

TENNESSEE VALLEY AUTHORITY  
DIVISION OF POWER PRODUCTION  
BROWNS FERRY NUCLEAR PLANT

MONTHLY OPERATING REPORT  
June 1, 1980 - June 30, 1980

DOCKET NUMBERS 50-259, 50-260, AND 50-296  
LICENSE NUMBERS DPR-33, DPR-52, AND DPR-68

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Plant Superintendent

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TABLE OF CONTENTS

Operations Summary . . . . .	1
Refueling Information . . . . .	4
Significant Operational Events . . . . .	6
Average Daily Unit Power Level . . . . .	13
Operating Data Reports . . . . .	16
Unit Shutdowns and Power Reductions. . . . .	19
Plant Maintenance . . . . .	22
Outage Summary . . . . .	29

Operations Summary

June 1980

The following summary describes the significant operational activities during the reporting period. In support of this summary, a chronological log of significant events is included in this report.

There were fifteen reportable occurrences reported to the NRC during the month of June.

Unit 1

There were five scrams on the unit during the month. On June 17, when moisture separator high water level, due to level control failure, caused a turbine trip. The reactor was manually scrammed later in the day to investigate oil level alarms on the "B" recirculation pump motor. The reactor was manually scrammed on June 23, to investigate level alarms on the EHC tank, leaks on the No. 2 control valve and PS 47-144. On June 24, the reactor shutdown twice because the control valve fast closure switch had been wired into the RPS incorrectly causing rod insertion during SI 4.1.A-12.

Unit 2

There were three scrams on the unit during the month. On June 19, the reactor was manually scrammed for maintenance to decrease steam tunnel temperature. The reactor scrammed on June 24, due to a turbine trip on loss of condenser vacuum, caused by maintenance on LCV 6-84A, moisture separator pump level control valve on C2 heater. Again on June 28, the reactor scrammed due to a loss of condenser vacuum caused by a diaphragm failure on (2FCV-66-11) the suction valve to the 2A SJAE.

Operations Summary (Continued)

June 1980

Unit 3

There were two scrams on the unit during the month. On June 7, the reactor scrambled due to a generator load rejection from the ground detection relay. On June 28, the reactor was manually scrambled in order that repairs to a leak in the feedwater line could be initiated. During this scram approximately one-third of the rods did not go to the full insert position, additional operator action was required and all rods were fully inserted after approximately 14 minutes. This problem is currently under investigation.

Operations Summary (Continued)

June 1980

Fatigue Usage Evaluation

The cumulative usage factors for the reactor vessel are as follows:

<u>Location</u>	<u>Usage Factor</u>		
	<u>Unit 1</u>	<u>Unit .2</u>	<u>Unit 3</u>
Shell at water line	0.00475	0.00355	0.00301
Feedwater nozzle	0.22762	0.15182	0.11232
Closure studs	0.19298	0.12304	0.08893

Note: This accumulated monthly information satisfies technical specification section 6.6.A.17.b(3) reporting requirements.

Common System

Approximately 2.94E+05 gallons of waste liquid were discharged containing approximately 2.14E-01 curies of activity.

Refueling Information

June 1980

Unit 1

Unit 1 is scheduled for its fourth refueling beginning on or about April 15, 1981, with a scheduled restart date of July 25, 1981. This refueling will involve loading additional 8 x 8 R (retrofit) fuel assemblies into the core, the final fix on the sparger modification, power supply on LPCI modification, and torus modifications if all approvals are received.

There are 764 fuel assemblies in the reactor vessel. The spent fuel storage pool presently contains 550 spent 7 x 7 fuel assemblies, five 8 x 8 fuel assemblies, one 8 x 8 R fuel assemblies, and 20 new P 8 x 8 R assemblies. Because of modification work to increase spent fuel pool capacity to 3471 assemblies, present capacity is limited to 1152 assemblies.

Unit 2

Unit 2 is scheduled for its third refueling beginning on or about September 1, 1980, with a scheduled restart date of October 11, 1980. Resumption of operation on that date will require a change in technical specifications pertaining to the core thermal limits. Licensing information in support of these changes will be submitted to the NRC before the outage. This refueling involves replacing some more 7 x 7 fuel assemblies with 8 x 8 R (retrofit) assemblies, and power supply on LPCI modification.

There are 764 fuel assemblies in the reactor vessel. At the end of the month, there were 132 discharged cycle 1 fuel assemblies, 268 discharged cycle 2 fuel assemblies, and 64 new 8 x 8 R assemblies in the spent fuel storage pool. The present storage capacity of the spent fuel pool is 1080 assemblies. With present capacity, the 1979 refueling would be the last

Refueling Information (Continued)

June 1980

Unit 2 (Continued)

refueling that could be discharged to the spent fuel pool without exceeding that capacity and maintaining full core discharge capability in the pool.

Unit 3

Unit 3 is scheduled for its third refueling beginning on or about October 17, 1980, with a scheduled restart date of November 25, 1980. This EOC-3 refueling, involves loading additional 8 x 8 R (retrofit) assemblies into the core, and power supply on LPCI modification.

