

Steam Generator Outage Summary Report

McGuire Unit 2 1999 Outage EOC 12

Location: Hwy. 73, Cowans Ford, North Carolina 28216

NRC Docket No. 50-370

National Board No. 84

Commercial Service Date: March 1, 1984

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

Revision 0

Prepared By: *Richard W. Camp* Date: *2/23/00*

Reviewed By: *O B Mays* Date: *2/24/00*

Approved By: *Morris Sample* Date: *2/24/00*

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3

State of North Carolina
Department of Labor
C/o J. M. Givens, Jr.

FORM NIS-1 OWNER'S DATA REPORT FOR INSERVICE INSPECTIONS

As required by the Provisions of the ASME Code Rules

1. Owner: Duke Energy Corporation, 526 S. Church St., Charlotte, NC 28201-1006
(Name and Address of Owner)
2. Plant: McGuire Nuclear Station, Highway 73, Cowans Ford, N. C. 28216
(Name and Address of Plant)
3. Plant Unit: 2
4. Owner Certificate of Authorization (if required) N/A
5. Commercial Service Date: March 1, 1984
6. National Board Number for Unit 84
7. Components Inspected:

<u>Component</u>	<u>Manufacturer</u>	<u>Manufacturer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
Steam Generator 2A	BWI	7700-02	NC-302674	159
Steam Generator 2B	BWI	7700-04	NC-302675	161
Steam Generator 2C	BWI	7700-01	NC-302676	158
Steam Generator 2D	BWI	7700-03	NC-302677	160

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8¹/₂ 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 24, 1999 to April 7, 1999
- 9. Inspection Period Identification: 2nd Period of the 2nd Interval
- 10. Inspection Interval Identification: 2nd Inspection Interval
- 11. Applicable Edition of Section XI 1989 Addenda None
- 12. Date/Revision of Inspection Plan: Tech Spec 5.9 Steam Generator 9/30/98 Revision
Steam Generator Management Program Rev. 1

- 13. Abstract of Examinations and Test. Reference attached NRC Inspection Report dated 4/19/99.
- 14. Abstract of Results of Examination and Tests. Reference attached NRC Inspection Report dated 4/19/99.
- 15. Abstract of Corrective Measures. Reference attached NRC Inspection Report dated 4/19/99.

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 2-24 ²⁰⁰⁰₁₉ Signed Duke Energy Corp. By Mous Sample
Owner

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 N.C. employed by *The HSBI&I Co. of ~~HARTFORD, CT.~~ have inspected the components described in this Owners' Report during the period 3-24-1999 to 4-7-1999, and state that to the best of my knowledge and belief, the Owner has performed examinations and tests and taken corrective measures described in the Owners' Report in accordance with the Inspection Plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations, test, and corrective measures described in this Owners' 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

RD Klein Commissions NB 7728, NC 853, N-I
Inspector's Signature National Board, State, Province, and Endorsements

Date 2-29 ²⁰⁰⁰₁₉

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



H. B. Barron
Vice President

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Duke Energy Corporation
McGuire Nuclear Station
12700 Hagers Ferry Road
Huntersville, NC 28078-9340
(704) 875-4800 OFFICE
(704) 875-4809 FAX

April 19, 1999

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

Subject: McGuire Nuclear Station
Docket Nos. 50-370
Unit 2 Steam Generators
EOC-12 Refueling Outage

Pursuant to Technical Specification 5.6.8 part a and b, the following information is submitted:

- a. The following quantity of tubes were inspected from either side of the generator.

<u>Steam Generator</u>	<u>Tubes Inspected</u> <u>Full Length</u>
A	6633
B	6632
C	6633
D	6632

- b. The following information is submitted concerning tube indications of imperfections. (The attached list identifies the tubes with imperfections and the location and size of the imperfections.)

<u>Steam Generator</u>	<u>Attachment</u>
A	1
B	2
C	3
D	4

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c. The following tubes were removed from service by plugging.

<u>Steam Generator</u>	<u>Attachment</u>
A	5
B	6
C	7
D	8

Questions regarding this submittal should be directed to Kay Crane, McGuire Regulatory Compliance, at (704) 875-4306.

