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March 26, 2008

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

Subject: Duke Power Company LLC d/b/a Duke Energy
Carolinas, LLC (Duke)
Catawba Nuclear Station, Unit 2
Docket Number 50-414
Steam Generator Outage Summary 180-Day
Report for End of Cycle 15 Refueling
Outage

Pursuant to Technical Specification 5.6.8, please find attached the subject report which provides the results of the steam generator inspection effort associated with the subject outage.

There are no regulatory commitments contained in this letter or its attachment.

If you have any questions concerning this material, please call L.J. Rudy at (803) 831-3084.

Very truly yours,



J.R. Morris

LJR/s

Attachment

A001
LJR

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ELL-EC050
NCMPA-1
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Steam Generator Tube Inspection Report

Catawba Unit 2 2007 Outage EOC 15

Technical Specification 5.6.8

Prepared By: *C. Clautho* Date: *3-5-08*

Reviewed By: *D. B. Mayo* Date: *3/6/2008*

Approved By: *P. W. Downing* Date: *3/6/08*

Catawba 2 EOC 15 Steam Generator Tube Inspection Report

Pursuant to Catawba technical specification 5.6.8 the following information is provided:

a. The scope of inspections performed on each SG

Baseline inspection scope shall include full length data acquisition and bobbin coil data analysis on all four (4) steam generators as follows. ECT data from all active coils shall be recorded full length.

- 1) *All tubes with previous indications, e.g., wear, DNT, PLP, etc. (above ARC elevation)*
- 2) *All tubes surrounding plugged tubes one tube deep. Periphery tubes two rows deep (outer perimeter, open lane, and T-slot)*
- 3) *20% sample of Row 1 through Row 10*
- 4) *Tubes susceptible to "Seabrook type" ODSCC due to cold work (approx. 27 tubes)*
- 5) *25% random sample of remaining tubes not inspected during EOC14*

Note: There were 2706 tubes inspected with bobbin in the A SG, 2618 in the B SG, 2569 in the C SG and 2767 in the D SG

Special interest inspection scope shall include data acquisition and array data analysis as follows:

- 1) *Special interest based on new bobbin calls (new wear indications, all bobbin "I" codes, and some miscellaneous codes)*
- 2) *20% sample of tubesheet region in all four (4) steam generators from TEH to TSH +3 inches. B SG expanded to 100% for TTS indications.*
- 3) *20% sample of Row 1 and 2 u-bend regions in all four (4) steam generators*
- 4) *20% sample of Row 10 u-bend regions in all four (4) steam generators*
- 5) *20% sample of Rows 1 through 10 at tube supports 08H and 09C in all four (4) steam generators (for evidence of complete blockage)*
- 6) *20% sample of pre-heater expansions in all four (4) steam generators*
- 7) *Periphery tubes two rows deep (TSH to 01H, TSC to 19C) in all four (4) steam generators (Outer perimeter, open lane, and T-slot)*
- 8) *Periphery tubes at 18th tube support plate on cold leg (two rows deep) in all four (4) steam generators*
- 9) *100% of Tubesheet OXP's and bulges in steam generator "B hot leg (above ARC elevation)*
- 10) *20% of tubesheet OXP's and bulges in all remaining channel heads (above ARC elevation)*
- 11) *New dent indications and existing dent indications not analyzed during EOC14*
- 12) *Bounding inspections two tubes around all PLP indications confirmed with array*
- 13) *Bounding inspections two tubes around all PLP indications dating back to EOC 11 if indications are still present/confirmed with array.*

Plug inspection scope shall be as follows:

1) Visual inspection of all plugs

b. Active degradation mechanisms found

Active degradation found in all four of the Catawba Unit 2 steam generators include wear at support structures. OD indications were found at the top of tubesheet in the B steam generator. ID indications were found in the tack expansions in the B steam generator. ID indications were found at the tube end in the A,C and D steam generators.

c. Non-destructive examination techniques utilized for each degradation mechanism

Bobbin was utilized for the detection of the wear. The array was utilized for the detection of the indications at the top of tubesheet, within the tubesheet and at the tube end.

d. Location, orientation (if linear), and measured sizes (if available) of service induced indications

The complete listing for service induced indications is attached.

e. Number of tubes plugged during the inspection outage for each active degradation mechanism

Eight tubes were plugged in the B steam generator for top of tubesheet indications.

f. The total number and percentage of tubes plugged to date

<u>Steam Generator</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>Total</u>
Prior to EOC-15	69	99	55	87	310
EOC-15	0	8	0	0	8
Total	69	107	55	87	318
% Plugged	1.51	2.34	1.20	1.90	1.74

g. The results of condition monitoring, including the results of tube pulls and in-situ pressure testing

The only observed tubing degradation at EOC 15 not exempted by alternate repair criteria was wear and the top of tubesheet axial indications (presumed to be ODSCC) identified in steam generator B. All condition monitoring requirements were met.

For wear, the maximum observed NDE depth reading was 35% through wall. An NDE reading of 65% through wall or less assures the structural integrity requirement is met.

For the presumed axial ODSCC near the top of the tubesheet in steam generator B, a worst case indication was evaluated at 69% NDE depth and 0.5" length. The condition monitoring limit for this form of degradation is 78% NDE depth at a 0.5" length.

No tube pulls or in-situ testing were performed during Unit 2 EOC15.

The complete listings of service induced indications are on the following pages. The indication codes and their descriptions are provided here to assist in review of these lists.

Indication Three Letter Codes

Ind Code	Description
SAI	Single Axial Indication
MAI	Multiple Axial Indication
SCI	Single Circumferential Indication
MCI	Multiple Circumferential Indication
TWD	Through Wall Dimension
VOL	Volumetric Indication
WAR	Wear

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL	1	UTIL	2	CAL	#	LEG	PROBE	SCOPE
1	104	29.63	17	14	SCI		TEC	0.21	TSC	TEC				405		COLD	610XP	Tubesheet Exam
7	23	3.67	46	106	MAI		TEH	0.23	TSH	TEH				58		HOT	610XP	Selected Array
		31.83	39	78	SCI		TEH	0.12	TSH	TEH				58		HOT	610XP	Selected Array
29	76	31.71	13	78	SCI		TEH	1.14	TSH	TEH				496		HOT	610XP	Tubesheet Exam
30	13	1.19	0	P4	TWD	18	AV3	0.00	TEC	TEH	WAR			232		HOT	XPMMR610	Bobbin Exam
30	23	0.72	0	P4	TWD	13	AV2	-0.15	TEC	TEH	WAR			630		HOT	XPMMR610	Bobbin Exam
30	75	19.25	17	114	SCI		TEH	1.00	TSH	TEH				494		HOT	610XP	Tubesheet Exam
31	102	0.45	0	P4	TWD	11	AV4	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam
		0.67	0	P4	TWD	14	AV2	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam
31	103	1.60	0	P4	TWD	22	AV2	0.23	TEC	TEH	WAR			280		HOT	XPMMR610	Bobbin Exam
32	15	0.59	0	P4	TWD	12	AV2	0.39	TEC	TEH	WAR			234		HOT	XPMMR610	Bobbin Exam
32	70	38.62	37	46	SCI		TEH	1.13	TSH	TEH				494		HOT	610XP	Tubesheet Exam
33	14	0.37	0	P4	TWD	8	AV4	0.18	TEC	TEH	WAR			232		HOT	XPMMR610	Bobbin Exam
33	69	41.06	28	94	MCI		TEH	1.11	TSH	TEH				492		HOT	610XP	Tubesheet Exam
33	93	1.02	0	P4	TWD	16	AV2	0.00	TEC	TEH	WAR	OR		310		HOT	XPMMR610	Bobbin Exam
33	99	0.56	0	P4	TWD	10	AV2	0.00	TEC	TEH	WAR			310		HOT	XPMMR610	Bobbin Exam
33	100	0.67	0	P4	TWD	14	AV3	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam
34	69	10.37	26	110	SCI		TEH	1.22	TSH	TEH				492		HOT	610XP	Tubesheet Exam
34	99	0.37	0	P4	TWD	10	AV4	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam
		0.51	0	P4	TWD	11	AV3	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam
35	16	1.29	0	P4	TWD	19	AV3	0.00	TEC	TEH	WAR			232		HOT	XPMMR610	Bobbin Exam
		0.84	0	P4	TWD	14	AV2	0.04	TEC	TEH	WAR			232		HOT	XPMMR610	Bobbin Exam
35	28	1.44	0	P4	TWD	20	AV3	0.00	TEC	TEH	WAR			628		HOT	XPMMR610	Bobbin Exam
37	17	0.87	0	P4	TWD	14	AV3	0.18	TEC	TEH	WAR			232		HOT	XPMMR610	Bobbin Exam
		0.39	0	P4	TWD	8	AV2	0.00	TEC	TEH	WAR			232		HOT	XPMMR610	Bobbin Exam
37	27	0.97	0	P4	TWD	15	AV2	0.13	TEC	TEH	WAR			226		HOT	XPMMR610	Bobbin Exam
37	39	0.72	0	P4	TWD	12	AV2	0.21	TEC	TEH	WAR			616		HOT	XPMMR610	Bobbin Exam
37	77	1.04	0	P4	TWD	17	AV4	0.00	TEC	TEH	WAR	OR		292		HOT	XPMMR610	Bobbin Exam
		1.02	0	P4	TWD	18	AV3	-0.22	TEC	TEH	WAR	OR		292		HOT	XPMMR610	Bobbin Exam
		1.16	0	P4	TWD	18	AV2	0.00	TEC	TEH	WAR	OR		292		HOT	XPMMR610	Bobbin Exam
38	17	0.78	0	P4	TWD	14	AV4	-0.12	TEC	TEH	WAR			230		HOT	XPMMR610	Bobbin Exam
		1.01	0	P4	TWD	16	AV3	-0.12	TEC	TEH	WAR			230		HOT	XPMMR610	Bobbin Exam
		0.73	0	P4	TWD	13	AV1	0.11	TEC	TEH	WAR			230		HOT	XPMMR610	Bobbin Exam
38	21	1.16	0	P4	TWD	18	AV2	0.00	TEC	TEH	WAR			630		HOT	XPMMR610	Bobbin Exam
38	22	0.82	0	P4	TWD	14	AV3	-0.06	TEC	TEH	WAR			632		HOT	XPMMR610	Bobbin Exam
		1.01	0	P4	TWD	16	AV2	0.15	TEC	TEH	WAR			632		HOT	XPMMR610	Bobbin Exam
38	23	0.77	0	P4	TWD	14	AV2	-0.18	TEC	TEH	WAR			630		HOT	XPMMR610	Bobbin Exam
38	25	0.84	0	P4	TWD	13	AV3	-0.01	TEC	TEH	WAR			626		HOT	XPMMR610	Bobbin Exam
38	89	0.83	0	P4	TWD	14	AV3	-0.19	TEC	TEH	WAR			300		HOT	XPMMR610	Bobbin Exam
		0.95	0	P4	TWD	15	AV2	-0.36	TEC	TEH	WAR			300		HOT	XPMMR610	Bobbin Exam
38	91	0.63	0	P4	TWD	11	AV4	-0.13	TEC	TEH	WAR			308		HOT	XPMMR610	Bobbin Exam
		1.02	0	P4	TWD	16	AV2	0.05	TEC	TEH	WAR			308		HOT	XPMMR610	Bobbin Exam
38	93	1.85	153	P4	TWD	22	AV2	0.03	TEC	TEH	WAR			308		HOT	XPMMR610	Bobbin Exam
38	96	0.31	0	P4	TWD	7	AV4	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam
		0.85	0	P4	TWD	16	AV3	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam
		2.47	0	P4	TWD	28	AV2	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam
38	97	0.89	0	P4	TWD	16	AV4	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam
		1.42	0	P4	TWD	22	AV3	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam
		3.28	0	P4	TWD	31	AV2	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam
38	98	0.76	0	P4	TWD	14	AV4	-0.11	TEC	TEH	WAR			280		HOT	XPMMR610	Bobbin Exam
		0.77	0	P4	TWD	14	AV3	-0.11	TEC	TEH	WAR			280		HOT	XPMMR610	Bobbin Exam
		1.14	0	P4	TWD	18	AV2	-0.14	TEC	TEH	WAR			280		HOT	XPMMR610	Bobbin Exam
39	21	0.66	0	P4	TWD	12	AV2	0.00	TEC	TEH	WAR			230		HOT	XPMMR610	Bobbin Exam
40	18	2.58	0	P4	TWD	27	AV3	0.09	TEC	TEH	WAR			230		HOT	XPMMR610	Bobbin Exam
40	94	0.74	0	P4	TWD	14	AV4	0.00	TEC	TEH	WAR			282		HOT	XPMMR610	Bobbin Exam