There are 764 fuel assemblies presently in the reactor vessel. There are 144 discharged cycle 2 fuel assemblies and 208 discharged cycle 1 fuel assemblies in the spent fuel storage pool. The present storage capacity of the spent fuel pool is 1528 assemblies. With present capacity, the 1980 refueling would be the last refueling that could be discharged to the spent fuel pool without exceeding that capacity and maintaining full core discharge capability in the pool.



Significant Operational Events

## Unit 1

Date	Time	Event
6/01/80	0001	Reactor thermal power at 97%, EHC vibration limited, Sequence "B"
	0100	Commenced reducing thermal power for removal of "B" recirculation pump MG set from service for brush replacement
	0515	Reactor thermal power at 50%, holding for removal of "B" recirculation pump from service
	2135	"B" recirculation pump MG set brush replacement completed and pump placed in service, commenced power ascension
6/02/80	0430	Commenced PCIOMR from 73% thermal power
	1432	Reactor thermal power at 82%, holding due to HPCI being inoperable
6/05/80	0200	HPCI declared operable, commenced power ascension
	0300	Commenced PCIOMR from 88% thermal power
	1700	Reactor thermal power at >99% steady state
6/07/80	0300	Reduced thermal power from 99% to 70% for turbine C. V. test and SI's
	0605	Turbine C. V. tests and SI's completed, commenced power ascension.
	0730	Commenced PCIOMR from 90% thermal power
	1500	Reactor thermal power at >99%, steady state
6/13/80	1350	Reduced thermal power from >99% to 95% due to high river differential temperature
6/14/80	0207	Reduced thermal power from 95% to 85% for turbine C.V. tests and SI's
	0340	Turbine C. V. tests and SI's completed, commenced power ascension
	0700	Reactor thermal power at 96%, holding due to high river differential temperature
6/15/80	1915	Commenced PCIOMR from 96% thermal power
	2215	Reactor thermal power at >99%, steady state
6/17/80	0654	Reactor Scram No. 127 from >99% thermal power on moisture separator B-2 level high and turbine trip
	1000	Commenced rod withdrawal
	1417	Reactor critical No. 147 sequence "A"
	1652	Reactor Scram No. 128, from 5% thermal power manual due to receipt of "B" recirculation pump low oil level alarm

Significant Operational Events

## Unit 1

Date	Time	Event
6/18/80	2025	Commenced rod withdrawal (to stay subcritical).
	2346	Resume rod withdrawal
	2355	Reactor critical No. 148
6/19/80	0535	Rolled T/G
	0540	Synchronized generator, commenced power ascension
	2030	Commenced PCIOMR from 70% thermal power
6/20/80	1930	Reactor thermal power at 99%, maximum flow
	2005	Reduced thermal power from 99% to 92 % for removal of "B" string high pressure heaters from service due to leaks
6/21/80	0127	Reduced thermal power from 92% to 89% for CRD exercise
	0220	"B" string high pressure heater maintenance completed, heaters placed in service
	0250	CRD exercise completed, commenced power ascension
	0355	Commenced reducing thermal power from 92% to 70% for control rod adjustment
	0700	Control rod adjustment completed, commenced PCIOMR from 70% thermal power
6/22/80	1730	Reactor thermal power at >99%, MWT limited
6/23/80	1843	Commenced reducing thermal power for shutdown due to High EHC leaks (No. 2 Control Valve)
	1853	Reactor Scram No. 129 manual from 35% thermal power to accommodate maintenance to EHC leaks
	2155	Maintenance to EHC completed, commenced rod withdrawal
6/24/80	0051	Reactor critical No. 149
	0240	Rolled T/G
	0258	Synchronized generator commenced power ascension
	0454	Reactor Scram No. 130 from 30% thermal power while performing SI. 4.1.A.12 (C. V. closure)
	0858	Commenced rod withdrawal
	1116	Reactor critical No. 150
	1405	Reactor made sub-critical due to No. 3 Servo valve malfunction
	1610	Reactor critical No. 151
	1628	Reactor Scram No. 131, manual from 10% thermal power while performing SI 4.1.A.12 (C. V. closure)
	2123	Commenced rod withdrawal
2348	Reactor critical No. 152	

Significant Operational Events

## Unit 1

Date	Time	Event
6/25/80	0200	Rolled T/G
	0227	Synchronized generator, commenced power ascension
	0830	Commenced PCIOMR from 55% thermal power
6/26/80	0700	Reactor thermal power at 76%, holding due to "A" reactor feed pump maintenance (turning gear mechanism)
6/27/80	0333	Commenced power ascension from 76% thermal power
	2015	"A" reactor feed pump maintenance completed and pump placed in service, commenced power ascension
6/28/80	0130	Commenced PCIOMR from 86% thermal power
	1530	Reactor thermal power at 99%, maximum flow
	1640	Reduced thermal power from 99% to 76%, due to high main steam tunnel temperature
	1808	Commenced power ascension
	1900	Commenced PCIOMR from 93% thermal power
	2300	Reactor thermal power at 99%, maximum flow
6/30/80	2400	Reactor thermal power at 99%, maximum flow