Sincerely,



H. B. Barron, Vice President
McGuire Nuclear Station

Attachment

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cc: Mr. L. A Reyes
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
61 Forsyth St., SW, Suite 23T85
Atlanta, Georgia 30323

Mr. F. Rinaldi, Project Manager
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Scott Shaeffer
Senior NRC Resident Inspector
McGuire Nuclear Station

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bxc: EC050-ELL
RGC File

FTI TUBAN II (Version 2.3) 04/07/1999 16:50:31
 McGuire N.S. - Unit Two Replacement
 S/G A
 03/99 RFO
 BOBBIN,MRPC C/L SI,MRPC H/L SI,MRPC UBEND SI

ATTACHMENT #1 - INDICATIONS OF IMPERFECTIONS
 INDS OF IMPERFECTIONS - SGA
 ROW COL OUTAGE TEST TYPE

IND	%TW	VOLTS	LOCATION					
3	52	03/99	BOBBIN	ADI	0.69	08H	+28.83	
5	82	03/99	BOBBIN	NQI	0.26	CBC	-0.26	
6	41	03/99	BOBBIN	ADI	0.21	01H	+7.16	
8	79	03/99	BOBBIN	ODI	7	0.15	04H	+8.83
21	68	03/99	BOBBIN	NQI	0.43	CBC	+5.57	
		03/99	BOBBIN	NQI	0.45	CBC	+5.63	
26	43	03/99	BOBBIN	ADI	0.19	07H	-2.94	
27	36	03/99	BOBBIN	ADI	0.16	07H	+34.43	
29	76	03/99	BOBBIN	ADI	0.16	07H	+6.77	
32	49	03/99	BOBBIN	ODI	22	0.11	TSC	+14.11
		03/99	MRPC C/L SI	VOL	0.07	TSC	+14.33	
33	88	03/99	BOBBIN	ADI	0.22	04C	-2.87	
		03/99	MRPC C/L SI	VOL	0.17	03C	+37.99	
35	40	03/99	BOBBIN	ODI	8	0.20	02H	+30.31
44	105	03/99	BOBBIN	ADI	0.22	06C	+22.61	
		03/99	MRPC C/L SI	VOL	0.12	06C	+23.09	
45	112	03/99	BOBBIN	NQI	1.24	CBH	+0.95	
46	81	03/99	BOBBIN	ADI	0.25	08C	+26.51	
		03/99	MRPC C/L SI	VOL	0.28	08C	+27.04	
47	34	03/99	BOBBIN	ODI	17	0.52	05H	+0.51
		03/99	MRPC H/L SI	SVI	0.23	05H	+0.46	
47	44	03/99	BOBBIN	ADI	0.21	TSH	+16.33	
48	31	03/99	BOBBIN	ODI	21	0.25	01C	+26.73
		03/99	MRPC C/L SI	VOL	0.27	01C	+26.64	
48	35	03/99	BOBBIN	NQI	0.56	05H	+0.49	
		03/99	MRPC H/L SI	SVI	0.28	05H	+0.51	
52	85	03/99	BOBBIN	ADI	1.30	08C	+6.66	
60	85	03/99	BOBBIN	ADI	1.17	01C	+28.06	
61	70	03/99	BOBBIN	ODI	5	0.14	FB5	+1.55
		03/99	BOBBIN	ODI	6	0.49	FB5	+1.62
		03/99	MRPC UBEND SI	VOL	0.46	FB5	+1.60	
63	56	03/99	BOBBIN	ADI	0.18	03H	+20.17	
66	61	03/99	BOBBIN	ODI	3	0.09	FB4	+1.09
		03/99	BOBBIN	ODI	18	0.24	FB4	+0.98
		03/99	MRPC UBEND SI	SVI	0.18	FB4	+1.09	
68	75	03/99	BOBBIN	ODI	4	0.38	FB4	+1.05
		03/99	BOBBIN	ODI	5	0.14	FB4	+1.04
69	50	03/99	BOBBIN	ODI	6	0.12	08H	+22.23
70	79	03/99	BOBBIN	ADI	0.73	02H	+15.56	
72	103	03/99	BOBBIN	ADI	0.23	04C	+28.00	
		03/99	MRPC C/L SI	VOL	0.14	04C	+27.64	
75	68	03/99	BOBBIN	ODI	14	0.47	05H	+6.86
		03/99	MRPC H/L SI	VOL	0.66	05H	+6.86	
80	71	03/99	BOBBIN	ADI	0.16	01H	+16.15	
81	62	03/99	BOBBIN	ODI	10	0.28	FB5	+1.26
		03/99	BOBBIN	ODI	39	0.84	FB5	+1.26
		03/99	MRPC UBEND SI	VOL	0.88	FB5	+1.26	
88	37	03/99	BOBBIN	ADI	0.16	06C	+4.52	
		03/99	BOBBIN	ADI	0.17	03H	+22.33	
91	44	03/99	BOBBIN	ADI	0.49	03C	+28.26	
		03/99	BOBBIN	ADI	0.54	03C	+28.07	
		03/99	MRPC C/L SI	VOL	0.56	03C	+28.62	
94	41	03/99	BOBBIN	ODI	10	0.38	05C	+6.43
		03/99	MRPC C/L SI	VOL	0.25	05C	+7.07	
94	107	03/99	BOBBIN	ODI	12	0.57	02H	+18.89
		03/99	MRPC H/L SI	VOL	0.28	02H	+18.89	
95	48	03/99	BOBBIN	ADI	0.86	01C	+27.49	
95	72	03/99	BOBBIN	ODI	10	0.15	01H	+13.02
		03/99	MRPC H/L SI	VOL	0.25	01H	+13.04	
96	75	03/99	BOBBIN	ODI	3	0.10	FB6	+0.69
		03/99	BOBBIN	ODI	8	0.22	FB6	+0.70
		03/99	MRPC UBEND SI	VOL	0.25	FB6	+0.66	