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL	1	UTIL	2	CAL	#	LEG	PROBE	SCOPE
40	95	1.63	0	P4	TWD 22	AV2	0.00	TEC	TEH	WAR				282	HOT	XPMMR610	Bobbin Exam	
		1.11	0	P4	TWD 18	AV4	-0.09	TEC	TEH	WAR				280	HOT	XPMMR610	Bobbin Exam	
		1.77	0	P4	TWD 23	AV2	0.00	TEC	TEH	WAR				280	HOT	XPMMR610	Bobbin Exam	
41	30	0.59	0	P4	TWD 11	AV2	0.18	TEC	TEH	WAR				628	HOT	XPMMR610	Bobbin Exam	
41	44	0.75	0	P4	TWD 14	AV3	-0.03	TEC	TEH	WAR				610	HOT	XPMMR610	Bobbin Exam	
		0.90	0	P4	TWD 15	AV2	0.18	TEC	TEH	WAR				610	HOT	XPMMR610	Bobbin Exam	
		1.27	0	P4	TWD 19	AV1	-0.24	TEC	TEH	WAR				610	HOT	XPMMR610	Bobbin Exam	
41	75	1.19	64	6	VOL	AV2	0.03	09C	08H	WAR		OR		88	HOT	610XP	UBend Special Inter	
		0.86	0	P4	TWD 15	AV2	0.00	TEC	TEH	WAR		OR		288	HOT	XPMMR610	Bobbin Exam	
41	81	0.71	0	P4	TWD 13	AV4	0.00	TEC	TEH	WAR				688	HOT	XPMMR610	Bobbin Exam	
		1.27	0	P4	TWD 19	AV3	0.03	TEC	TEH	WAR				688	HOT	XPMMR610	Bobbin Exam	
		1.97	0	P4	TWD 24	AV2	-0.03	TEC	TEH	WAR				688	HOT	XPMMR610	Bobbin Exam	
41	83	0.95	0	P4	TWD 16	AV4	0.22	TEC	TEH	WAR				688	HOT	XPMMR610	Bobbin Exam	
		1.54	0	P4	TWD 21	AV3	0.16	TEC	TEH	WAR				688	HOT	XPMMR610	Bobbin Exam	
		1.30	0	P4	TWD 19	AV2	0.00	TEC	TEH	WAR				688	HOT	XPMMR610	Bobbin Exam	
41	85	1.90	0	P4	TWD 23	AV3	0.00	TEC	TEH	WAR				688	HOT	XPMMR610	Bobbin Exam	
41	90	0.90	0	P4	TWD 15	AV3	-0.19	TEC	TEH	WAR		OR		310	HOT	XPMMR610	Bobbin Exam	
41	92	0.50	0	P4	TWD 12	AV4	0.00	TEC	TEH	WAR				282	HOT	XPMMR610	Bobbin Exam	
		0.99	0	P4	TWD 17	AV3	0.00	TEC	TEH	WAR				282	HOT	XPMMR610	Bobbin Exam	
41	93	0.60	0	P4	TWD 12	AV4	0.00	TEC	TEH	WAR				282	HOT	XPMMR610	Bobbin Exam	
		0.66	0	P4	TWD 13	AV3	0.00	TEC	TEH	WAR				282	HOT	XPMMR610	Bobbin Exam	
41	94	0.65	0	P4	TWD 13	AV4	-0.10	TEC	TEH	WAR				280	HOT	XPMMR610	Bobbin Exam	
		2.40	0	P4	TWD 26	AV3	-0.11	TEC	TEH	WAR				280	HOT	XPMMR610	Bobbin Exam	
		1.20	0	P4	TWD 19	AV2	0.06	TEC	TEH	WAR				280	HOT	XPMMR610	Bobbin Exam	
42	24	1.32	0	P4	TWD 19	AV2	0.00	TEC	TEH	WAR		OR		232	HOT	XPMMR610	Bobbin Exam	
		0.96	75	106	VOL	AV2	0.00	09C	08H	WAR		OR		32	HOT	610XP	UBend Special Inter	
42	81	0.66	0	P4	TWD 12	AV4	0.06	TEC	TEH	WAR				690	HOT	XPMMR610	Bobbin Exam	
		0.92	0	P4	TWD 15	AV2	0.17	TEC	TEH	WAR				690	HOT	XPMMR610	Bobbin Exam	
42	85	1.28	0	P4	TWD 19	AV3	0.11	TEC	TEH	WAR				690	HOT	XPMMR610	Bobbin Exam	
		2.78	0	P4	TWD 28	AV2	0.00	TEC	TEH	WAR				690	HOT	XPMMR610	Bobbin Exam	
42	91	0.75	0	P4	TWD 14	AV3	0.00	TEC	TEH	WAR				282	HOT	XPMMR610	Bobbin Exam	
43	23	0.83	0	P4	TWD 14	AV2	0.06	TEC	TEH	WAR				230	HOT	XPMMR610	Bobbin Exam	
		0.41	0	P4	TWD 9	AV1	0.03	TEC	TEH	WAR				230	HOT	XPMMR610	Bobbin Exam	
43	91	1.57	0	P4	TWD 21	AV4	-0.09	TEC	TEH	WAR				310	HOT	XPMMR610	Bobbin Exam	
		1.07	0	P4	TWD 16	AV3	0.00	TEC	TEH	WAR				310	HOT	XPMMR610	Bobbin Exam	
		1.15	0	P4	TWD 17	AV2	0.00	TEC	TEH	WAR				310	HOT	XPMMR610	Bobbin Exam	
		0.51	0	P4	TWD 10	AV1	0.00	TEC	TEH	WAR				310	HOT	XPMMR610	Bobbin Exam	
44	23	1.24	0	P4	TWD 19	AV4	0.03	TEC	TEH	WAR				230	HOT	XPMMR610	Bobbin Exam	
		4.34	0	P4	TWD 35	AV3	0.00	TEC	TEH	WAR				230	HOT	XPMMR610	Bobbin Exam	
		1.77	0	P4	TWD 23	AV2	-0.06	TEC	TEH	WAR				230	HOT	XPMMR610	Bobbin Exam	
		0.86	0	P4	TWD 15	AV1	0.00	TEC	TEH	WAR				230	HOT	XPMMR610	Bobbin Exam	
44	25	1.10	0	P4	TWD 17	AV3	0.03	TEC	TEH	WAR				230	HOT	XPMMR610	Bobbin Exam	
		0.86	0	P4	TWD 15	AV2	0.06	TEC	TEH	WAR		OR		230	HOT	XPMMR610	Bobbin Exam	
44	31	0.81	0	P4	TWD 13	AV2	0.00	TEC	TEH	WAR				626	HOT	XPMMR610	Bobbin Exam	
44	90	0.71	0	P4	TWD 12	AV3	0.00	TEC	TEH	WAR				310	HOT	XPMMR610	Bobbin Exam	
44	92	1.06	0	P4	TWD 18	AV3	0.22	TEH	TEC	WAR		OR		227	COLD	XPMMR610	Bobbin Exam	
		0.65	0	P4	TWD 13	AV4	0.29	TEH	TEC	WAR		OR		227	COLD	XPMMR610	Bobbin Exam	
45	26	1.98	0	P4	TWD 23	AV3	-0.06	TEC	TEH	WAR				232	HOT	XPMMR610	Bobbin Exam	
		0.73	0	P4	TWD 13	AV2	0.12	TEC	TEH	WAR		OR		232	HOT	XPMMR610	Bobbin Exam	
45	90	0.92	0	P4	TWD 14	AV3	-0.24	TEC	TEH	WAR		OR		308	HOT	XPMMR610	Bobbin Exam	
45	91	1.75	0	P4	TWD 22	AV4	-0.30	TEC	TEH	WAR				308	HOT	XPMMR610	Bobbin Exam	
		1.26	0	P4	TWD 18	AV3	-0.27	TEC	TEH	WAR				308	HOT	XPMMR610	Bobbin Exam	
		0.97	0	P4	TWD 15	AV2	0.16	TEC	TEH	WAR				308	HOT	XPMMR610	Bobbin Exam	
47	27	2.61	0	P4	TWD 27	AV3	0.29	TEC	TEH	WAR		OR		226	HOT	XPMMR610	Bobbin Exam	
		1.09	0	P4	TWD 16	AV2	-0.15	TEC	TEH	WAR				226	HOT	XPMMR610	Bobbin Exam	

