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MONTHLY OPERATING REPORT FOR JANUARY 1978.

PLANT NAME: BROWNS FERRY - UNIT 1
BROWNS FERRY - UNIT 2
BROWNS FERRY - UNIT 3

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TENNESSEE VALLEY AUTHORITY
Browns Ferry Nuclear Plant
P. O. Box 2000
Decatur, Alabama 35602

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Nuclear Regulatory Commission
Office of Management Information
and Program Control
Washington, D. C. 20555

Gentlemen:

Enclosed is the January 1978 Monthly Operating Report for Browns Ferry Nuclear Plant Units 1, 2, and 3.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. G. Dewease
Plant Superintendent

Enclosure
cc: Director, Region II
Nuclear Regulatory Commission
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TENNESSEE VALLEY AUTHORITY

DIVISION OF POWER PRODUCTION

BROWNS FERRY NUCLEAR PLANT

MONTHLY OPERATING REPORT

JANUARY 1, 1978 - JANUARY 31, 1978

DOCKET NUMBERS 50-259, 50-260, and 50-296

LICENSE NUMBERS DPR-33, DPR-52, and DPR-68

Submitted by J. Lemaire
Plant Superintendent

TABLE OF CONTENTS

Operations Summary 1

Operational Data 2

Maintenance. 2

Significant Operational Events 3

Reportable Occurrences 11

Average Daily Unit Power Level 12

Operating Data Reports 15

Unit Shutdowns and Power Reductions. 18

Plant Maintenance Summary. 21

Instrument Maintenance Summary 26

Operations Summary

The following summary describes the significant operational activities during the reporting period. In support of this summary, a chronologically ordered log of significant events is included in this report and begins on page 3.

There were 5 Reportable Occurences reported to the NRC during the month of January. They are listed on page 11.

Unit 1

Significant operational events for unit 1 are tabulated by date and time beginning on page 3.

Fuel loading on the unit was completed on January 2. On January 15 the 60 hour soak commenced to destroy the shoe cover lost in the reactor vessel. The turbine generator was synchronized to the grid on January 19.

On January 18 the unit scrammed.

A summary of maintenance and outage work is shown on pages 21 through 25.

Unit 2

Significant operational events for unit 2 are tabulated by date and time beginning on page 5.

The unit did not scram during the month of January.

A summary of maintenance work is shown on pages 21 through 25.

Operations Summary (Continued)

Unit 3

Significant operational events for unit 3 are tabulated by date and time beginning on page 7.

There was one scram on the unit in January. On January 27 the reactor was manually scrammed to accomodate scheduled maintenance.

Common Systems

The radwaste system performed as designed without significant problems. Approximately 2.01 E+6 gallons of waste containing 2.97 curies of activity were discharged during the month.

Operational Data

The average daily unit power level for units 1, 2, and 3 is shown on pages 12 through 14.

The operating data reports for all three units are shown on pages 15 through 17.

Unit shutdowns and power reductions for all three units are shown on pages 18 through 20.

Maintenance

Major electrical and mechanical maintenance activities during the month are described on pages 21 through 25 . Instrument maintenance is described on pages 26 through 29 .

Significant Operational Events

Date	Time	Event
		Unit 1
1/1	0000	A total of 602 fuel assemblies placed in the reactor with fuel loading activities in progress.
1/2	1937	A total of 764 fuel assemblies placed in the reactor, fuel loading activities completed.
1/9	0045	Reactor vessel head torqued in place (reactor available).
1/11	0330	Commenced pressurizing the reactor vessel for hydrostatic leak checks (High pressure, low temperature test).
	0350	Reactor vessel pressure at 100 psi and holding for leak checks.
	0445	Reactor vessel pressure at 300 psi and holding for leak checks.
	0650	Reactor vessel pressure at 500 psi and holding for leak checks.
	0917	Reactor vessel pressure at 1000 psi and holding for leak checks.
	1430	Hydrostatic leak checks completed, commenced depressurizing the reactor vessel.
	1740	Reactor vessel pressure at atmospheric pressure.
1/13	1620	Commenced rod withdrawal for heatup.
	1735	Reactor critical No. 97 Sequence "A"
1/14	2106	Reactor vessel pressure at 250 psi and holding for relief valve tests (RTI 26).