Total Indications Found = 62
 Total Tubes Found = 37

FTI TUBAN II (Version 2.3) 04/07/1999 16:48:12
 McGuire N.S. - Unit Two Replacement
 S/G B
 03/99 RFO
 BOBBIN,MRPC C/L SI,MRPC H/L SI,MRPC UBEND SI

ATTACHMENT #2 - INDICATIONS OF IMPERFECTIONS
 INDS OF IMPERFECTIONS - SGB
 ROW COL OUTAGE TEST TYPE

IND %TW VOLTS LOCATION

ROW	COL	OUTAGE	TEST TYPE	IND	%TW	VOLTS	LOCATION		
1	10	03/99	BOBBIN	OXP		49.81	TEC	+0.40	to +3.88
1	18	03/99	BOBBIN	OXP		64.41	TEC	+0.76	to +2.87
		03/99	BOBBIN	OXP		89.93	TEC	+23.71	to +26.69
1	24	03/99	BOBBIN	OXP		39.10	TEC	+5.44	to +6.55
1	26	03/99	BOBBIN	OXP		39.91	TEC	+0.36	to +2.36
		03/99	BOBBIN	OXP		95.78	TEC	+25.21	to +26.43
1	44	03/99	BOBBIN	ADI		0.09	06C	+23.73	
		03/99	BOBBIN	OXP		38.88	TEC	+5.36	to +6.51
1	110	03/99	BOBBIN	OXP		47.47	TEC	+0.20	to +2.87
1	118	03/99	BOBBIN	OXP		64.48	TEC	+0.38	to +2.93
2	117	03/99	BOBBIN	OXP		39.59	TEC	+0.82	to +5.49
2	123	03/99	BOBBIN	ADI		0.65	08H	+30.87	
2	125	03/99	BOBBIN	OXP		30.61	TEC	+6.20	
2	139	03/99	BOBBIN	OXP		32.73	TEH	+0.56	to +2.57
3	112	03/99	BOBBIN	ODI	5	0.34	04C	-2.75	
8	5	03/99	BOBBIN	SKR		32.70	TEC	+0.00	to +0.68
9	130	03/99	BOBBIN	ADI		0.16	03H	+18.43	
14	5	03/99	BOBBIN	NQI		0.80	CBH	+7.35	
15	116	03/99	BOBBIN	OXP		52.79	TEC	+0.00	to +6.99
15	140	03/99	BOBBIN	OXP		27.14	TEC	+0.00	to +11.74
16	51	03/99	BOBBIN	NQI		0.28	08C	+14.90	
18	105	03/99	BOBBIN	ADI		0.18	02C	+11.51	
18	131	03/99	BOBBIN	ADI		0.22	06H	+37.28	
		03/99	BOBBIN	ADI		0.36	06H	+24.28	
24	57	03/99	BOBBIN	ADI		0.16	01H	+19.11	
		03/99	MRPC H/L SI	VOL		0.18	01H	+19.00	
		03/99	MRPC H/L SI	VOL		0.39	01H	+16.39	
24	135	03/99	BOBBIN	ODI	17	0.19	03H	+17.89	
		03/99	BOBBIN	ODI	34	0.12	01H	+8.90	
25	24	03/99	BOBBIN	ADI		0.63	06C	+34.02	
28	43	03/99	BOBBIN	ADI		1.40	05H	+30.65	
29	34	03/99	BOBBIN	ADI		0.27	03C	+7.45	
31	38	03/99	BOBBIN	NQI		7.24	FB6	-4.42	
43	100	03/99	BOBBIN	NQI		0.23	03H	-1.66	
		03/99	MRPC H/L SI	VOL		0.24	03H	-1.60	
45	110	03/99	BOBBIN	ODI	11	0.31	02H	+4.80	
		03/99	MRPC H/L SI	VOL		0.22	02H	+4.41	
47	80	03/99	BOBBIN	ODI	18	0.20	04H	+30.69	
		03/99	MRPC H/L SI	VOL		0.04	04H	+29.72	
