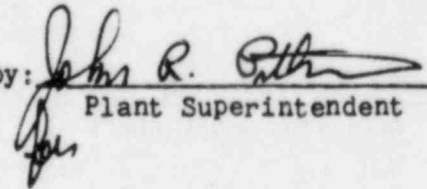


TENNESSEE VALLEY AUTHORITY  
DIVISION OF NUCLEAR POWER  
BROWNS FERRY NUCLEAR PLANT

MONTHLY OPERATING REPORT  
December 1, 1982 - December 31, 1982

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

Submitted by:

  
Plant Superintendent

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Operations Summary

November 1982

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

There were 17 reportable occurrences and one revision to previous reportable occurrences reported to the NRC during the month of December.

Unit 1

There were two scrams on the unit during the month. On December 6, the reactor was manually scrammed to repair a crack on a reactor feed pump's discharge line. The reactor scrammed on December 6 when a control rod double-notched during startup and caused two IRMs to reach their trip setpoints.

Unit 2

The unit was in its EOC-4 refueling outage the entire month.

Unit 3

There was no scrams on the unit during the month.

Principally prepared by B. R. McPherson.

Operations Summary (Continued)

December 1982

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	0.00564	0.00448	0.00388
Feedwater nozzle	0.27594	0.19544	0.14705
Closure studs	0.21688	0.15641	0.12638

NOTE: This accumulated monthly information satisfies Technical Specification Section 6.6.A.17.B(3) reporting requirements.

Common System

Approximately 9.09E+0.5 gallons of waste liquids were discharged containing approximately 1.55E+00 curies of activities.



Operations Summary (Continued)

December 1982

Refueling InformationUnit 1

Unit 1 is scheduled for its fifth refueling beginning on or about March 18, 1983 with a scheduled restart date of July 18, 1983. This refueling will involve loading 8 X 8 R (retrofit) fuel assemblies into the core; finishing the torus modification; turbine inspection; finishing TMI-2 modifications; post-accident sampling facility tie-ins; core spray changeout; and changeout of jet pump hold-down beams.

There are 764 fuel assemblies in the reactor vessel. The spent fuel storage pool presently contains 52 new fuel assemblies; 260 EOC-4 fuel assemblies; 232 EOC-3 fuel assemblies; 156 EOC-2 fuel assemblies; and 168 EOC-1 fuel assemblies. The present capacity is 1,148 locations. Modification work and testing are in progress to increase the spent fuel pool capacity to 3,471 assemblies.

Unit 2

Unit 2 began its fourth refueling on July 30, 1982 with a scheduled restart date of February 14, 1983. This refueling outage will involve completing relief valve modifications; torus modifications; "A" low-pressure turbine inspection; generator inspection; MG set installation for LPCI modification; loading additional 8 X 8 R fuel assemblies into the core; TMI-2 modifications; post-accident sampling facility tie-ins; and changeout of jet pump hold-down beams.

Operations Summary (Continued)

December 1982

Refueling InformationUnit 2 (Continued)

There are no fuel assemblies in the reactor vessel. At the end of the month there were 248 new fuel assemblies; 764 EOC-4 fuel assemblies; 353 EOC-3 fuel assemblies; 156 EOC-2 fuel assemblies; and 132 EOC-1 fuel assemblies in the spent fuel storage pool. The present available capacity of the spent fuel pool is 97 locations.

Unit 3

Unit 3 is scheduled for its fifth refueling on or about October 1, 1983, with a scheduled restart date of January 31, 1984. This refueling will involve loading 8 X 8 R (retrofit) assemblies into the core; finishing the torus modifications; post-accident sampling facility tie-in; core spray changeout; finishing TMI-2 modifications; turbine inspection; and changeout of jet pump hold-down beams.

There are 764 fuel assemblies presently in the reactor vessel. There are 280 EOC-4 fuel assemblies; 124 EOC-3 fuel assemblies; 144 EOC-2 fuel assemblies; and 208 EOC-1 fuel assemblies in the spent fuel storage pool. The present available capacity of the spent fuel pool is 993 locations.