Significant Operational Events (continued)

Date	Time	Event
		Unit 1 (cont)
1/15	0142	Relief value tests completed, commenced increasing pressure-temperature for hot hydrostatic tests.
	0415	Reactor vessel at 600 psi and 370° F and holding for leak checks.
	1005	Reactor vessel at 1000 psi and 483° F, holding for leak checks.
	1045	Reactor vessel at 1020 psi and 520° F, holding for leak checks.
	1200	Hydrostatic tests at hot standby conditions completed, commenced decreasing reactor vessel pressure to 1000 psi.
	1300	Reactor thermal power at 3%, commenced 60 hour fuel soak.
1/18	0115	60 hour fuel soak completed.
	0230	Commenced power ascension.
	1225	Reactor scram No. 84 from 15% power.
	1427	Commenced rod withdrawal in rod sequence B.
	1626	Reactor critical No. 98.
1/19	0402	Synchronized generator, commenced power ascension.
	0700	Reactor thermal power at 20% and holding for startup SI's.
1/22	0700	Increased reactor thermal power to 25%.
1/23	0915	Increased reactor thermal power to 37%.
1/24	0700	Adjusting rods for target patterns at 43% thermal power.

Significant Operational Events (continued)

Date	Time	Event
		Unit 1 (cont)
1/25	1500	Commenced power ascension.
1/26	0013	Reduced power from 54% to 40% for turbine bypass valves calibration tests.
	0340	Turbine bypass valves calibration tests completed. Commenced power ascension.
	2300	Commenced PC10MR from 62% thermal power.
1/28	0205	Reduced thermal power from 78% to 70% for turbine C. V. tests and SI's.
	0305	Turbine C. V. tests and SI's completed, commenced PC10MR from 70% thermal power.
1/29	2300	Reactor thermal power at 80%, with a core flow of 100%. Holding for the remainder of the month, (rod pattern limited).
		Unit 2
1/1	0000	Reactor thermal power at 60%, sequence B, and holding for electrical penetration inspection.
	0502	Electrical penetration inspection completed, commenced power ascension.
	1130	Commenced PC10MR from 80% thermal power.
1/2	1500	Reactor thermal power at 92% and steady state.
1/4	0700	Reactor thermal power at 91%.
1/5	0700	Reactor thermal power at 90%.

Significant Operational Events (continued)

Date	Time	Event
		Unit 2 (cont)
1/7	0010	Reduced thermal power from 90% to 70% for turbine C. V. tests, SI's, and removal of "A". Reactor feed pump from service for maintenance.
	0155	Turbine C. V. tests and SI's completed and holding at 70% thermal power for "A" reactor feed pump maintenance.
	0430	"A" reactor feed pump maintenance completed and restored to service.
	0515	Commenced power ascension with PC10MR from 70% thermal power.
1/9	2130	Reactor thermal power at 92% and steady state.
1/10	0700	Reactor thermal power at 91% and steady state.
1/11	0700	Reactor thermal power at 90%.
1/12	0700	Reactor thermal power at 89%.
1/14	1245	Reduced thermal power from 89% to 70% for turbine C. V. tests and SI's.
	1430	Turbine C. V. tests and SI's completed, commenced power ascension.
	1830	Commenced PC10MR from 80% thermal power.
1/15	0700	Reactor thermal power at 89% and steady state.
1/18	0700	Reactor thermal power at 88%.
1/21	0235	Reduced thermal power from 88% to 70% for Turbine C. V. tests and SI's.

Significant Operational Events (continued)

Date	Time	Event
		Unit 2 (cont)
1/21	0410	Turbine C. V. tests and SI's completed, commenced reducing thermal power from 70% to 40% for control rod swap from "B" to "A" rod sequence...
	0500	Reactor thermal power at 40%, commenced control rod swap.
	0925	Control rod swap completed, commenced power ascension in sequence "A".
1/22	0700	Commenced PC10MR from 67% thermal power.
1/26	0120	Reactor thermal power at 93% and steady state.
1/29	0015	Reduced thermal power from 92% to 70% for turbine C. V. tests and SI's.
	0100	Turbine C. V. tests and SI's completed, commenced power ascension.
	0700	Reactor thermal power at 92% and steady state.
1/31	2400	Reactor thermal power at 91% and steady state.
		Unit 3
1/1	0000	Reactor thermal power at 72%, sequence A, with power ascension in progress.
	0700	Commenced PC10MR from 80% thermal power.
1/2	2010	Reactor thermal power at 96% and steady state.
1/3	0030	Reduced thermal power from 96% to 95% due to EHC high vibration.