Significant Operational Events

## Unit 2

<u>Date</u>	<u>Time</u>	<u>Event</u>
6/01/80	0001	Reactor thermal power at 98%, maximum flow sequence "A"
6/02/80	0700	Reactor thermal power at 97%, maximum flow
6/03/80	0700	Reactor thermal power at 96%, maximum flow
6/07/80	0523	Reduced thermal power from 96% to 52% due to "A" recirculation pump trip
	1518	"A" recirculation pump tagged out for maintenance
	2130	"A" recirculation pump maintenance completed and pump placed in service, commenced power ascension
	2250	Commenced PCIOMR from 90% thermal power
6/09/80	0700	Reactor thermal power at 97%, maximum flow
6/10/80	1500	Reactor thermal power at 95%, maximum flow
6/13/80	2200	Reduced thermal power from 95% to 50% for control rod sequence exchange from "A" to "B"
6/14/80	0155	Control rod sequence exchange completed, commenced power ascension (sequence "B")
	1510	Commenced PCIOMR from 66% thermal power
6/16/80	0130	Reactor thermal power at 98%, maximum flow
6/19/80	2132	Commenced reducing thermal power for shutdown
	2231	Reactor Scram No. 101 manual from 35% thermal power for scheduled outage
6/22/80	1600	Commenced rod withdrawal
	1835	Reactor critical No. 112, sequence "B"
6/23/80	1255	Rolled T/G
	1343	Synchronized generator, commenced power ascension
6/24/80	0149	Reactor Scram No. 102 from 65% thermal power due to condenser low vacuum during maintenance on (6-84A) condenser drain valve.
	0651	Commenced rod withdrawal
	0940	Reactor critical No. 113, sequence "B"
	1225	Rolled T/G
	1246	Synchronized generator, commenced power ascension

Significant Operational Events

## Unit 2

<u>Date</u>	<u>Time.</u>	<u>Event</u>
6/25/80	0001	Commenced PCIOMR from 67% thermal power
6/27/80	0700 0713	Reactor thermal power at 95%, maximum flow Reduced thermal power from 95% to 92% due to one-half scram when "A" RPS MG set isolated
6/28/80	0849 1155 1420 1855 1915	Reactor Scram No. 103 on condenser low vacuum, diaphragm failure on Z FCV-66-11 Commenced rod withdrawal Reactor critical No. 114 Rolled T/G Synchronized generator, commenced power ascension
6/29/80	0730	Commenced PCIOMR from 65% thermal power
6/30/80	2030 2400	Reactor thermal power at 97%, maximum flow Reactor thermal power at 97%, maximum flow

Significant Operational Events

## Unit 3

<u>Date</u>	<u>Time</u>	<u>Event</u>
6/01/80	0001	Reactor thermal power at 84%, power ascension in progress, sequence "B"
	0150	Commenced PCIOMR from 90% thermal power
	1430	Reactor thermal power at 99%, rod limited
6/06/80	2130	Reduced thermal power from 99% to 50% due to "B" recirculation pump run back
	2145	Commenced power ascension from 50% thermal power
6/07/80	1436	Reactor Scram No. 84 from 99% thermal power when the ground protection relay tripped relay 186C which tripped the turbine scrambling the reactor
	2214	Commenced rod withdrawal
6/08/80	0115	Reactor critical No. 94
	0320	Rolled T/G
	0341	Synchronized generator commenced power ascension
	1330	Commenced PCIOMR from 70% thermal power
6/10/80	1500	Reactor thermal power at 98%, maximum flow
6/13/80	1405	Reduced thermal power from 98% to 80% due to high river differential temperature
	1640	Commenced power ascension
	2030	Commenced PCIOMR from 88% thermal power
6/14/80	2300	Reduced thermal power from 97% to 60% for turbine C. V. tests, SI's and control rod pattern adjustment
6/15/80	0046	Turbine C. V. tests and SI's completed, holding for control rod pattern adjustment
	0130	Control rod pattern adjustment completed, commenced PCIOMR from 60% thermal power
6/16/80	1630	Reactor thermal power at 99% maximum flow
6/20/80	2148	Reduced thermal power from 99% to 90% for turbine C. V. tests and SI's
	2215	Turbine C. V. tests and SI's completed, commenced power ascension
	2225	Commenced PCIOMR from 95% thermal power
6/21/80	0700	Reactor thermal power at 98%, maximum flow
6/26/80	2300	Reactor thermal power at 97%, maximum flow