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL	1	UTIL	2	CAL	#	LEG	PROBE	SCOPE
48	85	0.44	0	P4	TWD	10	AV4	0.00	TEC	TEH	WAR			684		HOT	XPMMR610	Bobbin Exam
		0.27	0	P4	TWD	7	AV3	0.00	TEC	TEH	WAR			684		HOT	XPMMR610	Bobbin Exam
48	86	0.76	0	P4	TWD	13	AV4	0.00	TEC	TEH	WAR			288		HOT	XPMMR610	Bobbin Exam
		0.64	0	P4	TWD	12	AV3	0.00	TEC	TEH	WAR	OR		288		HOT	XPMMR610	Bobbin Exam
49	70	0.57	0	P4	TWD	12	AV1	0.00	TEC	TEH	WAR			284		HOT	XPMMR610	Bobbin Exam
49	81	1.00	140	P17	VOL		AV1	0.06	09C	08H	WAR			484		HOT	610XP	UBend Special Inter
		0.53	0	P4	TWD	12	AV1	0.18	TEC	TEH	WAR			284		HOT	XPMMR610	Bobbin Exam

Total Tubes : 67
Total Records: 117

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE	SCOPE	
1	6	1.44	60	130	SAI		TEH	0.15	TSH	TEH			538	HOT	610XP	Tubesheet Exam
1	8	3.55	39	186	SAI		TEH	0.24	TSH	TEH			538	HOT	610XP	Tubesheet Exam
1	10	8.06	38	186	SAI		TEH	0.15	TSH	TEH			538	HOT	610XP	Tubesheet Exam
1	15	7.79	28	186	SAI		TEH	0.28	TSH	TEH			538	HOT	610XP	Tubesheet Exam
1	16	12.13	33	130	SAI		TEH	0.13	TSH	TEH			538	HOT	610XP	Tubesheet Exam
1	34	7.23	42	58	MAI		TEH	0.17	TSH	TEH			506	HOT	610XP	Tubesheet Exam
1	36	6.62	30	38	SAI		TEH	0.12	TSH	TEH			506	HOT	610XP	Tubesheet Exam
1	37	28.73	10	66	SCI		TEH	0.07	TSH	TEH			506	HOT	610XP	Tubesheet Exam
1	38	8.83	41	58	MAI		TEH	0.06	TSH	TEH			506	HOT	610XP	Tubesheet Exam
1	39	3.77	19	42	SAI		TEH	0.15	TSH	TEH			506	HOT	610XP	Tubesheet Exam
1	40	13.47	31	58	MAI		TEH	0.24	TSH	TEH			506	HOT	610XP	Tubesheet Exam
1	43	5.03	49	58	MAI		TEH	0.18	TSH	TEH			506	HOT	610XP	Tubesheet Exam
1	44	10.43	36	58	MAI		TEH	0.12	TSH	TEH			506	HOT	610XP	Tubesheet Exam
1	46	9.98	41	38	SAI		TEH	0.09	TSH	TEH			506	HOT	610XP	Tubesheet Exam
1	50	16.53	9	66	SCI		TEH	0.02	TSH	TEH	OR		506	HOT	610XP	Tubesheet Exam
1	54	12.93	19	50	SCI		TEH	0.12	TSH	TEH			506	HOT	610XP	Tubesheet Exam
1	56	26.27	27	34	MCI		TEH	0.06	TSH	TEH			506	HOT	610XP	Tubesheet Exam
1	63	22.87	15	82	SCI		TEH	0.57	TSH	TEH			410	HOT	610XP	Tubesheet Exam
1	91	10.43	33	42	SAI		TEH	0.25	TSH	TEH			448	HOT	610XP	Tubesheet Exam
1	96	10.14	40	54	MAI		TEH	0.14	TSH	TEH			448	HOT	610XP	Tubesheet Exam
1	97	5.76	20	138	SAI		TEH	0.13	TSH	TEH			448	HOT	610XP	Tubesheet Exam
1	99	13.49	26	142	MAI		TEH	0.20	TSH	TEH			448	HOT	610XP	Tubesheet Exam
2	11	2.23	36	182	SAI		TEH	0.16	TSH	TEH			538	HOT	610XP	Tubesheet Exam
2	14	4.99	62	130	SAI		TEH	0.12	TSH	TEH			534	HOT	610XP	Tubesheet Exam
2	27	3.47	69	166	SAI		TEH	0.11	TSH	TEH			516	HOT	610XP	Tubesheet Exam
2	33	7.80	21	174	MAI		TEH	0.21	TSH	TEH	OR		508	HOT	610XP	Tubesheet Exam
2	34	7.07	24	166	MAI		TEH	0.15	TSH	TEH			508	HOT	610XP	Tubesheet Exam
2	44	5.93	26	70	SAI		TEH	0.09	TSH	TEH			508	HOT	610XP	Tubesheet Exam
2	70	3.43	49	186	SAI		TEH	0.29	TSH	TEH			412	HOT	610XP	Tubesheet Exam
2	77	0.87	31	186	SAI		TEH	0.14	TSH	TEH			412	HOT	610XP	Tubesheet Exam
2	78	7.04	24	182	MAI		TEH	0.18	TSH	TEH			12	HOT	610XP	Tubesheet Exam
2	79	3.64	29	170	SAI		TEH	0.11	TSH	TEH			412	HOT	610XP	Tubesheet Exam
2	80	0.81	124	182	SAI		TEH	0.11	TSH	TEH			412	HOT	610XP	Tubesheet Exam
2	82	5.82	44	182	SAI		TEH	0.36	TSH	TEH			412	HOT	610XP	Tubesheet Exam
2	83	4.11	36	186	MAI		TEH	0.22	TSH	TEH			412	HOT	610XP	Tubesheet Exam
2	84	3.15	69	190	SAI		TEH	0.25	TSH	TEH			412	HOT	610XP	Tubesheet Exam
2	86	5.29	26	134	MAI		TEH	0.11	TSH	TEH			448	HOT	610XP	Tubesheet Exam
2	92	4.91	17	142	SAI		TEH	0.93	TSH	TEH			146	HOT	RXP590	Tubesheet Exam
		2.08	18	134	SAI		TEH	0.29	TSH	TEH			48	HOT	610XP	Tubesheet Exam
2	95	4.97	29	6	SAI		TEH	0.17	TSH	TEH			448	HOT	610XP	Tubesheet Exam
3	14	1.81	48	122	SAI		TEH	0.09	TSH	TEH			536	HOT	610XP	Tubesheet Exam
3	21	12.58	21	38	SAI		TEH	0.27	TSH	TEH			514	HOT	610XP	Tubesheet Exam
3	24	2.22	106	42	SAI		TEH	0.07	TSH	TEH			514	HOT	610XP	Tubesheet Exam
3	29	7.90	36	38	SAI		TEH	0.27	TSH	TEH			514	HOT	610XP	Tubesheet Exam
3	30	4.17	29	22	SAI		TEH	0.10	TSH	TEH			514	HOT	610XP	Tubesheet Exam
3	32	4.54	154	22	SAI		TEH	0.10	O2H	TEH			514	HOT	610XP	Tubesheet Exam
3	33	3.33	32	26	SAI		TEH	0.15	TSH	TEH			506	HOT	610XP	Tubesheet Exam
3	34	2.12	24	38	SAI		TEH	0.12	TSH	TEH			506	HOT	610XP	Tubesheet Exam
3	36	6.34	39	22	SAI		TEH	0.03	TSH	TEH			506	HOT	610XP	Tubesheet Exam
3	70	1.41	132	130	MAI		TEH	0.25	TSH	TEH			412	HOT	610XP	Tubesheet Exam
3	76	9.16	37	138	SAI		TEH	0.20	O2H	TEH			490	HOT	610XP	Tubesheet Exam
3	77	3.11	21	166	MAI		TEH	0.35	TSH	TEH			410	HOT	610XP	Tubesheet Exam
3	78	4.04	22	158	SAI		TEH	0.49	TSH	TEH			410	HOT	610XP	Tubesheet Exam
3	79	3.61	12	154	SAI		TEH	0.96	TSH	TEH			410	HOT	610XP	Tubesheet Exam
3	80	10.38	217	138	SAI		TEH	0.17	O2H	TEH			490	HOT	610XP	Tubesheet Exam