Significant Operational Events (continued)

Date	Time	Event
		Unit 3 (cont)
1/7	0108	Reduced thermal power from 95% to 70% for turbine C. V. tests and SI's.
	0240	Turbine C. V. tests and SI's completed, commenced power ascension.
	0700	Commenced PC10MR from 92% thermal power.
	2300	Reactor thermal power at 95% and steady state.
1/15	0054	"B" recirculation pump motor-generator set brush replacement completed, reduced thermal power from 77% to 50% to restore "B" recirculation pump to service.
	0135	"B" recirculation pump in service, commenced power ascension.
	1230	Commenced PC10MR from 90% thermal power.
1/16	0700	Reactor thermal power at 95% and steady state.
	2240	Reduced thermal power from 95% to 88% for the removal of E condensate demineralizer from service due to resin trap problems. Four other demineralizers flow limiting (High DP).
1/17	0515	Condensate demineralizer problems resolved, commenced power ascension.
	0700	Reactor thermal power at 93% and holding due to EHC high vibration.
1/18	2040	Reduced thermal power from 93% to 83% for the removal of "B" string high pressure heaters from service due to leaks.
	2355	"B" string high pressure heaters in service, commenced power ascension.

Significant Operational Events (continued)

Date	Time	Event
		Unit 3 (cont)
1/19	0050	Commenced PC10MR from 88% thermal power.
	0700	Reactor thermal power at 93% and steady state.
1/21	0110	Reduced thermal power from 93% to 70% for turbine C. V. tests and SI's.
	0350	Turbine C. V. tests and SI's completed, commenced power ascension.
	0452	Commenced PC10MR from 88% thermal power.
	1500	Reactor thermal power at 93% and steady state.
1/25	1500	Reduced thermal power from 93% to 90% due to EHC high vibration.
1/27	2105	Commenced reducing thermal power to remove unit from service for scheduled maintenance.
	2332	Reactor scram No. 49(1), manual, to accommodate outage maintenance work.
1/29	0610	Outage work completed.
	0615	Commenced rod withdrawal for startup.
	0742	Reactor Critical No. 58 (Sequence "B").
	1305	Rolled T/G.
	1339	Synchronized generator, commenced power ascension.
1/30	0730	Commenced PC10MR from 60% thermal power.
	2330	Reduced thermal power from 76% to 65% for control rod pattern adjustment.

Significant Operational Events (continued)

Date	Time	Event
		Unit 3 (cont)
1/31	0210	Control rod pattern established, commenced power ascension from 65% thermal power.
1/31	2400	Reactor thermal power at .75% with power ascension in progress.

(1) Manual scram.

Reportable Occurrences

BFRO	Occurrence Date	Description
		Unit 1
259/7727	12-28-77	During S.I. testing, an interlock switch malfunctioned which would allow the refueling bridge to travel over the rector while in the startup mode.
259/781	12-26-77	During refueling a smoke alarm which would not clear was received for auxiliary instrument room 1.
259/782	1/11/78	During normal operation of units 2 and 3 with unit 1 shutdown, continuous monitoring of the stock gases temporarily was lost.
259/783	1/13/78	During plant shutdown, while performing surveillance instruction (SI4.2.B-21) core spray pump discharge pressure switch PS-75-44 exceeded the technical specification setpoint.
		Unit 2
260/7716	12-18-77	During power operation following a hot restart, the HPCI flow controller was observed to be in the manual control mode and at a reduced flow setting when the reactor conditions required the HPCI to be operable with the flow controller in the Automatic mode and set to maintain an injection flow rate of 5000 GPM as required by technical specifications.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-259
UNIT Browns Ferry I
DATE 2-6-78
COMPLETED BY Don Green
TELEPHONE 205/729-6846