Significant Operational Events

## Unit 3

<u>Date</u>	<u>Time</u>	<u>Event</u>
6/27/80	2212	Commenced reducing thermal power from 97% to shutdown for feedwater line maintenance
6/28/80	0130	Reactor Scram No. 85 manual from 35% thermal power to accommodate maintenance to feedwater line (leak)
	0146	The scram was completed, the delay being due to control rod insertion problems.
	1320	Reactor at cold shutdown
6/30/80	2400	Unit at cold shutdown for maintenance

## AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-259  
 UNIT Browns Ferry - 1  
 DATE 7-2-80  
 COMPLETED BY Ted Thom  
 TELEPHONE 205 729 6846

MONTH JUNE 1980

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>602</u>	17	<u>298</u>
2	<u>820</u>	18	<u>-12</u>
3	<u>869</u>	19	<u>451</u>
4	<u>876</u>	20	<u>934</u>
5	<u>989</u>	21	<u>814</u>
6	<u>1050</u>	22	<u>986</u>
7	<u>997</u>	23	<u>817</u>
8	<u>1048</u>	24	<u>7</u>
9	<u>1056</u>	25	<u>527</u>
10	<u>1057</u>	26	<u>756</u>
11	<u>1057</u>	27	<u>798</u>
12	<u>1054</u>	28	<u>980</u>
13	<u>1033</u>	29	<u>1034</u>
14	<u>996</u>	30	<u>1025</u>
15	<u>1015</u>	31	<u></u>
16	<u>1045</u>		

## 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.



## AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-260  
 UNIT Browns Ferry - 2  
 DATE 7-2-80  
 COMPLETED BY Ted Thom  
 TELEPHONE 205 729 6846

MONTH JUNE 1980

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	1043	17	1015
2	1021	18	1030
3	1025	19	931
4	1032	20	-10
5	1020	21	-10
6	1020	22	-10
7	667	23	207
8	965	24	292
9	1030	25	802
10	1015	26	973
11	1013	27	993
12	1011	28	416
13	972	29	691
14	620	30	948
15	918	31	
16	1039		

## 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. 50-296UNIT Browns Ferry - 3DATE 7-2-80COMPLETED BY Ted ThomTELEPHONE 205 729 6846MONTH JUNE 1980

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>1039</u>	17	<u>1068</u>
2	<u>1075</u>	18	<u>1072</u>
3	<u>1078</u>	19	<u>1078</u>
4	<u>1076</u>	20	<u>1065</u>
5	<u>1070</u>	21	<u>1068</u>
6	<u>1036</u>	22	<u>1072</u>
7	<u>612</u>	23	<u>1074</u>
8	<u>582</u>	24	<u>1071</u>
9	<u>994</u>	25	<u>1067</u>
10	<u>1053</u>	26	<u>1061</u>
11	<u>1032</u>	27	<u>1032</u>
12	<u>1055</u>	28	<u>25</u>
13	<u>1001</u>	29	<u>-12</u>
14	<u>1015</u>	30	<u>-11</u>
15	<u>805</u>	31	<u></u>
16	<u>1028</u>		

## 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.

## OPERATING DATA REPORT

DOCKET NO. 50-259  
 DATE 7-2-80  
 COMPLETED BY Don Green  
 TELEPHONE 205 729 6846

OPERATING STATUS

1. Unit Name: BROWNS FERRY - UNIT 1
2. Reporting Period: JUNE 1980
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): 1098.4
7. Maximum Dependable Capacity (Net MWe): 1065
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report. Give Reasons:  
N/A

Notes

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

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	<u>720</u>	<u>4,367</u>	<u>51,865</u>
12. Number Of Hours Reactor Was Critical	<u>659.82</u>	<u>2191.50</u>	<u>30,468.78</u>
13. Reactor Reserve Shutdown Hours	<u>60.18</u>	<u>344.03</u>	<u>5,033.64</u>
14. Hours Generator On-Line	<u>643.60</u>	<u>2,072.20</u>	<u>29,684.93</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>1,974,667</u>	<u>5,791,462</u>	<u>79,927,955</u>
17. Gross Electrical Energy Generated (MWH)	<u>615,870</u>	<u>1,869,260</u>	<u>26,387,720</u>
18. Net Electrical Energy Generated (MWH)	<u>599,539</u>	<u>1,812,746</u>	<u>25,614,714</u>
19. Unit Service Factor	<u>89.4</u>	<u>47.5</u>	<u>57.2</u>
20. Unit Availability Factor	<u>89.4</u>	<u>47.5</u>	<u>57.2</u>
21. Unit Capacity Factor (Using MDC Net)	<u>78.2</u>	<u>39.0</u>	<u>46.4</u>
22. Unit Capacity Factor (Using DER Net)	<u>78.2</u>	<u>39.0</u>	<u>46.4</u>
23. Unit Forced Outage Rate	<u>10.6</u>	<u>16.4</u>	<u>32.0</u>
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):