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE	SCOPE
3	83	4.31	20	138	MAI		TEH 0.99	TSH	TEH			410	HOT	610XP	Tubesheet Exam
3	84	4.41	24	146	SAI		TEH 0.52	TSH	TEH		OR	410	HOT	610XP	Tubesheet Exam
3	85	1.65	33	142	SAI		TEH 0.49	TSH	TEH			410	HOT	610XP	Tubesheet Exam
3	95	0.82	45	154	SAI		TEH 0.16	TSH	TEH			450	HOT	610XP	Tubesheet Exam
3	96	1.64	49	150	SAI		TEH 0.17	TSH	TEH			450	HOT	610XP	Tubesheet Exam
4	14	2.11	49	190	SAI		TEH 0.12	TSH	TEH			534	HOT	610XP	Tubesheet Exam
4	27	3.70	85	106	SAI		TEH 0.06	TSH	TEH			516	HOT	610XP	Tubesheet Exam
4	28	4.57	79	174	SAI		TEH 0.06	TSH	TEH			516	HOT	610XP	Tubesheet Exam
4	29	3.46	36	166	SAI		TEH 0.03	TSH	TEH			516	HOT	610XP	Tubesheet Exam
4	78	2.77	33	130	SAI		TEH 0.18	TSH	TEH			412	HOT	610XP	Tubesheet Exam
4	79	6.97	32	170	MAI		TEH 0.46	TSH	TEH			412	HOT	610XP	Tubesheet Exam
4	80	2.15	58	178	SAI		TEH 0.25	TSH	TEH			412	HOT	610XP	Tubesheet Exam
4	83	3.12	36	70	SAI		TEH 0.09	TSH	TEH			492	HOT	610XP	Tubesheet Exam
4	95	2.23	24	150	SAI		TEH 0.04	TSH	TEH		OR	492	HOT	610XP	Tubesheet Exam
5	31	3.50	121	22	SAI		TEH 0.07	TSH	TEH			510	HOT	610XP	Tubesheet Exam
5	44	9.14	38	54	SAI		TEH 0.17	TSH	TEH			490	HOT	610XP	Tubesheet Exam
5	76	10.41	37	54	MAI		TEH 0.20	O2H	TEH			490	HOT	610XP	Tubesheet Exam
5	79	3.97	24	146	SAI		TEH 0.95	TSH	TEH			410	HOT	610XP	Tubesheet Exam
5	80	5.49	24	158	SAI		TEH 0.09	TSH	TEH			810	HOT	610XP	Tubesheet Exam
5	81	2.23	24	150	MAI		TEH 0.35	TSH	TEH			410	HOT	610XP	Tubesheet Exam
5	82	4.43	32	146	SAI	TO	0.21	TSH	TEH			410	HOT	610XP	Tubesheet Exam
5	106	8.48	37	26	SAI		TEH 0.17	O2H	TEH			490	HOT	610XP	Tubesheet Exam
6	44	4.46	16	74	SAI		TEH 0.20	TSH	TEH			492	HOT	610XP	Tubesheet Exam
6	77	9.68	13	102	MAI		TEH 0.29	TSH	TEH		OR	412	HOT	610XP	Tubesheet Exam
6	79	3.13	54	174	SAI		TEH 0.25	TSH	TEH		OR	412	HOT	610XP	Tubesheet Exam
6	80	2.47	28	178	SAI		TEH 0.25	TSH	TEH		OR	412	HOT	610XP	Tubesheet Exam
6	81	2.87	90	178	SAI		TEH 0.29	TSH	TEH			412	HOT	610XP	Tubesheet Exam
6	82	0.83	107	178	MAI		TEH 0.14	TSH	TEH			412	HOT	610XP	Tubesheet Exam
6	84	1.74	71	178	SAI		TEH 0.25	TSH	TEH			412	HOT	610XP	Tubesheet Exam
7	34	3.27	32	38	SAI		TEH 0.06	TSH	TEH			506	HOT	610XP	Tubesheet Exam
7	39	8.31	43	22	SAI		TEH 0.15	TSH	TEH			506	HOT	610XP	Tubesheet Exam
7	45	4.34	52	70	SAI		TEH 0.17	TSH	TEH			490	HOT	610XP	Tubesheet Exam
7	56	12.06	32	122	MAI		TEH 0.23	O2H	TEH			490	HOT	610XP	Tubesheet Exam
7	58	7.63	30	54	SAI		TEH 0.20	O2H	TEH			490	HOT	610XP	Tubesheet Exam
7	77	3.27	46	182	SAI		TEH 0.12	TSH	TEH			416	HOT	610XP	Tubesheet Exam
7	79	5.48	25	190	MAI		TEH 0.30	TSH	TEH		OR	416	HOT	610XP	Tubesheet Exam
7	80	6.07	22	102	MAI		TEH 0.14	TSH	TEH		OR	416	HOT	610XP	Tubesheet Exam
7	86	1.85	57	182	MAI		TEH 0.18	TSH	TEH			446	HOT	610XP	Tubesheet Exam
8	13	0.51	36	26	SAI		TEH 0.20	TSH	TEH			534	HOT	610XP	Tubesheet Exam
8	25	0.37	0	P2	TWD	10	05H -0.74	O9C	TEH	WAR		312	HOT	XPMMR610	Bobbin Exam
		0.39	72	2	VOL		05H -0.70	05H	05H	WAR		166	HOT	+PT610RPC3C	H/L and C/L Special
		0.74	89	2	VOL		05H -0.69	05H	05H	WAR		112	HOT	610XP	H/L and C/L Special
8	28	5.50	62	174	SAI		TEH 0.09	TSH	TEH			512	HOT	610XP	Tubesheet Exam
8	36	1.69	45	70	SAI		TEH 0.12	TSH	TEH			508	HOT	610XP	Tubesheet Exam
8	59	3.69	16	134	SAI		TEH 0.07	TSH	TEH			824	HOT	610XP	Tubesheet Exam
8	63	4.58	11	134	SAI		TEH 0.13	TSH	TEH			416	HOT	610XP	Tubesheet Exam
8	64	6.22	18	86	SAI		TEH 0.22	TSH	TEH			416	HOT	610XP	Tubesheet Exam
8	80	7.06	36	150	MAI		TEH 0.16	TSH	TEH			414	HOT	610XP	Tubesheet Exam
8	82	3.51	25	138	SAI		TEH 0.20	TSH	TEH		OR	414	HOT	610XP	Tubesheet Exam
9	27	2.21	37	26	SAI		TEH 0.07	TSH	TEH			510	HOT	610XP	Tubesheet Exam
9	65	6.28	12	122	SAI		TEH 0.11	TSH	TEH			416	HOT	610XP	Tubesheet Exam
9	76	4.02	24	190	MAI	TO	0.24	TSH	TEH			416	HOT	610XP	Tubesheet Exam
9	77	2.10	42	182	SAI		TEH 0.18	TSH	TEH			416	HOT	610XP	Tubesheet Exam
9	78	2.93	22	86	SAI		TEH 0.11	TSH	TEH			416	HOT	610XP	Tubesheet Exam
9	82	2.53	40	170	SAI		TEH 0.13	TSH	TEH		OR	416	HOT	610XP	Tubesheet Exam