49	70	03/99	BOBBIN	ODI	25	0.33	01H	+27.87	
		03/99	MRPC H/L SI	VOL		0.41	01H	+26.32	
49	82	03/99	BOBBIN	NQI		0.59	09C	+12.03	
		03/99	BOBBIN	NQI		0.62	09C	+11.77	
54	73	03/99	BOBBIN	ODI	12	0.20	05H	+13.58	
		03/99	MRPC H/L SI	VOL		0.15	05H	+12.26	
61	42	03/99	BOBBIN	ADI		1.40	06H	+14.11	
62	61	03/99	BOBBIN	NQI		1.25	09C	+12.05	
65	100	03/99	BOBBIN	OXP		26.64	TEC	+2.45	to +11.98
66	83	03/99	BOBBIN	ADI		0.19	05H	+10.94	
68	71	03/99	BOBBIN	NQI		0.22	CBH	+3.02	
		03/99	MRPC UBEND SI	VOL		0.21	CBH	+3.93	
70	21	03/99	BOBBIN	OXP		28.10	TEC	+20.82	
70	29	03/99	BOBBIN	OXP		69.51	TEC	+19.65	to +20.67
74	71	03/99	BOBBIN	ODI	22	0.32	05H	+14.35	
		03/99	MRPC H/L SI	VOL		0.15	05H	+13.93	
74	81	03/99	BOBBIN	ADI		0.29	05H	+10.17	
		03/99	MRPC H/L SI	VOL		0.25	05H	+9.88	
75	108	03/99	BOBBIN	ADI		0.21	04H	+24.72	
76	77	03/99	BOBBIN	ODI	11	0.18	02C	+21.16	
78	77	03/99	BOBBIN	ODI	3	0.10	FB2	+0.93	
		03/99	BOBBIN	ODI	14	0.23	FB2	+0.87	
		03/99	MRPC UBEND SI	VOL		0.28	FB2	+1.35	
81	78	03/99	BOBBIN	ODI	6	0.18	FB5	+0.81	
		03/99	BOBBIN	ODI	37	0.37	FB5	+0.96	
		03/99	MRPC UBEND SI	VOL		0.47	FB5	+0.67	

FTI TUBAN II (Version 2.3) 04/07/1999 16:48:12
McGuire N.S. - Unit Two Replacement
S/G B
03/99 RFO
BOBBIN,MRPC C/L SI,MRPC H/L SI,MRPC UBEND SI

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ATTACHMENT #2 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGB

ROW COL OUTAGE TEST TYPE

IND %TW VOLTS LOCATION

87	44	03/99	BOBBIN	ADI		1.36	08H	+12.75
87	78	03/99	BOBBIN	ODI	7	0.20	01C	+31.92
		03/99	MRPC C/L SI	VOL		0.41	01C	+32.26
88	57	03/99	BOBBIN	ADI		1.47	CBH	+8.33
89	72	03/99	BOBBIN	ADI		0.23	09C	+16.00
		03/99	BOBBIN	ADI		0.23	09C	+16.21
		03/99	MRPC UBEND SI	VOL		0.64	09C	+15.97
93	96	03/99	BOBBIN	ODI	4	0.36	03H	+27.83
		03/99	MRPC H/L SI	VOL		0.31	03H	+26.98
99	80	03/99	BOBBIN	ADI		1.23	08C	+32.06
100	95	03/99	BOBBIN	ADI		0.53	TSH	+8.71
104	49	03/99	BOBBIN	ADI		0.26	04H	+26.46
		03/99	MRPC H/L SI	VOL		0.09	04H	+25.58
108	69	03/99	BOBBIN	NQI		0.25	FB3	+1.76
		03/99	BOBBIN	ODI	6	0.17	FB3	+1.85
		03/99	MRPC UBEND SI	VOL		0.45	FB3	+2.22