INITIAL CRITICALITY  
 INITIAL ELECTRICITY  
 COMMERCIAL OPERATION

Forecast

Achieved

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

OPERATING DATA REPORT

DOCKET NO. 50-260  
 DATE 7-2-80  
 COMPLETED BY Don Green  
 TELEPHONE 205 729 6846

OPERATING STATUS

1. Unit Name: BROWNS FERRY - UNIT 2
2. Reporting Period: JUNE
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): 1098.4
7. Maximum Dependable Capacity (Net MWe): 1065
8. If Changes Occur in Capacity Ratings. (Items Number 3 Through 7) Since Last Report. Give Reasons:  
N/A

Notes

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

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	<u>720</u>	<u>4,367</u>	<u>46,776</u>
12. Number Of Hours Reactor Was Critical	<u>641.38</u>	<u>3,787.98</u>	<u>28,272.46</u>
13. Reactor Reserve Shutdown Hours	<u>78.62</u>	<u>579.02</u>	<u>12,353.96</u>
14. Hours Generator On-Line	<u>611.42</u>	<u>3,679.09</u>	<u>27,343.40</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>1,776,475</u>	<u>10,557,875</u>	<u>76,712,875</u>
17. Gross Electrical Energy Generated (MWH)	<u>585,310</u>	<u>3,522,000</u>	<u>25,472,068</u>
18. Net Electrical Energy Generated (MWH)	<u>568,875</u>	<u>3,426,932</u>	<u>24,758,401</u>
19. Unit Service Factor	<u>84.9</u>	<u>84.2</u>	<u>58.5</u>
20. Unit Availability Factor	<u>84.9</u>	<u>84.2</u>	<u>58.5</u>
21. Unit Capacity Factor (Using MDC Net)	<u>74.2</u>	<u>73.7</u>	<u>49.7</u>
22. Unit Capacity Factor (Using DER Net)	<u>74.2</u>	<u>73.7</u>	<u>49.7</u>
23. Unit Forced Outage Rate	<u>3.4</u>	<u>14.0</u>	<u>34.5</u>

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):  
Refuel Outage September, 1980

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. 50-296  
 DATE 7-2-80  
 COMPLETED BY Don Green  
 TELEPHONE 205 729 6846

OPERATING STATUS

1. Unit Name: BROWNS FERRY - UNIT 3  
 2. Reporting Period: JUNE 1980  
 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): 1098.4  
 7. Maximum Dependable Capacity (Net MWe): 1065  
 8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:  
N/A

Notes

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

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	<u>720</u>	<u>4,367</u>	<u>29,231</u>
12. Number Of Hours Reactor Was Critical	<u>638.85</u>	<u>3,853.80</u>	<u>22,761.35</u>
13. Reactor Reserve Shutdown Hours	<u>81.15</u>	<u>101.63</u>	<u>1,759.94</u>
14. Hours Generator On-Line	<u>636.42</u>	<u>3822.80</u>	<u>22260.61</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>1,990,334</u>	<u>11,937,761</u>	<u>65,045,627</u>
17. Gross Electrical Energy Generated (MWH)	<u>672,640</u>	<u>4,029,030</u>	<u>21,431,610</u>
18. Net Electrical Energy Generated (MWH)	<u>654,737</u>	<u>3,927,577</u>	<u>20,815,350</u>
19. Unit Service Factor	<u>88.4</u>	<u>87.5</u>	<u>76.2</u>
20. Unit Availability Factor	<u>88.4</u>	<u>87.5</u>	<u>76.2</u>
21. Unit Capacity Factor (Using MDC Net)	<u>85.4</u>	<u>84.4</u>	<u>66.9</u>
22. Unit Capacity Factor (Using DER Net)	<u>85.4</u>	<u>84.4</u>	<u>66.9</u>
23. Unit Forced Outage Rate	<u>11.7</u>	<u>12.5</u>	<u>9.6</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): <u>Refuel Outage October, 1980</u>			

25. If Shut Down At End Of Report Period, Estimated Date of Startup: Undertermined  
 26. Units In Test Status (Prior to Commercial Operation):
- |                      | Forecast      | Achieved      |
|----------------------|---------------|---------------|
| INITIAL CRITICALITY  | <u>      </u> | <u>      </u> |
| INITIAL ELECTRICITY  | <u>      </u> | <u>      </u> |
| COMMERCIAL OPERATION | <u>      </u> | <u>      </u> |

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH JUNE

DOCKET NO. 50-259  
 UNIT NAME Browns Ferry - 1  
 DATE 7-2-80  
 COMPLETED BY Don Green  
 TELEPHONE 205 729 6846

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
126	800601	S		B					Derated to replace brushes in "B" recirculation pump M.G. set
127	800607	S		B					Derated for turbine control valve tests and SI's
128	800617	F	9.97	A	3				Moisture separator high level
129	800617	F	36.80	A	2				"B" recirculation pump low oil level alarm
130	800621	S		B					Derated for turbine control valve tests and SI's
131	800623	F	8.08	A	2				Maintenance to EHC oil leak
132	800624	F	11.57	B	3				While performing control valve closure SI
133	800624	F	9.98	B	2				While performing control valve closure SI