Significant Operational Event

## Unit 1

Date	Time	Event
12/01/82	0001	Reactor thermal power at 99%, maximum flow, rod limited.
12/03/82	0325	Commenced reducing thermal power for turbine control valve test and SI's.
	0330	Reactor thermal power at 95% for turbine control valve test and SI's.
	0340	Turbine control valve test and SI's complete; commenced power ascension.
	0400	Reactor thermal power at 99%, maximum flow, rod limited.
12/04/82	1645	Commenced reducing thermal power for shutdown due to a leak on discharge of "B" reactor feed-water pump.
	1718	Reactor scram manual No. 162 from 42% thermal power to repair leak on discharge line of "B" reactor feedwater pump.
12/06/82	1915	Commenced rod withdrawal for startup.
	2118	Reactor critical No. 181. Inserted rod 18-51 back to 00 to bring reactor sub-critical.
	2119	Reactor sub-critical.
	2253	Reactor critical No. 182.
	2316	Reactor scram No. 163, from 0% thermal power on "A" and "F" IRM spike when control rod 18-51 double-notched.
12/07/82	0145	Commenced rod withdrawal for startup.
	0250	Reactor critical No. 183.
	0545	Rolled T/G.
	0607	Synchronized generator, commenced power ascension.
	2330	Commenced reducing thermal power from 84% for control rod pattern adjustment.
	2400	Reactor thermal power at 80% for control rod pattern adjustment.
12/08/82	0001	Control rod pattern adjustment complete, commenced power ascension.
	0200	Commenced PCIOMR from 88% thermal power (Sequence "B").
	2200	Commenced reducing thermal power from 96% thermal power for removal of "A" recirculation pump from service to repair an oil leak on recirculation pump M-G set.
	2300	Reactor thermal power at 51% for "A" recirculation pump M-G set oil leak repair.

Significant Operational Event

## Unit 1

Date	Time	Event
12/09/82	0021	"A" recirculation pump in service, commenced power ascension.
	0230	Commenced PCIOMR from 84% thermal power (Sequence "B").
	1200	Reactor thermal power at 99%, maximum flow, rod limited.
12/17/82	2323	Commenced reducing thermal power for control rod pattern adjustment and turbine control valve test and SI's.
	2400	Turbine control valve test and SI's complete reactor power at 83%, increasing power for control rod pattern adjustment.
12/18/82	0100	Reactor power at 84% control rod pattern adjustment in progress.
	0120	Control rod pattern adjustment complete, holding at 84% for SI 4.1.A-10 (main steamline radiation).
	0230	SI 4.1.A-10 complete. Commenced PCIOMR from 84% thermal power.
	1730	Reactor thermal power at 99% maximum flow, rod limited.
12/20/82	2140	Commenced reducing thermal power for MSIV 10% closure SI 4.1.A.11 and MSIV full closure SI 4.7.D.1.b-2.
	2150	Reactor power at 90%. SI 4.1.A-11 complete, reducing power for SI 4.7.D.1.b-2.
	2305	Reactor thermal power at 69%, SI 4.7.D.1.b-2 complete. Commenced power ascension.
12/21/82	0100	Commenced PCIOMR from 97% (Sequence "B").
	0300	Reactor thermal power at 99%, maximum flow, rod limited.
12/25/82	0130	Commenced reducing thermal power for turbine control valve tests and SI's.
	0140	Reactor power at 95% for turbine control valve tests and SI's.
	0150	Turbine control valve test and SI's complete, commenced power ascension.
	0200	Commenced PCIOMR from 98% thermal power. (Sequence "B").
	0300	Reactor thermal power at 99%, maximum flow, rod limited.
12/31/82	2400	Reactor thermal power at 99%, maximum flow, rod limited.

Significant Operational Event

Unit 2

<u>Date</u>	<u>Time</u>	<u>Event</u>
12/01/82	0001	End of cycle, refuel outage continues.
12/31/82	2400	End of cyce, refuel outage continues.