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL	1	UTIL	2	CAL	#	LEG	PROBE	SCOPE
9	85	3.54	26	146	SAI		TEH	0.23	TSH	TEH				414		HOT	610XP	Tubesheet Exam
9	111	15.50	8	2	SCI		TEH	0.14	TSH	TEH				846		HOT	610XP	Tubesheet Exam
10	39	2.28	23	86	SAI		TEH	0.10	TSH	TEH				508		HOT	610XP	Tubesheet Exam
10	76	4.71	18	38	SAI		TEH	0.12	TSH	TEH				814		HOT	610XP	Tubesheet Exam
10	78	5.87	56	90	SAI		TEH	0.20	02H	TEH				414		HOT	610XP	Tubesheet Exam
10	81	4.20	25	26	SAI		TEH	0.21	TSH	TEH				814		HOT	610XP	Tubesheet Exam
10	84	1.65	28	58	SAI		TEH	0.18	TSH	TEH				492		HOT	610XP	Tubesheet Exam
11	66	3.18	34	154	SAI		TEH	0.18	TSH	TEH				492		HOT	610XP	Tubesheet Exam
11	70	11.80	28	182	SAI		TEH	0.24	TSH	TEH				816		HOT	610XP	Tubesheet Exam
11	77	9.41	37	6	MAI		TEH	0.11	TSH	TEH				416		HOT	610XP	Tubesheet Exam
12	36	5.04	10	178	SAI		TEH	0.06	TSH	TEH				508		HOT	610XP	Tubesheet Exam
12	64	8.92	26	134	SAI		TEH	0.58	TSH	TEH				428		HOT	610XP	Tubesheet Exam
		10.15	29	134	SAI		TEH	0.41	TSH	TEH				428		HOT	610XP	Tubesheet Exam
12	79	3.70	15	90	SAI		TEH	0.18	TSH	TEH				428		HOT	610XP	Tubesheet Exam
12	82	1.77	40	10	SAI		TEH	0.06	TSH	TEH				828		HOT	610XP	Tubesheet Exam
12	92	3.58	34	38	SAI		TEH	0.03	TSH	TEH				848		HOT	610XP	Tubesheet Exam
13	70	7.08	31	186	SAI		TEH	0.18	TSH	TEH				820		HOT	610XP	Tubesheet Exam
14	43	5.86	32	6	SAI		TEH	0.15	TSH	TEH				494		HOT	610XP	Tubesheet Exam
15	32	2.05	59	178	SAI		TEH	0.14	TSH	TEH				528		HOT	610XP	Tubesheet Exam
15	36	3.74	203	162	SAI		TEH	0.09	TSH	TEH				508		HOT	610XP	Tubesheet Exam
15	56	1.42	0	P4	TWD	16	AV4	-0.21	TEC	TEH	WAR			222		HOT	XPMMR610	Bobbin Exam
15	69	6.30	37	106	MAI		TEH	0.21	02H	TEH				490		HOT	610XP	Tubesheet Exam
15	77	2.67	23	70	SAI		TEH	0.06	TSH	TEH				488		HOT	610XP	Tubesheet Exam
15	79	0.00	0	2	TWD	0	TSH	0.09	TSH	TSH				62		HOT	+PT610RPC3C	Tubesheet Exam
		0.19	121	2	TWD	4	TSH	0.12	TSH	TSH				62		HOT	+PT610RPC3C	Tubesheet Exam
		0.27	116	2	TWD	20	TSH	0.15	TSH	TSH				62		HOT	+PT610RPC3C	Tubesheet Exam
		0.27	115	2	TWD	23	TSH	0.18	TSH	TSH				62		HOT	+PT610RPC3C	Tubesheet Exam
		0.16	118	2	TWD	14	TSH	0.20	TSH	TSH				62		HOT	+PT610RPC3C	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	0.23	TSH	TSH				62		HOT	+PT610RPC3C	Tubesheet Exam
		0.89	83	106	SAI		TSH	0.41	TSH	TEH				428		HOT	610XP	Tubesheet Exam
		0.38	100	3	SAI		TSH	0.22	TSH	TSH		OR		60		HOT	RPG590C	Special Run
16	45	4.43	15	74	MAI		TEH	0.12	TSH	TEH				494		HOT	610XP	Tubesheet Exam
17	28	1.56	103	142	SAI		TSH	0.32	TSH	TEH				514		HOT	610XP	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	0.08	TSH	TSH				166		HOT	+PT610RPC3C	Tubesheet Exam
		0.47	114	2	TWD	1	TSH	0.10	TSH	TSH				166		HOT	+PT610RPC3C	Tubesheet Exam
		0.40	114	2	TWD	1	TSH	0.12	TSH	TSH				166		HOT	+PT610RPC3C	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	0.15	TSH	TSH				166		HOT	+PT610RPC3C	Tubesheet Exam
18	49	2.56	24	154	SAI		TEH	0.09	TSH	TEH				494		HOT	610XP	Tubesheet Exam
18	64	9.00	33	154	SAI		TEH	0.41	TSH	TEH				428		HOT	610XP	Tubesheet Exam
18	71	0.00	0	2	TWD	0	TSH	0.10	TSH	TSH				164		HOT	+PT610RPC3C	Tubesheet Exam
		0.23	121	2	TWD	0	TSH	0.12	TSH	TSH				164		HOT	+PT610RPC3C	Tubesheet Exam
		0.25	121	2	TWD	0	TSH	0.14	TSH	TSH				164		HOT	+PT610RPC3C	Tubesheet Exam
		0.24	130	2	TWD	0	TSH	0.17	TSH	TSH				164		HOT	+PT610RPC3C	Tubesheet Exam
		0.16	116	2	TWD	0	TSH	0.20	TSH	TSH				164		HOT	+PT610RPC3C	Tubesheet Exam
		0.19	106	2	TWD	0	TSH	0.23	TSH	TSH				164		HOT	+PT610RPC3C	Tubesheet Exam
		0.19	107	2	TWD	0	TSH	0.25	TSH	TSH				164		HOT	+PT610RPC3C	Tubesheet Exam
		0.17	118	2	TWD	0	TSH	0.28	TSH	TSH				164		HOT	+PT610RPC3C	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	0.31	TSH	TSH				164		HOT	+PT610RPC3C	Tubesheet Exam
		0.89	107	26	SAI		TSH	0.49	TSH	TEH				492		HOT	610XP	Tubesheet Exam
19	29	2.00	107	102	SAI		TSH	0.07	TSH	TEH				514		HOT	610XP	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	0.19	TSH	TSH				166		HOT	+PT610RPC3C	Tubesheet Exam
		0.43	136	2	TWD	1	TSH	0.20	TSH	TSH				166		HOT	+PT610RPC3C	Tubesheet Exam
		0.41	130	2	TWD	1	TSH	0.23	TSH	TSH				166		HOT	+PT610RPC3C	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	0.26	TSH	TSH				166		HOT	+PT610RPC3C	Tubesheet Exam
20	32	4.49	25	166	SAI		TEH	0.09	TSH	TEH				516		HOT	610XP	Tubesheet Exam

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE	SCOPE
20	33	4.88	21	186	SAI	TEH	0.17	TSH	TEH			506	HOT	610XP	Tubesheet Exam
21	33	5.83	26	150	SAI	TEH	0.12	TSH	TEH			504	HOT	610XP	Tubesheet Exam
21	63	2.72	74	158	SAI	TEH	0.07	TSH	TEH			424	HOT	610XP	Tubesheet Exam
21	65	5.29	18	106	SAI	TEH	0.18	TSH	TEH			424	HOT	610XP	Tubesheet Exam
23	74	4.74	31	150	MAI	TEH	0.15	TSH	TEH			412	HOT	610XP	Tubesheet Exam
24	44	0.00	0	2	TWD	0	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.11	113	2	TWD	1	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.09	98	2	TWD	19	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.18	119	2	TWD	1	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.18	132	2	TWD	1	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		1.84	93	186	SAI	TSH	0.12	TSH	TEH			498	HOT	610XP	Tubesheet Exam
24	72	1.46	95	170	SAI	TSH	0.33	TSH	TEH			536	HOT	610XP	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.43	114	2	TWD	1	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.54	117	2	TWD	1	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.41	118	2	TWD	1	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
25	31	2.95	45	162	SAI	TEH	0.08	TSH	TEH			528	HOT	610XP	Tubesheet Exam
25	38	1.49	88	162	SAI	TSH	0.24	TSH	TEH			498	HOT	610XP	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.24	126	2	TWD	1	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.33	121	2	TWD	1	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.31	125	2	TWD	1	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.44	122	2	TWD	1	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
		0.00	0	2	TWD	1	TSH	TSH	TSH			166	HOT	+PT610RPC3C	Tubesheet Exam
26	64	0.80	69	142	MAI	TSH	0.57	TSH	TEH			418	HOT	610XP	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	TEH	TSH	#1		168	HOT	+PT610RPC3C	Tubesheet Exam
		0.32	133	2	TWD	0	TSH	TEH	TSH	#2		168	HOT	+PT610RPC3C	Tubesheet Exam
		0.23	112	2	TWD	1	TSH	TEH	TSH	#2		168	HOT	+PT610RPC3C	Tubesheet Exam
		0.19	96	2	TWD	24	TSH	TEH	TSH	#2		168	HOT	+PT610RPC3C	Tubesheet Exam
		0.11	100	2	TWD	13	TSH	TEH	TSH	#1		168	HOT	+PT610RPC3C	Tubesheet Exam
		0.20	94	2	TWD	30	TSH	TEH	TSH	#2		168	HOT	+PT610RPC3C	Tubesheet Exam
		0.07	129	2	TWD	2	TSH	TEH	TSH	#1		168	HOT	+PT610RPC3C	Tubesheet Exam
		0.10	98	2	TWD	19	TSH	TEH	TSH	#2		168	HOT	+PT610RPC3C	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	TEH	TSH	#1		168	HOT	+PT610RPC3C	Tubesheet Exam
		0.00	0	2	TWD	0	TSH	TEH	TSH	#2		168	HOT	+PT610RPC3C	Tubesheet Exam
26	81	14.66	18	46	MCI	TEH	0.48	TSH	TEH			488	HOT	610XP	Tubesheet Exam
27	59	7.35	149	178	SAI	TEH	0.25	TSH	TEH			420	HOT	610XP	Tubesheet Exam
27	60	1.91	0	P4	TWD	20	AV2	TEC	TEH	WAR		220	HOT	XPMMR610	Bobbin Exam
30	21	2.00	48	174	SAI	TEH	0.17	TSH	TEH			518	HOT	610XP	Tubesheet Exam
30	104	1.04	0	P4	TWD	13	AV3	TEC	TEH	WAR		256	HOT	XPMMR610	Bobbin Exam
		0.98	0	P4	TWD	12	AV1	TEC	TEH	WAR		256	HOT	XPMMR610	Bobbin Exam
32	103	1.01	0	P4	TWD	13	AV4	TEC	TEH	WAR		256	HOT	XPMMR610	Bobbin Exam
		0.85	0	P4	TWD	11	AV3	TEC	TEH	WAR		256	HOT	XPMMR610	Bobbin Exam
		1.17	0	P4	TWD	14	AV2	TEC	TEH	WAR		256	HOT	XPMMR610	Bobbin Exam
33	56	3.10	25	90	SAI	TEH	0.30	TSH	TEH			478	HOT	610XP	Tubesheet Exam
36	19	1.62	80	70	SAI	TEH	0.17	TSH	TEH			524	HOT	610XP	Tubesheet Exam
		1.62	83	70	SAI	TEH	0.17	TSH	TEH	IDOK		124	HOT	610XP	Tubesheet Exam
36	98	0.71	0	P4	TWD	10	AV4	TEC	TEH	WAR		256	HOT	XPMMR610	Bobbin Exam
36	99	0.93	0	P4	TWD	12	AV4	TEC	TEH	WAR		256	HOT	XPMMR610	Bobbin Exam
37	98	1.23	0	P4	TWD	15	AV3	TEC	TEH	WAR		256	HOT	XPMMR610	Bobbin Exam
		0.38	78	26	VOL	AV3	0.00	09C	08H	WAR		56	HOT	610XP	UBend Special Inter
37	99	1.26	0	P4	TWD	15	AV4	TEC	TEH	WAR		256	HOT	XPMMR610	Bobbin Exam
38	75	0.79	0	P4	TWD	10	AV2	TEC	TEH	WAR	OR	228	HOT	XPMMR610	Bobbin Exam