Total Indications Found = 81

Total Tubes Found = 54

FTI TUBAN II (Version 2.3) 04/07/1999 16:57:25
 McGuire N.S. - Unit Two Replacement
 S/G C
 03/99 RFO
 BOBBIN,MRPC C/L SI,MRPC H/L SI,MRPC UBEND SI

ATTACHMENT #3 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGC

ROW	COL	OUTAGE	TEST	TYPE	IND	%TW	VOLTS	LOCATION	
1	128	03/99	BOBBIN		DNT		11.62	CBH	+2.72
14	141	03/99	BOBBIN		NQI		0.78	CBC	+7.45
25	138	03/99	BOBBIN		ODI	12	0.11	01H	+25.03
26	21	03/99	BOBBIN		ODI	17	0.13	03H	+5.45
27	30	03/99	BOBBIN		ADI		1.19	03H	+13.06 to +24.71
43	60	03/99	BOBBIN		ADI		0.18	01H	+5.70
43	66	03/99	BOBBIN		ODI	17	0.28	02C	+12.32
		03/99	MRPC C/L SI		VOL		0.27	02C	+12.32
44	105	03/99	BOBBIN		ODI	27	0.24	TSC	+11.52
48	71	03/99	BOBBIN		ADI		1.26	01H	+20.16
49	68	03/99	BOBBIN		ODI	3	0.16	02C	+12.62
		03/99	MRPC C/L SI		VOL		0.10	02C	+13.74
		03/99	MRPC C/L SI		VOL		0.12	02C	+12.93
51	86	03/99	BOBBIN		ODI	3	0.10	FB4	-1.80
		03/99	BOBBIN		ODI	34	0.26	FB4	-1.66
		03/99	MRPC UBEND SI		VOL		0.44	FB4	-1.97
68	15	03/99	BOBBIN		ADI		0.27	TSH	+14.81
68	49	03/99	BOBBIN		ODI	6	0.12	FB5	-0.46
		03/99	BOBBIN		ODI	21	0.40	FB5	-0.60
		03/99	MRPC UBEND SI		VOL		0.29	FB5	-0.60
68	63	03/99	BOBBIN		ODI	5	0.12	FB5	-1.61
		03/99	BOBBIN		ODI	33	0.21	FB5	-1.73
		03/99	MRPC UBEND SI		VOL		0.20	FB5	-1.73
68	85	03/99	BOBBIN		ODI	9	0.21	FB5	+1.04
		03/99	BOBBIN		ODI	19	0.56	FB5	+0.94
		03/99	MRPC UBEND SI		VOL		0.36	FB5	+0.84
69	120	03/99	BOBBIN		ODI	9	0.19	02H	+7.96
		03/99	MRPC H/L SI		VOL		0.44	02H	+8.37
70	67	03/99	BOBBIN		ODI	8	0.23	FB5	+1.31
		03/99	BOBBIN		ODI	13	0.46	FB5	+1.50
		03/99	MRPC UBEND SI		SVI		0.52	FB5	+1.32
71	48	03/99	BOBBIN		ADI		0.23	02C	+3.53
71	64	03/99	BOBBIN		ODI	3	0.32	FB5	+1.25
		03/99	BOBBIN		ODI	5	0.11	FB5	+1.27
		03/99	MRPC UBEND SI		VOL		0.38	FB5	+1.34
71	124	03/99	BOBBIN		ODI		69.64	TEC	+3.16 to +4.29
76	31	03/99	BOBBIN		ODI		32.53	TEC	+7.92 to +8.94
83	52	03/99	BOBBIN		NQI		0.83	09H	+13.55
90	115	03/99	BOBBIN		ADI		0.10	03C	+9.32
90	117	03/99	BOBBIN		ADI		1.37	09H	+8.64
101	78	03/99	BOBBIN		ODI		29.63	TEH	+1.88
104	57	03/99	BOBBIN		ADI		1.10	06C	+16.71 to +29.03
104	85	03/99	BOBBIN		ODI		29.47	TEC	+18.25 to +20.80
105	78	03/99	BOBBIN		ODI	7	0.15	FB4	+1.33
		03/99	BOBBIN		ODI	21	0.20	FB4	+1.46
		03/99	MRPC UBEND SI		VOL		0.32	FB4	+1.46