MONTH January 1978

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	-9	17	-11
2	-7	18	-14
3	-8	19	190
4	-8	20	158
5	-8	21	202
6	-8	22	204
7	-9	23	351
8	-9	24	411
9	-10	25	536
10	-10	26	549
11	-11	27	688
12	-8	28	731
13	-10	29	838
14	-12	30	850
15	-11	31	824
16	-12		

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

(9/77)

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-260
UNIT Browns Ferry II
DATE 2-6-78
COMPLETED BY Don Green
TELEPHONE 205/729-6846

MONTH January 1978

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	792	17	934
2	960	18	930
3	973	19	909
4	955	20	946
5	957	21	518
6	950	22	659
7	703	23	785
8	869	24	782
9	967	25	942
10	950	26	1012
11	973	27	979
12	945	28	978
13	943	29	973
14	930	30	982
15	946	31	965
16	937		

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

(9/77)

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-296
UNIT Browns Ferry III
DATE 2-6-78
COMPLETED BY Don Green
TELEPHONE 205/729/6846

MONTH January 1978

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	859	17	1020
2	980	18	966
3	1023	19	974
4	1014	20	932
5	1014	21	960
6	1015	22	967
7	975	23	1040
8	1002	24	894
9	1029	25	961
10	985	26	971
11	1013	27	883
12	991	28	12
13	989	29	184
14	939	30	699
15	914	31	728
16	993		

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

(9/77)

OPERATING DATA REPORT

DOCKET NO. 50-259
DATE 2-4-78
COMPLETED BY Don Green
TELEPHONE 205/729-6846

OPERATING STATUS

1. Unit Name: Browns Ferry I
2. Reporting Period: January, 1978
3. Licensed Thermal Power (MWt): 3293
4. Nameplate Rating (Gross MWe): 1152
5. Design Electrical Rating (Net MWe): 1065
6. Maximum Dependable Capacity (Gross MWe): 1098
7. Maximum Dependable Capacity (Net MWe): 1065

Notes

8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:

9. Power Level To Which Restricted, If Any (Net MWe): N/A
10. Reasons For Restrictions, If Any:

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	744	30,722
12. Number Of Hours Reactor Was Critical	445.56	445.56	13,425.44
13. Reactor Reserve Shutdown Hours	0	0	4046.8
14. Hours Generator On-Line	307.97	307.97	12,954.1
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	506,179	506,179	32,879,408
17. Gross Electrical Energy Generated (MWH)	162,230	162,230	10,980,250
18. Net Electrical Energy Generated (MWH)	152,617	152,617	10,640,964
19. Unit Service Factor	41.4	41.4	42.2
20. Unit Availability Factor	41.4	41.4	42.2
21. Unit Capacity Factor (Using MDC Net)	19.3	19.3	32.5
22. Unit Capacity Factor (Using DER Net)	19.3	19.3	32.5
23. Unit Forced Outage Rate	4.8	4.8	49.7

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):

25. If Shut Down At End Of Report Period, Estimated Date of Startup:
26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY		
INITIAL ELECTRICITY		
COMMERCIAL OPERATION		

OPERATING DATA REPORT

DOCKET NO. 50-260
DATE 2-6-78
COMPLETED BY Don Green
TELEPHONE 205/729/6846

OPERATING STATUS

1. Unit Name: Browns Ferry II
2. Reporting Period: January
3. Licensed Thermal Power (MWt): 3293
4. Nameplate Rating (Gross MWe): 1152
5. Design Electrical Rating (Net MWe): 1065
6. Maximum Dependable Capacity (Gross MWe): 1098
7. Maximum Dependable Capacity (Net MWe): 1065

Notes

8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:

9. Power Level To Which Restricted, If Any (Net MWe): N/A
10. Reasons For Restrictions, If Any:

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	744	25,633
12. Number Of Hours Reactor Was Critical	744	744	11,312.23
13. Reactor Reserve Shutdown Hours	0	0	11,199.77
14. Hours Generator On-Line	744	744	10,777.36
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,112,504	2,112,504	28,285,641
17. Gross Electrical Energy Generated (MWH)	691,800	691,800	9,288,750
18. Net Electrical Energy Generated (MWH)	673,067	673,067	9,015,871
19. Unit Service Factor	100	100	42.0
20. Unit Availability Factor	100	100	42.0
21. Unit Capacity Factor (Using MDC Net)	84.9	84.9	33.0
22. Unit Capacity Factor (Using DER Net)	84.9	84.9	33.0
23. Unit Forced Outage Rate	0	0	55.2