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL	1	UTIL	2	CAL #	LEG	PROBE	SCOPE
39	59	0.79	0	P4	TWD 8	AV4	-0.09	TEC	TEH	WAR				208	HOT	XPMMR610	Bobbin Exam
44	91	1.38	0	P4	TWD 16	AV2	0.10	TEC	TEH	WAR				252	HOT	XPMMR610	Bobbin Exam
45	24	0.70	0	P4	TWD 8	AV4	0.00	TEC	TEH	WAR				318	HOT	XPMMR610	Bobbin Exam
		1.09	30	182	VOL	TSH	1.24	TSH	TEH					518	HOT	610XP	TubeSheet Exam
45	91	1.32	0	P4	TWD 16	AV4	0.00	TEC	TEH	WAR				252	HOT	XPMMR610	Bobbin Exam
47	27	1.66	0	P4	TWD 17	AV4	0.03	TEC	TEH	WAR		OR		318	HOT	XPMMR610	Bobbin Exam
		1.81	0	P4	TWD 18	AV3	0.00	TEC	TEH	WAR		OR		318	HOT	XPMMR610	Bobbin Exam
		0.79	0	P4	TWD 9	AV2	0.00	TEC	TEH	WAR		OR		318	HOT	XPMMR610	Bobbin Exam
47	88	0.85	0	P4	TWD 11	AV4	-0.24	TEC	TEH	WAR				252	HOT	XPMMR610	Bobbin Exam
		0.95	0	P4	TWD 12	AV2	0.19	TEC	TEH	WAR				252	HOT	XPMMR610	Bobbin Exam

Handwritten notes:
 -HBM
 DBMays
 1/23/2008

Total Tubes : 166
 Total Records: 230

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL	1	UTIL	2	CAL	#	LEG	PROBE	SCOPE
1	19	2.43	28	26	SAI		TEH	0.20	TSH	TEH				410		HOT	610XP	Tubesheet Exam
1	21	1.44	71	118	SAI		TEH	0.11	TSH	TEH				410		HOT	610XP	Tubesheet Exam
1	80	0.80	34	42	SAI		TEH	0.47	TSH	TEH				442		HOT	610XP	Tubesheet Exam
5	49	3.83	43	178	SAI		TEH	0.20	TSH	TEH				440		HOT	610XP	Tubesheet Exam
10	80	6.64	75	190	MAI		TEH	0.00	TSH	TEH				438		HOT	610XP	Tubesheet Exam
22	70	4.08	39	6	SAI		TEH	0.15	TSH	TEH				474		HOT	610XP	Tubesheet Exam
25	10	1.30	99	42	VOL		18C	0.26	18C	18C	WAR			6		HOT	610XP	H/L and C/L Special
		2.20	0	P4	TWD	20	18C	0.34	TEC	TEH	WAR			206		HOT	XPMMR610	Bobbin Exam
27	9	3.45	0	P4	TWD	26	AV2	-0.16	TEC	TEH	WAR			210		HOT	XPMMR610	Bobbin Exam
28	10	1.27	0	P4	TWD	14	AV2	-0.03	TEC	TEH	WAR			210		HOT	XPMMR610	Bobbin Exam
28	11	0.99	0	P4	TWD	11	AV2	-0.03	TEC	TEH	WAR		OR	210		HOT	XPMMR610	Bobbin Exam
28	105	1.41	0	P4	TWD	14	AV3	0.00	TEC	TEH	WAR			254		HOT	XPMMR610	Bobbin Exam
29	10	0.67	0	P4	TWD	8	AV3	0.08	TEC	TEH	WAR			210		HOT	XPMMR610	Bobbin Exam
		0.48	0	P4	TWD	6	AV2	0.16	TEC	TEH	WAR		OR	210		HOT	XPMMR610	Bobbin Exam
29	12	0.80	0	P4	TWD	9	AV3	-0.05	TEC	TEH	WAR			212		HOT	XPMMR610	Bobbin Exam
		0.95	0	P4	TWD	11	AV2	0.03	TEC	TEH	WAR			212		HOT	XPMMR610	Bobbin Exam
29	14	0.82	0	P4	TWD	9	AV3	0.06	TEC	TEH	WAR			610		HOT	XPMMR610	Bobbin Exam
30	15	2.29	0	P4	TWD	20	AV4	0.28	TEC	TEH	WAR			300		HOT	XPMMR610	Bobbin Exam
31	12	2.19	0	P4	TWD	21	AV3	-0.06	TEC	TEH	WAR			294		HOT	XPMMR610	Bobbin Exam
		0.88	64	190	VOL		AV3	0.00	09C	08H	WAR			494		HOT	610XP	UBend Special Inter
33	12	1.38	0	P4	TWD	15	AV2	0.00	TEC	TEH	WAR			294		HOT	XPMMR610	Bobbin Exam
		1.71	0	P4	TWD	19	AV1	0.08	TEC	TEH	WAR			294		HOT	XPMMR610	Bobbin Exam
33	14	1.17	0	P4	TWD	14	AV3	0.00	TEC	TEH	WAR			294		HOT	XPMMR610	Bobbin Exam
		2.14	0	P4	TWD	20	AV2	0.03	TEC	TEH	WAR			294		HOT	XPMMR610	Bobbin Exam
33	55	2.44	0	P4	TWD	22	AV3	0.00	TEC	TEH	WAR			278		HOT	XPMMR610	Bobbin Exam
33	100	1.05	0	P4	TWD	12	AV2	0.14	TEC	TEH	WAR			256		HOT	XPMMR610	Bobbin Exam
33	102	0.98	0	P4	TWD	10	AV2	0.24	TEC	TEH	WAR			254		HOT	XPMMR610	Bobbin Exam
36	25	0.65	0	P4	TWD	8	AV2	-0.03	TEC	TEH	WAR			292		HOT	XPMMR610	Bobbin Exam
36	37	0.58	0	P4	TWD	8	AV2	0.08	TEC	TEH	WAR			292		HOT	XPMMR610	Bobbin Exam
36	98	1.22	0	P4	TWD	14	AV2	0.17	TEC	TEH	WAR			256		HOT	XPMMR610	Bobbin Exam
38	17	1.18	0	P4	TWD	15	AV4	-0.11	TEC	TEH	WAR			290		HOT	XPMMR610	Bobbin Exam
		1.89	0	P4	TWD	19	AV2	-0.16	TEC	TEH	WAR			290		HOT	XPMMR610	Bobbin Exam
		0.84	0	P4	TWD	12	AV1	0.00	TEC	TEH	WAR			290		HOT	XPMMR610	Bobbin Exam
38	23	0.82	0	P4	TWD	10	AV4	0.00	TEC	TEH	WAR		OR	292		HOT	XPMMR610	Bobbin Exam
		0.96	0	P4	TWD	12	AV2	-0.10	TEC	TEH	WAR		OR	292		HOT	XPMMR610	Bobbin Exam
38	34	1.07	0	P4	TWD	13	AV2	0.00	TEC	TEH	WAR			292		HOT	XPMMR610	Bobbin Exam
38	97	1.70	0	P4	TWD	17	AV2	-0.06	TEC	TEH	WAR			256		HOT	XPMMR610	Bobbin Exam
38	99	4.32	0	P4	TWD	30	AV4	0.00	TEC	TEH	WAR			254		HOT	XPMMR610	Bobbin Exam
		2.30	0	P4	TWD	20	AV3	-0.12	TEC	TEH	WAR			254		HOT	XPMMR610	Bobbin Exam
39	17	0.79	0	P4	TWD	10	AV1	0.11	TEC	TEH	WAR			290		HOT	XPMMR610	Bobbin Exam
39	18	1.53	0	P4	TWD	17	AV2	0.29	TEC	TEH	WAR			290		HOT	XPMMR610	Bobbin Exam
39	27	1.05	0	P4	TWD	14	AV3	0.19	TEH	TEC	WAR			225		COLD	XPMMR610	Bobbin Exam
39	94	1.56	0	P4	TWD	16	AV3	0.15	TEC	TEH	WAR			264		HOT	XPMMR610	Bobbin Exam
39	97	0.31	38	178	VOL		AV1	0.06	09C	08H	WAR			54		HOT	610XP	UBend Special Inter
		1.37	0	P4	TWD	14	AV4	-0.18	TEC	TEH	WAR			254		HOT	XPMMR610	Bobbin Exam
		1.35	0	P4	TWD	14	AV3	0.03	TEC	TEH	WAR			254		HOT	XPMMR610	Bobbin Exam
		1.21	0	P4	TWD	13	AV2	0.00	TEC	TEH	WAR			254		HOT	XPMMR610	Bobbin Exam
		0.70	0	P4	TWD	7	AV1	0.00	TEC	TEH	WAR			254		HOT	XPMMR610	Bobbin Exam
40	20	1.87	0	P4	TWD	19	AV2	0.05	TEC	TEH	WAR			292		HOT	XPMMR610	Bobbin Exam
40	22	1.12	0	P4	TWD	13	AV2	-0.05	TEC	TEH	WAR		OR	288		HOT	XPMMR610	Bobbin Exam
40	27	1.11	0	P4	TWD	13	AV2	0.21	TEC	TEH	WAR		OR	288		HOT	XPMMR610	Bobbin Exam
41	20	0.78	0	P4	TWD	9	AV3	0.03	TEC	TEH	WAR			286		HOT	XPMMR610	Bobbin Exam
		0.83	0	P4	TWD	9	AV2	0.08	TEC	TEH	WAR			286		HOT	XPMMR610	Bobbin Exam
		1.20	0	P4	TWD	13	AV1	-0.05	TEC	TEH	WAR			286		HOT	XPMMR610	Bobbin Exam
43	93	0.49	0	P4	TWD	6	AV4	-0.27	TEC	TEH	WAR			662		HOT	XPMMR610	Bobbin Exam