Total Indications Found = 46
 Total Tubes Found = 28

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 McGuire N.S. - Unit Two Replacement
 S/G D
 03/99 RFO
 BOBBIN,MRPC C/L SI,MRPC H/L SI,MRPC UBEND SI

ATTACHMENT #4 - INDICATIONS OF IMPERFECTIONS

INDS OF IMPERFECTIONS - SGD

ROW	COL	OUTAGE	TEST TYPE	IND	%TW	VOLTS	LOCATION		
1	14	03/99	BOBBIN	ADI		0.28	01H		+19.84
1	50	03/99	BOBBIN	OXF		41.31	TEH	+0.56	to +25.45
1	58	03/99	BOBBIN	OXF		51.06	TEH	+0.09	to +25.06
2	63	03/99	BOBBIN	OXF		30.40	TEC	+0.00	to +8.62
2	67	03/99	BOBBIN	OXF		30.56	TEC	+0.61	to +9.14
9	14	03/99	BOBBIN	ADI		0.17	01C		+14.62
16	9	03/99	BOBBIN	OXF		29.43	TEH	+13.56	to +19.41
20	121	03/99	BOBBIN	ADI		0.68	02C		+33.99
21	134	03/99	BOBBIN	OXF		60.37	TEH	+9.50	to +22.10
21	142	03/99	BOBBIN	OXF		56.57	TEH	+9.46	to +21.84
23	28	03/99	BOBBIN	OXF		32.91	TEH	+15.20	to +19.52
		03/99	BOBBIN	OXF		50.67	TEH	+0.00	to +6.00
23	34	03/99	BOBBIN	OXF		50.90	TEC	+0.00	to +4.29
23	36	03/99	BOBBIN	OXF		27.57	TEH	+0.00	to +5.91
		03/99	BOBBIN	OXF		41.29	TEH	+13.77	to +19.52
23	42	03/99	BOBBIN	OXF		32.77	TEC	+0.00	to +4.29
23	44	03/99	BOBBIN	OXF		75.06	TEH	+13.99	to +19.57
23	50	03/99	BOBBIN	OXF		58.55	TEC	+0.00	to +4.45
32	45	03/99	BOBBIN	OXF		48.29	TEH	+13.36	to +18.38
32	53	03/99	BOBBIN	OXF		45.77	TEH	+6.76	to +16.77
32	61	03/99	BOBBIN	OXF		47.92	TEH	+9.66	to +18.33
33	26	03/99	BOBBIN	OXF		30.69	TEH	+0.00	to +14.10
33	42	03/99	BOBBIN	OXF		56.28	TEH	+0.00	to +13.37
34	137	03/99	BOBBIN	OXF		52.62	TEH	+0.00	to +13.29
35	120	03/99	BOBBIN	OXF		60.90	TEH	+0.00	to +3.75
35	128	03/99	BOBBIN	OXF		30.29	TEH	+0.00	to +3.15
39	30	03/99	BOBBIN	OXF		28.92	TEC	+0.24	to +1.00
39	46	03/99	BOBBIN	OXF		42.21	TEC	+0.21	to +1.53
39	98	03/99	BOBBIN	OXF		55.78	TEH	+0.98	to +8.32
39	114	03/99	BOBBIN	OXF		46.98	TEH	+0.81	to +7.91
39	124	03/99	BOBBIN	OXF		38.75	TEH	+6.82	to +19.03
39	132	03/99	BOBBIN	OXF		62.49	TEH	+12.90	to +19.26
		03/99	BOBBIN	OXF		64.38	TEH	+0.96	to +6.55
41	34	03/99	BOBBIN	ADI		0.30	02H		+15.87
42	115	03/99	BOBBIN	OXF		37.87	TEC	+12.30	to +20.83
42	123	03/99	BOBBIN	OXF		52.54	TEC	+16.91	to +21.65
52	133	03/99	BOBBIN	OXF		52.54	TEC	+0.11	to +7.81
56	67	03/99	BOBBIN	OXF		46.02	TEC	+19.61	to +22.25
58	53	03/99	BOBBIN	ADI		0.47	05C		+12.35
		03/99	BOBBIN	ADI		0.68	05C		+22.12
59	130	03/99	BOBBIN	OXF		52.18	TSC	-0.90	
59	132	03/99	BOBBIN	OXF		40.64	TSC	-0.72	
60	131	03/99	BOBBIN	OXF		39.46	TSC	-0.83	
64	61	03/99	BOBBIN	ODI	5	0.16	FB5	-1.74	
		03/99	BOBBIN	ODI	6	0.20	FB5	-1.66	
		03/99	BOBBIN	ODI	31	0.42	FB5	-1.62	
		03/99	MRPC UBEND SI	SVI		0.78	FB5	-1.75	
69	60	03/99	BOBBIN	NQI		0.14	08H		+19.35
75	118	03/99	BOBBIN	OXF		32.26	TEC	+15.04	to +23.59
79	76	03/99	BOBBIN	OXF		57.52	TEH	+20.68	to +23.30
81	82	03/99	BOBBIN	ODI	9	0.33	FB5	+1.51	
		03/99	BOBBIN	ODI	10	0.31	FB5	+1.41	
		03/99	BOBBIN	ODI	33	0.60	FB5	+1.38	
		03/99	MRPC UBEND SI	SVI		0.51	FB5	+1.64	
82	37	03/99	BOBBIN	ADI		0.22	08H		+31.39
		03/99	BOBBIN	ADI		0.26	08H		+31.33
		03/99	MRPC H/L SI	VOL		0.23	08H		+31.55
84	95	03/99	BOBBIN	ADI		0.79	03H		+31.60
		03/99	BOBBIN	ADI		0.96	01H		+15.88
89	70	03/99	BOBBIN	ODI	4	0.15	FB8	-2.06	
		03/99	BOBBIN	ODI	5	0.17	FB8	-1.97	
		03/99	BOBBIN	ODI	8	0.41	FB8	-1.91	
		03/99	MRPC UBEND SI	SVI		0.39	FB8	-2.03	
93	74	03/99	BOBBIN	NQI		0.32	CBH		+2.32
96	31	03/99	BOBBIN	ADI		1.38	02C		+18.91