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
Refueling Outage March, 1978

25. If Shut Down At End Of Report Period, Estimated Date of Startup:
26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY		
INITIAL ELECTRICITY		
COMMERCIAL OPERATION		

(9/77)

OPERATING DATA REPORT

DOCKET NO. 50-296
DATE 2-6-78
COMPLETED BY Don Green
TELEPHONE 205/729-6846

OPERATING STATUS

1. Unit Name: Browns Ferry III
2. Reporting Period: January, 1978
3. Licensed Thermal Power (MWt): 3293
4. Nameplate Rating (Gross MWe): 1152
5. Design Electrical Rating (Net MWe): 1065
6. Maximum Dependable Capacity (Gross MWe): 1098
7. Maximum Dependable Capacity (Net MWe): 1065
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:

Notes

9. Power Level To Which Restricted, If Any (Net MWe): N/A
10. Reasons For Restrictions, If Any:

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	744	8088
12. Number Of Hours Reactor Was Critical	711.83	711.83	7407.50
13. Reactor Reserve Shutdown Hours	1.45	1.45	589.86
14. Hours Generator On-Line	705.88	705.88	7205.19
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,046,960	2,046,960	20,688,654
17. Gross Electrical Energy Generated (MWH)	687,910	687,910	6,721,780
18. Net Electrical Energy Generated (MWH)	669,715	669,715	6,520,621
19. Unit Service Factor	94.9	94.9	89.1
20. Unit Availability Factor	94.9	94.9	89.1
21. Unit Capacity Factor (Using MDC Net)	84.5	84.5	75.7
22. Unit Capacity Factor (Using DER Net)	84.5	84.5	75.7
23. Unit Forced Outage Rate	0	0	9.0

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):

25. If Shut Down At End Of Report Period, Estimated Date of Startup:
26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY		
INITIAL ELECTRICITY		
COMMERCIAL OPERATION		

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-259
UNIT NAME Browns Ferry I
DATE 2-6-78
COMPLETED BY Don Green
TELEPHONE 205-729-6846

REPORT MONTH January

No.	Date	Type[1]	Duration (Hours)	Reason[2]	Method of Shutting Down Reactor[3]	Licensee Event Report #	System Code[4]	Component Code[5]	Cause & Corrective Action to Prevent Recurrence
27	780101	S	192.75	C	2				
28	780109	S	227.67	B					
29	780118	F	15.61	A	3				APRM MALFUNCTION

1
F: Forced
S: Scheduled

2
Reason:
A-Equipment Failure (Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & License Examination
F-Administrative
G-Operational Error (Explain)
H-Other (Explain)

3
Method:
1-Manual
2-Manual Scram.
3-Automatic Scram.
4-Other (Explain)

4
Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5
Exhibit I - Same Source

(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-260
UNIT NAME Browns Ferry II
DATE 2-6-78
COMPLETED BY Don Green
TELEPHONE 205/729-6846

REPORT MONTH January

No.	Date	Type[1]	Duration (Hours)	Reason[2]	Method of Shutting Down Reactor[3]	Licensee Event Report #	System Code[4]	Component Code[5]	Cause & Corrective Action to Prevent Recurrence

1
F: Forced
S: Scheduled

2
Reason:
A-Equipment Failure (Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & License Examination
F-Administrative
G-Operational Error (Explain)
H-Other (Explain)

3
Method:
1-Manual
2-Manual Scram.
3-Automatic Scram.
4-Other (Explain)

4
Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5
Exhibit I - Same Source

(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-296
UNIT NAME Browns Ferry III
DATE 2-6-78
COMPLETED BY Don Green
TELEPHONE 205/729-6846

REPORT MONTH January

No.	Date	Type[1]	Duration (Hours)	Reason[2]	Method of Shutting Down Reactor[3]	Licensee Event Report #	System Code[4]	Component Code[5]	Cause & Corrective Action to Prevent Recurrence
47	780127	S	38.12	B	2				

