



# Florida Power CORPORATION

Crystal River Unit 3  
Docket No. 50-302

May 31, 1991  
3F0591-11

Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555

Subject: Special Report 91-02

References: A. FPC to NRC - Letter dated June 15, 1990  
B. FPC to NRC - Letter dated January 10, 1991

Dear Sir:

Attached please find Special Report 91-02 submitted in accordance with Crystal River Unit 3 Technical Specifications 4.4.5.5.b and 6.9.2.g. This Special Report includes a Summary of Eddy Current Testing and a List of Tube Indications. The summary provides the number and extent of tubes inspected. The list of tube indications provides the location and percent of wall-thickness penetration for each indication, and identifies all tubes plugged during Refuel 7.

Reference A provided the fifteen-day report required by Technical Specification 4.4.5.5.a. Reference B submitted a supplemental report summarizing the Eddy Current Testing results.

Sincerely,

G. L. Boldt  
Vice President  
Nuclear Production

GLB:LVC  
Attachment

xc: Regional Administrator, Region II  
NRR Project Manager  
Senior Resident Inspector

*2nd Dist  
Re insert RDS Code  
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**SPECIAL REPORT 91-02  
CRYSTAL RIVER UNIT 3 - OTSG's  
REFUEL 7 OUTAGE**

**SUMMARY OF EDDY CURRENT TESTING**

	"A" SG	"B" SG
Number of Tubes Inspected - Total Percent	3795 24.4%	4154 26.7%
Number of Tubes Inspected with 8 x 1 along lane down to 15th TSP	0	368
Number of Tubes Inspected with Eddy-360 along lane down to 15th TSP	387	387
Tube Plugs Inspected with Eddy-360	8	0
Total Tube Indications	42	59
1 - 19% Wall Loss	20	23
20 - 39% Wall Loss	13	19
> 40% Wall Loss	9	17
Number of Tubes Plugged (Refuel 7)	10	24
Tubes Plugged to-date	20	50

LIST OF TUBES CONTAINING INDICATIONS, "A" STEAM GENERATOR

COUNT	OTSG	ROW	COL	INDIC	% THRU-WALL	LOCATION	CONDITION
1	A	24	86	ODI	18	8TH SPAN	INSERVICE
2	A	25	91	ODI	6	8TH SPAN	PLUGGED
3	A	25	91	ODI	20	8TH SPAN	
4	A	25	91	WEAR	38	9TH TSP	
5	A	26	91	ODI	19	8TH SPAN	INSERVICE
6	A	27	92	AXI	19	15TH SPAN	INSERVICE
7	A	42	68	ODI	19	11TH SPAN	INSERVICE
8	A	42	69	ODI	19	9TH SPAN	INSERVICE
9	A	47	58	ODI	17	5TH SPAN	INSERVICE
10	A	58	123	ODI	7	9TH SPAN	INSERVICE
11	A	58	125	ODI	12	13TH SPAN	INSERVICE
12	A	59	63	ODI	19	13TH SPAN	INSERVICE
13	A	63	128	ODI	7	LTS/F SPAN	INSERVICE
14	A	63	129	ODI	15	LTS/F SPAN	PLUGGED
15	A	63	129	WEAR	44	10TH TSP	
16	A	74	103	ODI	19	LTS/F SPAN	INSERVICE
17	A	97	98	ODI	19	13TH SPAN	INSERVICE
18	A	97	98	ODI	19	13TH SPAN	
19	A	125	15	ODI	19	1ST SPAN	INSERVICE
20	A	136	21	ODI	19	LTS SPAN	INSERVICE
21	A	139	10	AXI	19	14TH SPAN	INSERVICE
22	A	149	21	WEAR	15	10TH TSP	INSERVICE
23	A	35	59	ODI	28	12TH SPAN	INSERVICE
24	A	73	128	WEAR	23	10TH TSP	INSERVICE
25	A	113	112	ODI	22	14TH SPAN	INSERVICE
26	A	150	16	ODI	28	10TH SPAN	INSERVICE
27	A	62	128	WEAR	33	10TH TSP	INSERVICE
28	A	76	123	WEAR	33	10TH TSP	INSERVICE
29	A	77	5	WEAR	30	15TH TSP	INSERVICE
30	A	73	25	WEAR	20	15TH TSP	INSERVICE
31	A	73	46	WEAR	19	14TH TSP	INSERVICE
32	A	75	47	WEAR	27	14TH TSP	INSERVICE
33	A	77	3	WEAR	55	15TH TSP	PLUGGED