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McGuire N.S. - Unit Two Replacement
S/G D
03/99 RFO
BOBBIN,MRPC C/L SI,MRPC H/L SI,MRPC UBEND SI

ATTACHMENT #4 - INDICATIONS OF IMPERFECTIONS
INDS OF IMPERFECTIONS - SGD
ROW COL OUTAGE TEST TYPE

				IND	%TW	VOLTS	LOCATION		
98	33	03/99	BOBBIN	ADI		0.20	04C		+21.32
105	84	03/99	BOBBIN	ODI	7	0.08	02H		+13.41
108	97	03/99	BOBBIN	OXF		33.20	TEC	+16.77 to	+25.20
110	53	03/99	BOBBIN	NQI		1.92	09H		+1.71
		03/99	BOBBIN	SKR		49.17	TEH		+0.64

Total Indications Found = 70
Total Tubes Found = 53

FTI TUBAN II (Version 2.3) 04/12/1999 16:46:40
McGuire N.S. - Unit Two Replacement
S/G A
03/99 RFO

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ATTACHMENT 5 - TUBES PLUGGED 3/99 RFO
COUNT ROW COL

1.	66	61
2.	68	75
3.	81	62

Total Data Items Found = 3
Total Tubes Found = 3

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04/12/1999 16:47:16

McGuire N.S. - Unit Two Replacement

S/G B

03/99 RFO

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ATTACHMENT 6 - TUBES PLUGGED 3/99 RFO
COUNT ROW COL

1.	43	100
2.	108	69

Total Data Items Found = 2
Total Tubes Found = 2

FTI TUBAN II (Version 2.3)

04/12/1999 16:47:47

McGuire N.S. - Unit Two Replacement

S/G C

03/99 RFO

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ATTACHMENT 7 - TUBES PLUGGED 3/99 RFO
COUNT ROW COL

1. 70 67

Total Data Items Found = 1

Total Tubes Found = 1

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McGuire N.S. - Unit Two Replacement
S/G D
03/99 RFO

Page 1

ATTACHMENT 8 - TUBES PLUGGED 3/99 RFO
COUNT ROW COL

1.	64	61
2.	81	82
3.	89	70

Total Data Items Found = 3
Total Tubes Found = 3