1
F: Forced
S: Scheduled

2
Reason:
A-Equipment Failure (Explain)
B-Maintenance of Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & License Examination
F-Administrative
G-Operational Error (Explain)
H-Other (Explain)

3
Method:
1-Manual
2-Manual Scram.
3-Automatic Scram.
4-Other (Explain)

4
Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5
Exhibit I - Same Source

(9/77)

CSSC EQUIPMENT

BROWNS FERRY NUCLEAR PLANT UNIT 2

MECHANICAL MAINTENANCE SUMMARY

For the Month of January 19 78

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
31	HPCI	Valve 73-5	Repacked	None	Packing Blown	Steam blowing	Repacked valve

CSSC EQUIPMENT

BROWNS FERRY NUCLEAR PLANT UNIT 3

MECHANICAL MAINTENANCE SUMMARY

For the Month of January 1978.

ATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
5 AT	CRD	Accumulator 58-43	Unstuck Accumulator	None	Stuck Accumulator	Blowing pressure gage	Tightened nut on o-ring
8	Main Steam	Valve 1-176A	Repacked valve	None	Packing Leak	Leak at packing	Installed new packing

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of January 1978

	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
/7	Core Spray	FCV 75-57	Adjust limit switch in closed position	None	Limit switch out of adjustment in closed position	Limit switch not making up in closed position	Adjusted limit switch in closed position on FCV 75-57. TR 79075
/8	Reactor Feedwater	Feedwater Inverter	Inverter isn't producing 120V A.C.	None	Voltage control card bad.	Inverter isn't producing 120V A.C.	Replaced voltage control card. TR 68096
/9	Fire Protection	Smoke Detector XS-39-15D	Replace smoke detector XS-39-15D	None	Increased detector sensitivity due to natural aging	Detector alarming with no cause	Replaced detector with new model #FT-200. TR 68778
/11	250V DC main batteries	Cell #10 main batteries	Cell housing cracked	None	Cell misalignment caused cell housing to crack when retaining braces were tightened	Cell #10 was replaced with a new cell	Installed new cell in main battery bank on U-1. TR 88302
1/14	Main steam	MSIV 'A' outboard	limit switch out of adjustment	None	Limit switch on MSIV 'A' outboard out of adjustment	Limit switch caused 5AK3A relay to drop out	Adjust limit switch on MSIV 'A' outboard. TR 97373
1/19	Diesel Generator	D/G Exhaust Fan 'A' & 'B'	Replace flow switches on exhaust fans	None	Flow switches bad on 'A' & 'B' D/G Exhaust fan motor controls	Exhaust Fan 'A' failed to start	Replace flow switches on both 'A' & 'B' Exhaust fans. TR 97603
1/23	Control Rod Drive	HS-85-48	Return spring on hand switch broken	None	Return spring broken.	Hand switch would not return automatically	Replace return spring on HS-85-48. TR 97110

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of January 1978

	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
/16	HPCI	HPCI hotwell pump	Motor burned up on pump	None	Motor burned up on hotwell pump	Breaker trips after each reset	Replaced pump motor TR 97668
/28	HPCI	LCV 73-8	Solenoid coil burned up	None	Coil burned up	Level ann. in turbine exh. drain pot.	Replaced solenoid coi TR 85522

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of January 1978

	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
/28	RHR	HCV 74-49	Tighten set screws on limit switch	None	Set screws loose on limit switch	Limit switch isn't giving an open indication.	Tightened set screw and adjusted limit switch. TR 79577
/28	Main steam	MSIV 1-26	Close limit switch sticking	None	Limit switch bad & limit switch out of adjustment	Green light stays on after red light comes on.	Replaced limit switch switch and adjusted limit arm. TR's 67268-69696
1/29	Primary Containment	FCV 64-28D & E	Red light failed to come on	None	Bad limit switch	Red light wouldn't come on.	Replaced limit switch TR 79589-67003-[illegible]00-97758