LIST OF TUBES CONTAINING INDICATIONS, "A" STEAM GENERATOR CONTINUED

COUNT	OTSG	ROW	COL	INDIC	% THRU-WALL	LOCATION	CONDITION
34	A	77	4	WEAR	42	15 TSP	PLUGGED
35	A	64	127	WEAR	45	10TH TSP	PLUGGED
36	A	69	130	WEAR	43	10TH TSP	PLUGGED
37	A	77	124	WEAR	41	10TH TSP	PLUGGED
38	A	77	124	WEAR	39	9TH TSP	PLUGGED
39	A	77	125	WEAR	46	10TH TSP	PLUGGED
40	A	77	125	WEAR	48	9TH TSP	PLUGGED
41	A	99	41	ODI	45	4TH TSP	PLUGGED
42	A	4	40	ODI	38	12TH TSP	PLUGGED

LIST OF TUBES CONTAINING INDICATIONS, "B" STEAM GENERATOR

COUNT	OTSG	ROW	COL	INDIC	% THRU-WALL	LOCATION	CONDITION
1	B	27	71	ODI	19	LTS/F SPAN	INSERVICE
2	B	43	76	ODI	16	11TH SPAN	INSERVICE
3	B	45	77	ODI	19	15TH SPAN	INSERVICE
4	B	46	83	ODI	19	LTS/F SPAN	INSERVICE
5	B	47	31	ODI	12	13TH SPAN	INSERVICE
6	B	80	42	ODI	19	14TH SPAN	INSERVICE
7	B	88	127	ODI	19	LTS SPAN	INSERVICE
8	B	92	32	ODI	19	3RD SPAN	INSERVICE
9	B	95	92	ODI	8	LTS/F SPAN	INSERVICE
10	B	97	43	AXI	19	LTS/F SPAN	INSERVICE
11	B	103	96	ODI	19	LTS SPAN	INSERVICE
12	B	105	33	ODI	14	LTS/F SPAN	INSERVICE
13	B	122	93	AXI	19	13TH SPAN	INSERVICE
14	B	122	93	AXI	19	15TH SPAN	INSERVICE
15	B	136	45	ODI	14	7TH TSP	INSERVICE
16	B	139	45	ODI	10	7TH TSP	INSERVICE
17	B	139	74	ODI	19	7TH TSP	INSERVICE
18	B	140	62	ODI	17	7TH TSP	INSERVICE
19	B	7	11	ODI	25	12TH SPAN	INSERVICE