<sup>1</sup>  
 F: Forced  
 S: Scheduled

<sup>2</sup>  
 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)

<sup>3</sup>  
 Method:  
 1-Manual  
 2-Manual Scram.  
 3-Automatic Scram.  
 4-Other (Explain)

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

<sup>5</sup>  
 Exhibit I - Same Source

(9/77)

**UNIT SHUTDOWNS AND POWER REDUCTIONS**

DOCKET NO. 50-259  
 UNIT NAME Browns Ferry - 1 (Cont.  
 DATE 7-2-80  
 COMPLETED BY Don Green  
 TELEPHONE 205 729 6846

REPORT MONTH JUNE

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
134	800628	F		A					Derated due to main steam line high temperature

<sup>1</sup>  
 F: Forced  
 S: Scheduled

<sup>2</sup>  
 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)

<sup>3</sup>  
 Method:  
 1-Manual  
 2-Manual Scram.  
 3-Automatic Scram.  
 4-Other (Explain)

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

<sup>5</sup>  
 Exhibit I - Same Source

(9/77)

**UNIT SHUTDOWNS AND POWER REDUCTIONS**

REPORT MONTH JUNE

DOCKET NO. 50-260  
 UNIT NAME Browns Ferry - 2  
 DATE 7-2-80  
 COMPLETED BY Don Green  
 TELEPHONE 205 729 6846

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
140	800607	F		A					Derated due to "A" recirculation pump trip
141	800613	S		H					Derated for control rod sequence exchange from "A" to "B"
142	800619	S	87.20	B	2				Scheduled maintenance
143	800624	F	10.95	B	3				Condenser low vacuum during maintenance on condenser drain valve.
144	800628	F	10.43	B	3				Condenser low vacuum

<sup>1</sup>  
 F: Forced  
 S: Scheduled

<sup>2</sup>  
 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)

<sup>3</sup>  
 Method:  
 1-Manual  
 2-Manual Scram.  
 3-Automatic Scram.  
 4-Other (Explain)

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

<sup>5</sup>  
 Exhibit I - Same Source

(9/77)



**UNIT SHUTDOWNS AND POWER REDUCTIONS**

REPORT MONTH JUNE

DOCKET NO. 50-296  
 UNIT NAME Browns Ferry - 3  
 DATE 7-2-80  
 COMPLETED BY Don Green  
 TELEPHONE 205 729 6846

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
129	800606	F		A					Derated due to "B" recirculation pump runback
130	800607	F	13.08	A	3				Ground protection relay trip
131	800614	S		B					Derated for turbine control valve tests, SI's and control rod adjustment
132	800627	F	70.50	A	2				Maintenance to feedwater piping

<sup>1</sup> F: Forced  
 S: Scheduled

<sup>2</sup> 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)

<sup>3</sup> Method:  
 1-Manual  
 2-Manual Scram.  
 3-Automatic Scram.  
 4-Other (Explain)

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

<sup>5</sup> Exhibit I - Same Source

BROWNS FERRY NUCLEAR PLANT UNIT 1

CSSC EQUIPMENT

MECHANICAL MAINTENANCE SUMMARY

For the Month of June 19 80

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
	None						

BROWNS FERRY NUCLEAR PLANT UNIT 2

CSSC EQUIPMENT

MECHANICAL MAINTENANCE SUMMARY

For the Month of June 19 80

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
5/21/80	Radwaste	FCV-2-77-4A	Valve will not open all the way	None	Bursted diaphragm	Inoperable valve	Replaced diaphragm and stem o ring TR 146793
6/21/80	Recirculation	Valve 2-2-27A	Valve needs to be repacked	None	Packing leak	Leaking valve	Repacked valve with graffoil packing TR 166605
6/21/80	Recirculation and HPCI	Valves 2-111B-L 2-110C-L 2-110C-H and 3-68	Valve needs to be repacked	None	Packing leak	Leaking valve	Repacked valve with graffoil packing TR 166602
5/21/80	Main Steam	Valve 2-1290-L 2-119B-L 2-119C-L 2-119A-L 2-119A-H 6-51D-L 6-51D-H 2-118D-L 2-118D-H 2-118B-L 2-118B-H 2-118A-L 2-118A-H 6-60C 6-51C-C 6-51C-H 2-117D-H 2-117C-C 2-117C-H 2-117A-C 2-117A-H 6-60B 6-51B-C 2-116B-H 2-116A-L 2-116A-H 2-51A-C 2-51A-H	Valve needs to be repacked	None	Packing leak	Leaking valve	Repacked valve with graffoil packing TR 166606

CSSC EQUIPMENT

## MECHANICAL MAINTENANCE SUMMARY

For the Month of June 19 80

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
/17/80	RHR	Pump C	Drain pipe leak	None	Drain leak	Drain leak	Tightened casing drain fittings TR 103460