Significant Operational Event

## Unit 3

Date	Time	Event
12/01/83	0001	Reactor thermal power at 99%, maximum flow, rod limited.
12/03/83	2130	Commenced reducing thermal power for removal of "A" reactor feedwater pump from service for maintenance.
	2250	Reactor thermal power at 65% "A", reactor feedwater pump out of service for maintenance.
12/04/83	0025	Started SI 4.3.B.1.a scram testing control rods, reactor thermal power at 63%.
	0135	SI 4.3.B.1.a complete. Commenced power ascension from 63% thermal power.
	0930	Reactor thermal power at 78%. Commenced control rod pattern adjustment.
	1105	Reducing thermal power for control rod pattern adjustment.
	1400	Reactor thermal power at 71% for control rod pattern adjustment.
	1440	Control rod pattern adjustment complete.
		Commenced power ascension from 71% thermal power.
	1800	Reactor thermal power at 75% for "A" reactor feedwater pump maintenance.
	2200	Reactor thermal power at 76% for "A" reactor feedwater pump maintenance.
12/05/83	0600	"A" reactor feedwater pump back in service. Commenced power ascension from 76% thermal power.
	0630	Commenced PCIOMR from 77% thermal power.
	0835	Stopped PCIOMR at 79% for tip set run.
	1105	Tip set complete. Commenced PCIOMR from 79% thermal power.
12/06/83	1110	Stopped PCIOMR at 96%, computer out of service.
	1300	Commenced PCIOMR from 96% thermal power.
	1600	Reactor thermal power at 99%, maximum flow, rod limited.
	1958	Commenced reducing thermal power due to 1/4 isolation from "C" main steamline low-pressure switch.

Significant Operational Event

## Unit 3

Date	Time	Event
12/07/83	0100	Reactor thermal power at 96%, "C" main steam-line low-pressure switch.
	1340	Commenced PCIOMR from 96% thermal power. (Sequence "B").
	1800	Reactor thermal power at 99%, maximum flow, rod limited.
12/07/83	2020	Received 1/4 isolation from "C" main steamline low-pressure switch. Commenced reducing thermal power.
	2300	Reactor thermal power at 96% due to 1/4 isolation from "C" main steamline low-pressure switch.
12/10/83	0945	Commenced power ascension from 96% thermal power.
	1000	Reactor thermal power at 99%, maximum flow, rod limited.
	2330	Commenced reducing thermal power for control rod pattern adjustment and turbine control valve test and SI's.
	2400	Reactor thermal power at 88%, turbine control valve test in progress.
12/11/83	0021	Turbine control valve test complete, dropping load from 88% for control rod pattern adjustment.
	0045	Reactor thermal power at 64% for control rod pattern adjustment.
	0238	Control rod pattern adjustment complete. Commenced power ascension.
	0810	Reduced thermal power from 81% to 77% for control rod pattern adjustment.
	1100	Commenced PCIOMR from 77% thermal power. (Control cell core).
	2330	Stopped PCIOMR at 91%, computer out of service.
12/12/83	1215	Computer back in service. Commenced PCIOMR from 91% thermal power.
	2111	Received 1/4 isolation from "C" main steam-line low-pressure switch. Commenced reducing thermal power from 98%.
	2200	Reactor thermal power at 96% due to "C" main steamline low-pressure.
12/13/83	0700	Reactor thermal power at 95% due to "C" main steam line low pressure switch.