BROWNS FERRY NUCLEAR PLANT UNIT 1

INSTRUMENT MAINTENANCE SUMMARY

FOR THE MONTH OF January, 1978

CSSC Equipment

ate	System	Component	Nature of Maintenance	Effect on Safe Operation of the reactor	Cause of Malfunction	Results of Malfunction	Action Taken to preclude recurrence
-17	Containment Dilution	H_2R-76-37	Maintenance	None	Bad microcircuit in Hydrogen Monitor	False Hydrogen Indication	Replaced Component
-17	Neutron Monitoring	IRM-D	Maintenance	None	Loose Connector	Erratic Signal	Tightened Connector
-23	Feedwater	FI-46-4	Maintenance	None	Faulty Component in Proportional Amp.	No Indication	Replaced Component
-24	RMCS	Rod Select	Maintenance	None	Cold Solder Joint	Could not select rods	Resoldered Connector
-27	Neutron Monitoring	LPRM 16-25	Maintenance	None	Dirty Connector	Erratic signal	Cleaned Connector

BROWNS FERRY NUCLEAR PLANT UNIT 2

INSTRUMENT MAINTENANCE SUMMARY

FOR THE MONTH OF January, 1978

CSSC Equipment

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of the reactor	Cause of Malfunction	Results of Malfunction	Action Taken to preclude recurrence
1-9	Rad. Monitor	RI-90-40	Calibration	None	Setpoint Drift	Downscale Alarm would not clear	Setpoint Reset
1-9	SLC	TA-63-3	Maintenance	None	Loose Connection	Alarm would not clear	Tightened Connector
1-9	HPCI	LA-73-8	Maintenance	None	Crud Buildup Around Plunger	Alarm would not clear	Cleaned Plunger
1-28	CAM	RR-90-256	Maintenance	None	Moisture in CAM	Downscale Alarm	Dried out Component

BROWNS FERRY NUCLEAR PLANT UNIT 3

INSTRUMENT MAINTENANCE SUMMARY

FOR THE MONTH OF January, 1978

CSSC Equipment

ate	System	Component	Nature of Maintenance	Effect on Safe Operation of the reactor	Cause of Malfunction	Results of Malfunction	Action Taken to preclude recurrence
-3	CRD	PdI-85-17	Calibration	None	Instrument Drift	False Indication	None
-6	Containment Dilution	O_2R-76-41	Maintenance	None	Low Amplifier Gain	Slow Response	Replaced Component
-9	Primary Containment	PdI-64-137 & 138	Calibration	None	Instrument Drift	Readings Disagree	None
-9	Primary Containment	PR-64-50	Maintenance	None	Bad Amplifier Board	Low Pressure Ind.	Replaced Component
-11	Core Spray	PdA-75-28	Calibration	None	Instrument Drift	False Alarm	Replaced Switch
-12	CRD	PdA-85-10	Calibration	None	Instrument Drift	False Alarm	None
-18	RCIC	TS-71-41A	Maintenance	None	Bad Relay	Could not test	Replaced Component
-28	CRD	PCV-85-66,67	Calibration	None	Valve Stroke Adjustment	Improper Control	Reestablished Stroke
-28	Feedwater	LI-3-206	Calibration	None	Instrument Drift	Level Indication	None
-28	Containment Inerting	O_2M-76-42 O_2M-76-43	Replacement	None	Faulty Sensors	Incorrect Oxygen Indication	Considering New Monitoring System

BROWNS FERRY NUCLEAR PLANT UNIT 3

INSTRUMENT MAINTENANCE SUMMARY

FOR THE MONTH OF January, 1978

CSSC Equipment

te	System	Component	Nature of Maintenance	Effect on Safe Operation of the reactor	Cause of Malfunction	Results of Malfunction	Action Taken to preclude recurrence
28	RPIS	Probe 26-51	Replacement	None	Faulty "8" switch in units column	No position Indication for "08, "18", 28, 38, 48	None
28	RPIS	Probe 22-55	Replacement	None	Reed Switch Misaligned	No position 48 Indication	None
28	RPIS	Probe 42-39	Replacement	None	Misalignment of "00" Reed switches	No. "00" Indication	None
28	RPIS	Probe 18-55	Replacement	None	Bad Reed switches	No. 46 & 48 Indication	None
28	RMC	Rod-06-23	Maintenance	None	Dirty Contacts on rod select relays	Unable to select rod 06-23	Cleaned contacts
28	RPIS	Probes 30-35, 06-31, 10-51, 14-15, 18-39, 22-39, 26-15, 34-23, 34-51	Replacement	None	Misalignment of "full-in" Switches	No "full-in" indication	None