BROWNS FERRY NUCLEAR PLANT UNIT 1CSSC EQUIPMENT

## ELECTRICAL MAINTENANCE SUMMARY

For the Month of June 19 80

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
6-1-80	Main Steam	FCV 1-1-26	Limit switch not making up to pickup 5AK3D relay for B main steam line.	NONE	Arm on limit switches out of adjustment.	Deenergized relay 5AK3D on "B" main steam line.	Adjusted arm on limit switch. Performed SI 4.1.B.9 Checked ok. TR# 156744
6-17-80	Control rod drive	1-FCV-85-23	Motor on 1-FCV-85-23 will not run	NONE	Overload heater open.	Left 1-FCV-85-23 inoperable	Replaced overload heater, 1-FCV-85-23 Checked ok; TR# 171185
6-23-80	Reactor protection	PS 47-144	Stop valve has a bad pressure switch.	EHC leak resulted in unit shutdown. Wiring error during repair caused later scrams. See referenced LER.	Pressure switch vibrated loose. 1 wire grounded, threads stripped.	Pressure switch inoperable.	Replaced nipple, insulated wires that were grounded, replaced bracket holding switch. TR# 146750 LER# 259-8050
6-24-80	Fire	Alarm XA-39-21B	Alarm is in and won't clear.	NONE	Alarm on panel 25-323 relay sticking on circuit to panel 9-8 annunciator for trouble.	Caused alarm to stay on.	Changed relay and reset panel alarm Checked ok. TR# 171528
6-29-80	PCIS	Relay 16A-K61B	Relay 16A-K61B bad	Isolated Rx building and re-fueling zone ventilation.	Coil Burned out.	No power from relay 16A-K61B	Replaced coil. Checked ok. TR# 160666

CSSC EQUIPMENT

## ELECTRICAL MAINTENANCE SUMMARY

For the Month of June 19 80

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
6-29-80	480 V Rx MOV Bd.	Rx MOV board 480	2A Rx MOV bd. 480 normal feeder breaker at 480 shut-down bd. 2A will not close.	Caused loss of power to 2A Rx MOV Bd. until bd. was energized from alternate feeder.	Closing mechanism out of adjustment.	Loss of power from normal feeder breaker.	Adjusted closing mechanism. Checked ok. TR# 171100

BROWNS FERRY NUCLEAR PLANT UNIT 3CSSC EQUIPMENT

## ELECTRICAL MAINTENANCE SUMMARY

For the Month of June 19 80

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
6-4-80	Unit preferred 120 V AC system.	MG set tach generator drive	Unit 3 preferred MG set tach generator drive belt needs repair	NONE	Broken belt and bad bearings.	Unable to operate MG set with DC drive motor.	Replaced belt and bearings. MG set checked ok. TR# 152303
6-4-80	RHRSW	A3 RHRSW pump	A3 RHRSW pump motor tripped and overcurrent and ground relays picked up.	NONE	B phase grounded to connection cover.	Rendered A3 RHRSW pump inoperable.	Retaped connections and performed EMI 71 A3 RHRSW pump checked ok. TR# 171260
6-9-80	RCIC.	RCIC - EGM box	RCIC turbine seems to be tripping on mechanical overspeed.	NONE	Bad voltage suppressor CR-1 in EGM control box.	Loss of speed control leaving RCIC inoperable.	Replaced suppressor RCIC checked ok. TR# 171298 LER# 296-8021
6-24-80	Control rod drive	Relay 3AK26	Relay bad.	NONE	Relay failed.	Caused rod block alarm.	Replaced relay 3AK26 Checked ok. TR# 170439
6-25-80	Fire protection	Heat detector TE-39-949B	Heat detector broken.	NONE	Broken detector	Loss of fire alarm in the area of this detector.	Replaced bad fire detector. Checked ok. TR# 171715