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL	1	UTIL	2	CAL	#	LEG	PROBE	SCOPE
		0.74	0	P4	TWD	9	AV3	-0.20	TEC	TEH	WAR			662		HOT	XPMMR610	Bobbin Exam
		0.64	0	P4	TWD	8	AV2	-0.05	TEC	TEH	WAR			662		HOT	XPMMR610	Bobbin Exam
		0.35	53	170	VOL		AV2	0.00	09C	08H	WAR			62		HOT	610XP	UBend Special Inter
44	81	1.13	0	P4	TWD	12	AV4	0.00	TEC	TEH	WAR			268		HOT	XPMMR610	Bobbin Exam
		2.12	0	P4	TWD	19	AV3	-0.11	TEC	TEH	WAR			268		HOT	XPMMR610	Bobbin Exam
		4.04	0	P4	TWD	29	AV2	0.19	TEC	TEH	WAR			268		HOT	XPMMR610	Bobbin Exam
49	59	1.67	0	P40	TWD	23	13C	0.00	13C	13C	WAR			433		COLD	610XP	H/L and C/L Special
		0.34	133	122	VOL		13C	0.00	13C	13C	WAR			433		COLD	610XP	H/L and C/L Special
		1.58	148	150	VOL		13C	0.00	13C	13C	WAR			74		HOT	610XP	H/L and C/L Special
		1.78	104	182	VOL		13C	0.00	13C	13C	WAR			74		HOT	610XP	H/L and C/L Special
49	76	2.77	0	P4	TWD	21	AV1	-0.19	TEC	TEH	WAR	OR		270		HOT	XPMMR610	Bobbin Exam

Total Tubes : 42
 Total Records: 66

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL 1	UTIL 2	CAL #	LEG	PROBE	SCOPE	
1	45	25.33	29	114	SCI	TEC	0.30	TSC	TEC			413	COLD	610XP	Tubesheet Exam	
1	46	63.21	36	82	SCI	TEC	0.19	TSC	TEC			413	COLD	610XP	Tubesheet Exam	
1	66	20.69	24	98	SCI	TEC	0.22	TSC	TEC			413	COLD	610XP	Tubesheet Exam	
		52.41	31	126	SCI	TEC	0.19	TSC	TEC			413	COLD	610XP	Tubesheet Exam	
1	67	64.87	38	66	SCI	TEC	0.25	TSC	TEC			413	COLD	610XP	Tubesheet Exam	
1	68	35.75	17	66	SCI	TEC	0.19	TSC	TEC			413	COLD	610XP	Tubesheet Exam	
		24.36	24	94	SCI	TEC	0.19	TSC	TEC			413	COLD	610XP	Tubesheet Exam	
1	69	53.67	41	30	SCI	TEC	0.25	TSC	TEC			413	COLD	610XP	Tubesheet Exam	
1	84	2.88	52	38	SAI	TEH	0.45	TSH	TEH	OR		410	HOT	610XP	Tubesheet Exam	
2	65	37.10	36	34	SCI	TEC	0.31	TSC	TEC			415	COLD	610XP	Tubesheet Exam	
		55.77	29	46	SCI	TEC	0.28	TSC	TEC	OR		415	COLD	610XP	Tubesheet Exam	
2	66	37.03	11	46	SCI	TEC	0.11	TSC	TEC			415	COLD	610XP	Tubesheet Exam	
		37.51	33	34	SCI	TEC	0.08	TSC	TEC			415	COLD	610XP	Tubesheet Exam	
2	67	18.95	1	98	SCI	TEC	0.08	TSC	TEC			415	COLD	610XP	Tubesheet Exam	
		81.45	29	110	SCI	TEC	0.06	TSC	TEC			415	COLD	610XP	Tubesheet Exam	
5	107	7.41	17	50	SCI	TEH	0.33	TSH	TEH			430	HOT	610XP	Tubesheet Exam	
5	109	3.76	66	114	SCI	TEH	0.33	TSH	TEH			430	HOT	610XP	Tubesheet Exam	
7	66	35.99	22	18	SCI	TEH	0.12	TSH	TEH			402	HOT	610XP	Tubesheet Exam	
		34.54	36	30	SCI	TEH	0.47	TSH	TEH			546	HOT	610XP	Tubesheet Exam	
8	58	17.78	22	82	SCI	TEH	0.22	TSH	TEH	OR		62	HOT	610XP	Tubesheet Exam	
		17.92	22	82	SCI	TEH	0.22	TSH	TEH	OR		462	HOT	610XP	Tubesheet Exam	
8	59	34.50	16	30	SCI	TEH	0.28	TSH	TEH			62	HOT	610XP	Tubesheet Exam	
8	62	33.06	20	98	SCI	TEH	0.31	TSH	TEH			62	HOT	610XP	Tubesheet Exam	
10	107	8.44	29	50	SCI	TEH	0.30	TSH	TEH			432	HOT	610XP	Tubesheet Exam	
15	106	5.71	28	114	SCI	TEH	0.24	TSH	TEH			430	HOT	610XP	Tubesheet Exam	
25	107	0.54	0	P4	TWD	10	AV3	-0.03	TEC	TEH	WAR	OR	230	HOT	XPMMR610	Bobbin Exam
		1.36	0	P4	TWD	19	AV2	0.34	TEC	TEH	WAR	OR	230	HOT	XPMMR610	Bobbin Exam
27	107	0.98	0	P4	TWD	15	AV2	0.18	TEC	TEH	WAR		246	HOT	XPMMR610	Bobbin Exam
		0.90	129	P6	VOL	AV2	-0.21	09C	07H	WAR			446	HOT	610XP	UBend Special Inter
28	10	0.65	0	P4	TWD	12	AV4	0.00	TEC	TEH	WAR		324	HOT	XPMMR610	Bobbin Exam
		0.44	0	P4	TWD	9	AV3	0.00	TEC	TEH	WAR		324	HOT	XPMMR610	Bobbin Exam
28	16	1.60	0	P4	TWD	22	13C	-0.55	TEC	TEH	WAR		306	HOT	XPMMR610	Bobbin Exam
28	71	1.28	0	P4	TWD	18	AV2	0.00	TEC	TEH	WAR		620	HOT	XPMMR610	Bobbin Exam
28	105	1.01	0	P4	TWD	15	AV2	0.16	TEC	TEH	WAR		246	HOT	XPMMR610	Bobbin Exam
29	104	0.58	0	P4	TWD	10	AV2	-0.11	TEC	TEH	WAR		250	HOT	XPMMR610	Bobbin Exam
30	102	1.73	0	P4	TWD	23	AV3	0.18	TEC	TEH	WAR		252	HOT	XPMMR610	Bobbin Exam
33	13	0.61	0	P4	TWD	11	AV4	0.05	TEC	TEH	WAR		320	HOT	XPMMR610	Bobbin Exam
		0.97	0	P4	TWD	16	AV3	0.14	TEC	TEH	WAR		320	HOT	XPMMR610	Bobbin Exam
		1.81	0	P4	TWD	24	AV2	-0.03	TEC	TEH	WAR		320	HOT	XPMMR610	Bobbin Exam
33	15	0.70	0	P4	TWD	13	AV4	0.11	TEC	TEH	WAR		322	HOT	XPMMR610	Bobbin Exam
		0.53	81	P6	VOL	AV4	0.11	09C	08H	WAR			122	HOT	610XP	UBend Special Inter
33	79	0.72	0	P4	TWD	13	AV2	0.00	TEC	TEH	WAR		624	HOT	XPMMR610	Bobbin Exam
34	98	1.48	0	P4	TWD	21	AV2	0.00	TEC	TEH	WAR		652	HOT	XPMMR610	Bobbin Exam
34	99	0.99	0	P4	TWD	16	AV2	-0.08	TEC	TEH	WAR		252	HOT	XPMMR610	Bobbin Exam
34	100	0.85	0	P4	TWD	14	AV3	0.05	TEC	TEH	WAR	OR	250	HOT	XPMMR610	Bobbin Exam
35	14	1.12	0	P4	TWD	17	AV4	0.00	TEC	TEH	WAR		324	HOT	XPMMR610	Bobbin Exam
		3.97	0	P4	TWD	35	AV2	0.00	TEC	TEH	WAR		324	HOT	XPMMR610	Bobbin Exam
35	17	8.09	49	62	SCI	TEH	0.20	TSH	TEH			508	HOT	610XP	Tubesheet Exam	
35	96	0.38	0	P4	TWD	6	AV2	0.00	TEC	TEH	WAR		646	HOT	XPMMR610	Bobbin Exam
36	16	0.61	0	P4	TWD	11	AV4	0.03	TEC	TEH	WAR		306	HOT	XPMMR610	Bobbin Exam
		0.72	0	P4	TWD	13	AV3	0.08	TEC	TEH	WAR		306	HOT	XPMMR610	Bobbin Exam
		3.30	0	P4	TWD	32	AV2	0.00	TEC	TEH	WAR		306	HOT	XPMMR610	Bobbin Exam
		0.60	0	P4	TWD	11	AV1	0.03	TEC	TEH	WAR		306	HOT	XPMMR610	Bobbin Exam
36	65	1.64	0	P4	TWD	20	AV3	0.17	TEC	TEH	WAR		254	HOT	XPMMR610	Bobbin Exam
36	93	1.14	0	P4	TWD	16	AV2	-0.05	TEC	TEH	WAR	OR	238	HOT	XPMMR610	Bobbin Exam