LIST OF TUBES CONTAINING INDICATIONS, "B" STEAM GENERATOR, CONTINUED

COUNT	OTSC	ROW	COL	INDIC	% THRU-WALL	LOCATION	CONDITION
20	B	41	41	ODI	23	LTS/F SPAN	INSERVICE
21	B	80	42	ODI	27	9TH SPAN	INSERVICE
22	B	80	127	ODI	23	11TH TSP	INSERVICE
23	B	130	44	ODI	29	7TH TSP	INSERVICE
24	B	37	41	ODI	32	LTS/F SPAN	INSERVICE
25	B	64	114	ODI	36	4TH TSP	PLUGGED
26	B	60	112	ODI	35	4TH TSP	INSERVICE
27	B	90	60	ODI	30	7TH TSP	INSERVICE
28	B	95	43	ODI	34	LTS/F SPAN	INSERVICE
29	B	124	9	ODI	38	2ND SPAN	PLUGGED
30	B	73	24	ODI	19	UTSF	INSERVICE
31	B	74	16	ODI	29	UTSF	INSERVICE
32	B	74	22	ODI	31	UTSF	INSERVICE
33	B	75	23	ODI	20	UTSF	INSERVICE
34	B	75	38	ODI	19	UTSF	INSERVICE
35	B	75	38	ODI	20	UTSF	INSERVICE
36	B	75	46	ODI	19	UTSF	INSERVICE
37	B	77	55	AXI	21	15TH TSP	INSERVICE
38	B	77	56	ODI	19	15TH TSP	INSERVICE
39	B	78	48	AXI	25	15TH TSP	INSERVICE
40	B	78	51	ODI	26	UTSF	INSERVICE
41	B	79	19	ODI	28	UTSF	INSERVICE
42	B	79	41	ODI	19	15TH TSP	INSERVICE
43	B	28	93	ODI	40	8TH TSP	PLUGGED
44	B	34	61	ODI	61	15TH SPAN	PLUGGED
45	B	78	49	ODI	40	UTSF	PLUGGED
46	B	79	37	ODI	55	11TH TSP	PLUGGED
47	B	88	39	ODI	47	7TH TSP	PLUGGED
48	B	96	33	MBM	65	LTS/F SPAN	PLUGGED
49	B	98	28	MBM	66	LTS/F SPAN	PLUGGED
50	B	98	44	MBM	43	LTS/F SPAN	PLUGGED

LIST OF TUBES CONTAINING INDICATIONS, "B" STEAM GENERATOR, CONTINUED

COUNT	OTSG	ROW	COL	INDIC	% THRU-WALL	LOCATION	CONDITION
51	B	109	34	MBM	53	LTS/F SPAN	PLUGGED
52	B	116	46	MBM	54	LTS/F SPAN	PLUGGED
53	B	124	39	ODI	56	7TH TSP	PLUGGED
54	B	125	9	WEAR	42	8TH TSP	PLUGGED
55	B	126	9	ODI	66	8TH TSP	PLUGGED
56	B	145	11	ODI	61	7TH TSP	PLUGGED
57	B	146	25	WEAR	64	8TH TSP	PLUGGED
58	B	27	93	WEAR	67	8TH TSP	PLUGGED
59	B	27	93	WEAR	70	7TH TSP	
NC	B	47	1	NONE	OBSTRUCTION IN TUBE		PLUGGED
NC	B	46	1	NONE	SURROUND OBSTRUCTED TUBE		PLUGGED
NC	B	47	2	NONE	SURROUND OBSTRUCTED TUBE		PLUGGED
NC	B	48	1	NONE	SURROUND OBSTRUCTED TUBE		PLUGGED
NC	B	48	2	NONE	SURROUND OBSTRUCTED TUBE		PLUGGED
NC	B	87	56	NONE	CORRECT PLUGGING ERROR		PLUGGED

ODI = OUTSIDE DIAMETER INDICATION  
 AXI = OUTSIDE DIAMETER AXIAL INDICATION  
 WEAR = OUTSIDE DIAMETER WEAR INDICATION  
 TSP = TUBE SUPPORT PLATE  
 LTS = LOWER TUBE SHEET  
 LTSF = LOWER TUBE SHEET SECONDARY FACE  
 LTSP = LOWER TUBE SHEET PRIMARY FACE  
 LTS/F SPAN = LOWER TUBE SHEET FREE SPAN  
 UTS = UPPER TUBE SHEET  
 UTSF = UPPER TUBE SHEET SECONDARY FACE  
 MBM = MANUFACTURERS BURNISH MARKS  
 NC = NOT COUNTED IN TOTAL INDICATIONS