BROWNS FERRY NUCLEAR PLANT UNIT 1,2 & 3

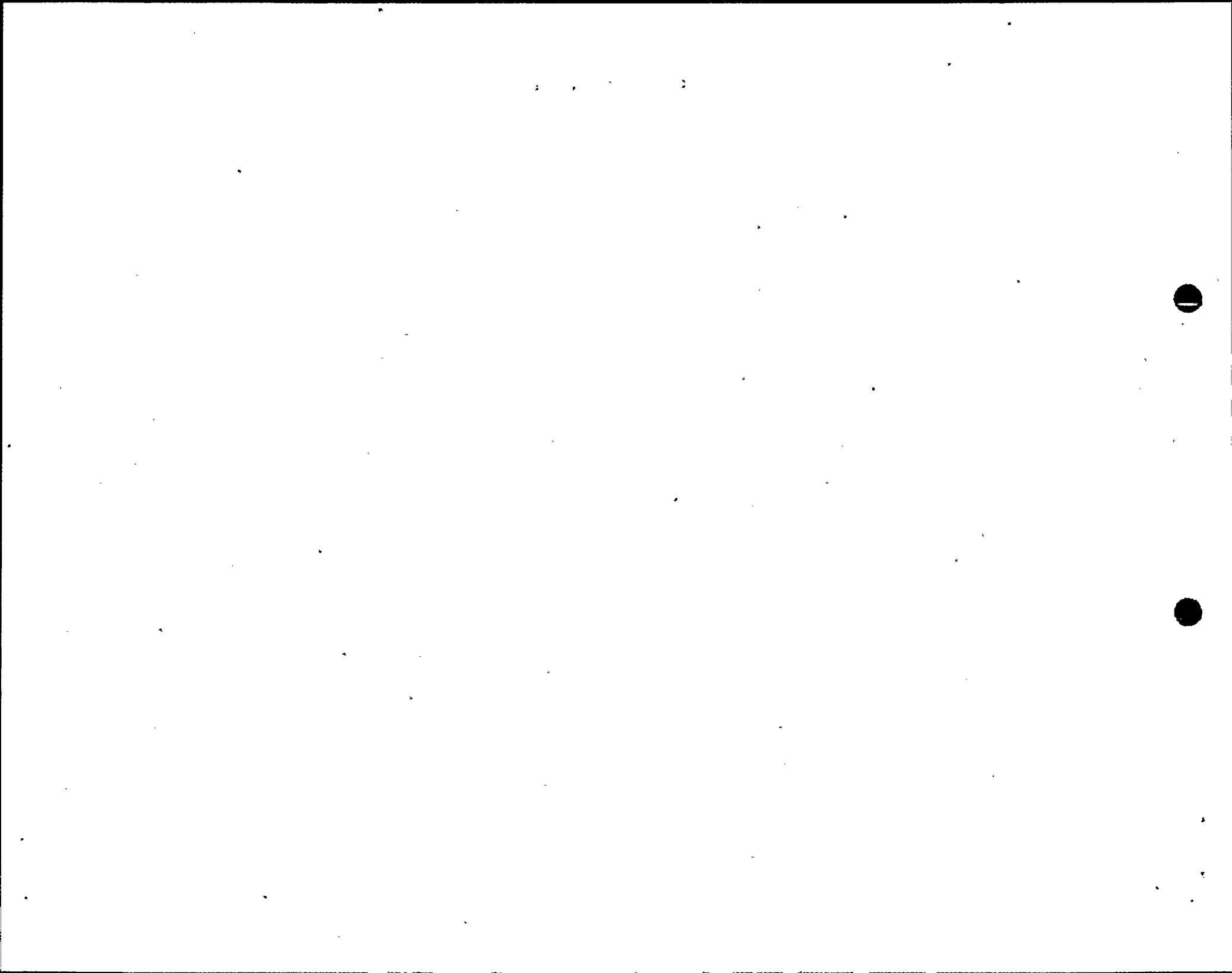
INSTRUMENT MAINTENANCE SUMMARY

CSSC EQUIPMENT

FOR THE MONTH OF June 19 80

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
<u>init 1</u>							
-4	Primary Containment	TI-64-55A	Calibrate	None	Instrument Drift	False Indication	None
-9	Primary Containment	LI-64-54B	Calibrate	None	Instrument Drift	Disagreement Between Redundant Indicators	None
-10	Standby Liquid Control	LS-63-1	Calibrate	None	Setpoint Drift	Intermittent False Alarm	None
-18	Feedwater	LI-3-53 -3-60 -3-206	Calibrate	None	Instrument Drift	Disagreement Between Redundant Indicators	None
-25	Primary Containment	LS-64-54A	Calibrate	None	Setpoint Drift	Alarm When Level Normal	None
<u>init 2</u>							
i-20	Control Rod Drive	RPIS Probe 42-31	Replace	None	Faulty Reed Switches	No Indication at Position 2,3,6,7 & 9	None
i-20	Neutron Monitoring	IRM-H	Replace	None	Detector Failure	Erratic Indication	None
<u>init 3</u>							
i-5	Feedwater	LI-3-58A	Repair	None	Failed Resistor	Indicated Upscale	None
i-5	Feedwater	LI-3-58B	Replace	None	Faulty Bearings in Indicator	Indicated Same Value Did Not Move	None





OUTAGE SUMMARY

June 1980

Major emphasis was placed on the security modifications in order to meet commitment dates of early August. Other modification work consisted of the anchor and hanger inspection per NRC Bulletins 79-02 and 79-14 with no major problems encountered, the construction of the new fabrication shop building, the construction of the east portal, the construction of the hypochlorite building, the addition of two condensate storage tanks and the cooling tower modifications.

Unit 2 was shutdown June 19, 1980, in order to install calcium silicate insulation on the main steam lines and modify the ventilation duct in the main steam tunnel to help reduce the extremely high temperatures experienced during unit operation.

Also, major emphasis was placed upon investigating the CRD problem experienced when Unit 3 which was shutdown June 28, 1980. The work consisted of cutting the CRD water lines and inspecting for any debris that may have prevented 68 control rods from inserting fully. The inspections revealed no debris either in the CRD lines or the scram discharge volume tanks.