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL	1	UTIL	2	CAL #	LEG	PROBE	SCOPE
36	94	0.77	0	P4	TWD	12	AV2	0.27	TEC	TEH	WAR			246	HOT	XPMMR610	Bobbin Exam
		0.54	0	P4	TWD	9	AV1	-0.38	TEC	TEH	WAR			246	HOT	XPMMR610	Bobbin Exam
36	96	0.50	0	P4	TWD	8	AV3	0.00	TEC	TEH	WAR			646	HOT	XPMMR610	Bobbin Exam
		0.99	0	P4	TWD	15	AV2	0.00	TEC	TEH	WAR			646	HOT	XPMMR610	Bobbin Exam
36	97	1.50	0	P4	TWD	16	AV2	0.00	TEC	TEH	WAR			650	HOT	XPMMR610	Bobbin Exam
36	98	0.88	0	P4	TWD	15	AV3	0.00	TEC	TEH	WAR			348	HOT	XPMMR610	Bobbin Exam
36	100	0.83	80	P20	VOL		AV3	-0.25	09C	08H	WAR			450	HOT	610XP	UBend Special Inter
		0.80	0	P4	TWD	13	AV3	-0.14	TEC	TEH	WAR			250	HOT	XPMMR610	Bobbin Exam
37	17	0.69	0	P4	TWD	12	AV4	0.06	TEC	TEH	WAR			306	HOT	XPMMR610	Bobbin Exam
		1.02	0	P4	TWD	16	AV2	-0.05	TEC	TEH	WAR			306	HOT	XPMMR610	Bobbin Exam
38	18	1.02	0	P4	TWD	16	AV4	0.14	TEC	TEH	WAR			306	HOT	XPMMR610	Bobbin Exam
		1.58	0	P4	TWD	22	AV2	-0.08	TEC	TEH	WAR			306	HOT	XPMMR610	Bobbin Exam
38	19	0.63	0	P4	TWD	12	AV2	-0.08	TEC	TEH	WAR			306	HOT	XPMMR610	Bobbin Exam
38	20	0.34	57	P130	VOL		AV4	-0.11	09C	08H	WAR			108	HOT	610XP	UBend Special Inter
		0.66	0	P4	TWD	11	AV4	0.00	TEC	TEH	WAR			308	HOT	XPMMR610	Bobbin Exam
		0.91	0	P4	TWD	15	AV2	0.00	TEC	TEH	WAR			308	HOT	XPMMR610	Bobbin Exam
38	21	0.66	0	P4	TWD	11	AV2	0.18	TEC	TEH	WAR			308	HOT	XPMMR610	Bobbin Exam
38	22	4.01	139	P110	MCI		TEH	0.28	TSH	TEH				506	HOT	610XP	Tubesheet Exam
38	26	0.79	0	P4	TWD	11	AV2	-0.03	TEC	TEH	WAR			294	HOT	XPMMR610	Bobbin Exam
38	64	1.24	0	P4	TWD	18	AV2	0.00	TEC	TEH	WAR			656	HOT	XPMMR610	Bobbin Exam
38	78	1.32	0	P4	TWD	21	AV3	-0.13	TEC	TEH	WAR			614	HOT	XPMMR610	Bobbin Exam
38	90	0.69	0	P4	TWD	11	AV2	0.00	TEC	TEH	WAR			640	HOT	XPMMR610	Bobbin Exam
38	93	0.75	0	P4	TWD	12	AV3	0.10	TEC	TEH	WAR			238	HOT	XPMMR610	Bobbin Exam
		1.68	0	P4	TWD	22	AV2	0.08	TEC	TEH	WAR			238	HOT	XPMMR610	Bobbin Exam
39	81	0.87	0	P4	TWD	13	AV2	0.19	TEC	TEH	WAR			218	HOT	XPMMR610	Bobbin Exam
39	96	0.89	0	P4	TWD	14	AV3	0.05	TEC	TEH	WAR			246	HOT	XPMMR610	Bobbin Exam
39	98	0.66	0	P4	TWD	12	AV1	0.11	TEC	TEH	WAR			250	HOT	XPMMR610	Bobbin Exam
40	93	0.86	0	P4	TWD	14	AV2	-0.14	TEC	TEH	WAR	OR		238	HOT	XPMMR610	Bobbin Exam
40	94	1.37	0	P4	TWD	19	AV3	0.00	TEC	TEH	WAR			248	HOT	XPMMR610	Bobbin Exam
		1.17	0	P4	TWD	17	AV2	0.00	TEC	TEH	WAR			248	HOT	XPMMR610	Bobbin Exam
40	97	0.72	0	P4	TWD	12	AV3	0.19	TEC	TEH	WAR			250	HOT	XPMMR610	Bobbin Exam
		0.59	0	P4	TWD	11	AV1	0.00	TEC	TEH	WAR			250	HOT	XPMMR610	Bobbin Exam
41	20	0.48	0	P4	TWD	9	AV4	0.06	TEC	TEH	WAR			306	HOT	XPMMR610	Bobbin Exam
41	55	1.61	68	P10	SAI		TEH	0.25	TSH	TEH				466	HOT	610XP	Tubesheet Exam
41	59	3.30	11	P126	SCI		TEH	0.77	TSH	TEH				458	HOT	610XP	Tubesheet Exam
		4.83	31	P130	MAI		TEH	0.37	TSH	TEH				458	HOT	610XP	Tubesheet Exam
41	77	0.56	0	P4	TWD	10	AV3	-0.05	TEC	TEH	WAR			618	HOT	XPMMR610	Bobbin Exam
		1.35	0	P4	TWD	19	AV2	0.46	TEC	TEH	WAR			618	HOT	XPMMR610	Bobbin Exam
42	23	1.69	0	P4	TWD	23	AV2	-0.16	TEC	TEH	WAR			306	HOT	XPMMR610	Bobbin Exam
		0.72	0	P4	TWD	13	AV4	0.14	TEC	TEH	WAR			306	HOT	XPMMR610	Bobbin Exam
42	30	0.99	0	P4	TWD	16	AV2	0.00	TEC	TEH	WAR			296	HOT	XPMMR610	Bobbin Exam
42	32	0.99	0	P4	TWD	16	AV2	-0.05	TEC	TEH	WAR			296	HOT	XPMMR610	Bobbin Exam
42	85	0.59	0	P4	TWD	11	AV3	0.08	TEC	TEH	WAR	OR		218	HOT	XPMMR610	Bobbin Exam
		1.45	0	P4	TWD	19	AV2	0.44	TEC	TEH	WAR	OR		218	HOT	XPMMR610	Bobbin Exam
43	22	1.31	0	P4	TWD	19	AV4	0.30	TEC	TEH	WAR	OR		306	HOT	XPMMR610	Bobbin Exam
		2.24	0	P4	TWD	27	AV3	0.05	TEC	TEH	WAR	OR		306	HOT	XPMMR610	Bobbin Exam
		0.66	0	P4	TWD	12	AV2	-0.05	TEC	TEH	WAR	OR		306	HOT	XPMMR610	Bobbin Exam
43	29	0.74	0	P4	TWD	13	AV2	-0.08	TEC	TEH	WAR			294	HOT	XPMMR610	Bobbin Exam
43	78	3.45	0	P4	TWD	31	AV3	0.15	TEC	TEH	WAR			236	HOT	XPMMR610	Bobbin Exam
		2.06	0	P4	TWD	24	AV2	-0.05	TEC	TEH	WAR			236	HOT	XPMMR610	Bobbin Exam
		0.75	0	P4	TWD	12	AV1	-0.05	TEC	TEH	WAR			236	HOT	XPMMR610	Bobbin Exam
44	24	1.11	0	P4	TWD	15	AV3	0.21	TEC	TEH	WAR			302	HOT	XPMMR610	Bobbin Exam
44	46	1.51	0	P4	TWD	20	AV3	0.03	TEC	TEH	WAR			298	HOT	XPMMR610	Bobbin Exam
44	90	0.38	0	P4	TWD	7	AV1	0.00	TEC	TEH	WAR	OR		238	HOT	XPMMR610	Bobbin Exam
44	91	0.68	0	P4	TWD	11	AV4	-0.22	TEC	TEH	WAR	OR		238	HOT	XPMMR610	Bobbin Exam

Service Induced Degradation

QUERY: QueryM1[1]

ROW	COL	VOLTS	DEG	CHN	IND	%TW	LOCATION	EXT	EXT	UTIL	1	UTIL	2	CAL #	LEG	PROBE	SCOPE
		0.78	0	P4	TWD 12	AV2	-0.03	TEC	TEH	WAR	OR			238	HOT	XPMMR610	Bobbin Exam
		0.73	61	54	VOL	AV2	0.00	09C	08H	WAR	OR			38	HOT	610XP	UBend Special Inter
45	52	1.21	0	P4	TWD 18	15C	0.33	TEC	TEH	WAR				308	HOT	XPMMR610	Bobbin Exam
45	91	0.59	0	P4	TWD 10	AV4	-0.09	TEC	TEH	WAR	OR			238	HOT	XPMMR610	Bobbin Exam
		0.49	0	P4	TWD 8	AV2	0.22	TEC	TEH	WAR	OR			238	HOT	XPMMR610	Bobbin Exam
47	87	0.78	0	P4	TWD 13	AV4	-0.18	TEC	TEH	WAR	OR			342	HOT	XPMMR610	Bobbin Exam
48	78	3.10	0	P4	TWD 31	AV4	0.29	TEC	TEH	WAR				240	HOT	XPMMR610	Bobbin Exam
48	82	0.51	0	P4	TWD 9	AV1	0.11	TEC	TEH	WAR				240	HOT	XPMMR610	Bobbin Exam
49	37	0.38	0	P4	TWD 7	AV1	0.15	TEC	TEH	WAR				274	HOT	XPMMR610	Bobbin Exam
49	74	0.64	0	P4	TWD 11	AV4	-0.08	TEC	TEH	WAR				250	HOT	XPMMR610	Bobbin Exam
49	84	0.48	0	P4	TWD 8	AV1	-0.16	TEC	TEH	WAR	OR			238	HOT	XPMMR610	Bobbin Exam

Total Tubes : 83
 Total Records: 121