOUND = 20  
 TOTAL INDICATIONS FOUND = 20

TOTAL TUBES IN INPUT FILE = 15531  
 TOTAL TUBES INSPECTED = 9498