Significant Operational Event

## Unit 3

Date	Time	Event
12/15/83	2105	Commenced power ascension from 95% thermal power.
	2130	Commenced PCIOMR from 96% thermal power (control cell core.)
	2230	Reactor thermal power at 99% maximum flow, rod limited.
12/18/83	0210	Reducing thermal due to loss of RSCS.
	0500	Reactor thermal power at 90% due to RSCS problem.
	0545	RSCS repaired. Commenced PCIOMR (control cell core).
	0900	Reactor thermal power at 99% maximum flow, rod limited.
12/19/83	1728	Reduced thermal power to 81% when "A" feedwater pump tripped while injection water was being adjusted.
	1750	"A" reactor feedwater pump reset and placed back in service, holding at 81% for removal of "C" string low-pressure heaters from service for maintenance. (Bottom head leaking.)
	1804	"C" low-pressure heaters out of service, reactor power at 81%.
	1910	Commenced power ascension from 81% thermal power. ("C" low-pressure heaters out of service for maintenance).
12/20/83	0850	Commenced reducing thermal power from 93% when "C" string high-pressure heater isolated, on C1 and C2 moisture-separator drain pump high level.
	0910	"C" string high-pressure heaters back in service. Reactor power at 89% for "C" string low-pressure heater maintenance.
	1900	Reactor thermal power at 90% for "C" string low-pressure heater maintenance.
12/21/83	1110	"C" string low-pressure heater maintenance complete. Heater back in service; commenced power ascension.
	1400	Reactor thermal power at 99%, maximum flow, rod limited.



Significant Operational Event

## Unit 3

Date	Time	Event
12/23/83	1042	"A" reactor feedwater pump tripped on high vibration, commenced reducing thermal power.
	1400	Reactor thermal power at 81%, "A" reactor feedwater pump off line due to high-vibration trip.
	1405	Rolled 3A reactor feedwater pump.
	1407	3A reactor feedwater pump tripped on high vibration. Reactor power at 81%.
	1408	Rolled 3A reactor feedwater pump.
	1438	3A reactor feedwater pump tripped on high vibration. Reactor power at 81%.
	1510	3A reactor feedwater pump back in service.
	1548	3A reactor feedwater pump taken out of service to replace cable on turbine and Indikon. Reactor power at 81%.
	1630	Cable replaced on 3A reactor feedwater pump turbine end Indikon. Commenced power ascension.
	1800	Reactor thermal power t 99% maximum flow, rod limited.
12/24/83	2344	Commenced reducing thermal power for turbine control valve test and SI's.
	2359	Reactor thermal power at 93% for turbine control valve test and SI's.
12/25/83	0115	Turbine control valve test and SI's complete. menced power ascension.
	0130	Reactor thermal power at 99%, maximum flow, rod limited.
12/28/83	2030	Commenced reducing thermal power for removal of 3A reactor feedwater pump from service for maintenance.
	2110	Reactor thermal power at 73%, 3A reactor feedwater pump out of service for maintenance.
	2206	Maintenance complete on 3A reactor feedwater pump, placed pump in service, commenced power ascension.
	2300	Commenced PCIOMR from 98% thermal power (control cell core).
	2400	Reactor thermal power at 99%, maximum flow, rod limited.

Significant Operational Event

## Unit 3

Date	Time	Event
12/29/83	1015	Commenced reducing thermal power for removal of 3C reactor feedwater pump from service for maintenance.
	1100	3C reactor feedwater pump out of service for maintenance, reactor thermal power at 74%.
	1940	3C reactor feedwater pump maintenance complete, placed pump in service, commenced power ascension.
	2200	Reactor thermal power at 99%, maximum flow, rod limited.
12/31/83	0628	Commenced reducing thermal power for removal of 3C reactor feedwater pump from service for maintenance.
	0730	3C reactor feedwater pumps out of service for maintenance. Reactor power at 76%.
	0800	Reactor power at 75%, 3C reactor feedwater pump maintenance.
	1000	Reactor power at 77%, 3C reactor feedwater pump maintenance.
	1400	Reactor power at 78%, 3C reactor feedwater pump maintenance.
	1800	Reactor power at 79%, 3C reactor feedwater pump maintenance.
	1840	Maintenance complete on 3C reactor feedwater pump. placed pump in service, commenced power ascension.
	2100	Reducing thermal power from 98% for maintenance to change oil filter on 3A reactor feed pump and turbine control valve tests and SI's.
	2200	Reactor thermal power at 96% for oil filter change on 3A reactor feedwater pump and turbine control valve tests and SI's.
	2400	Reactor thermal power at 96% for oil filter change on 3A reactor feedwater pump and turbine control valve tests and SI's.

## AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-259  
 UNIT Browns Ferry 1  
 DATE 1/1/83  
 COMPLETED BY T. Thom  
 TELEPHONE 205/729-0834

MONTH December

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>1060</u>
2	<u>1063</u>
3	<u>1064</u>
4	<u>754</u>
5	<u>-16</u>
6	<u>-12</u>
7	<u>437</u>
8	<u>962</u>
9	<u>984</u>
10	<u>1069</u>
11	<u>1062</u>
12	<u>1063</u>
13	<u>1066</u>
14	<u>1068</u>
15	<u>1064</u>
16	<u>1067</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>1067</u>
18	<u>982</u>
19	<u>1071</u>
20	<u>1041</u>
21	<u>1061</u>
22	<u>1066</u>
23	<u>1067</u>
24	<u>1089</u>
25	<u>1064</u>
26	<u>1041</u>
27	<u>1064</u>
28	<u>1066</u>
29	<u>1068</u>
30	<u>1067</u>
31	<u>1051</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 1-1-83  
 COMPLETED BY T. Thom  
 TELEPHONE 205/729-0834

MONTH December

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	-2
2	-2
3	-2
4	-2
5	-3
6	-2
7	-2
8	-2
9	-2
10	-2
11	-2
12	-2
13	-2
14	-2
15	-2
16	-3

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	-2
18	-2
19	-3
20	-2
21	-2
22	-2
23	-2
24	-3
25	-6
26	-7
27	-6
28	-6
29	-7
30	-7
31	-6

## 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. 50-296  
 UNIT Browns Ferry 3  
 DATE 1-1-83  
 COMPLETED BY T. Thom  
 TELEPHONE 205/729-0834

MONTH December

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>1054</u>
2	<u>1058</u>
3	<u>1031</u>
4	<u>775</u>
5	<u>850</u>
6	<u>1015</u>
7	<u>1027</u>
8	<u>1018</u>
9	<u>1019</u>
10	<u>1046</u>
11	<u>813</u>
12	<u>1014</u>
13	<u>1008</u>
14	<u>1013</u>
15	<u>1015</u>
16	<u>1064</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>1070</u>
18	<u>1050</u>
19	<u>1029</u>
20	<u>936</u>
21	<u>997</u>
22	<u>1054</u>
23	<u>1018</u>
24	<u>1037</u>
25	<u>1056</u>
26	<u>1049</u>
27	<u>1059</u>
28	<u>1043</u>
29	<u>991</u>
30	<u>1065</u>
31	<u>917</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 1-1-83  
 COMPLETED BY T. Thom  
 TELEPHONE 205/729-0834

OPERATING STATUS

1. Unit Name: Browns Ferry - 1  
 2. Reporting Period: December 1982  
 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>744</u>	<u>8,760</u>	<u>73,802</u>
12. Number Of Hours Reactor Was Critical	<u>686.87</u>	<u>8,074.74</u>	<u>47,389.54</u>
13. Reactor Reserve Shutdown Hours	<u>57.13</u>	<u>522.11</u>	<u>5,737.31</u>
14. Hours Generator On-Line	<u>683.18</u>	<u>7,969.95</u>	<u>46,400.12</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>2,196,238</u>	<u>24,898,097</u>	<u>131,773,004</u>
17. Gross Electrical Energy Generated (MWH)	<u>729,940</u>	<u>8,108,270</u>	<u>43,400,720</u>
18. Net Electrical Energy Generated (MWH)	<u>711,479</u>	<u>7,880,870</u>	<u>42,149,779</u>
19. Unit Service Factor	<u>91.8</u>	<u>92.2</u>	<u>63.0</u>
20. Unit Availability Factor	<u>91.8</u>	<u>92.2</u>	<u>63.0</u>
21. Unit Capacity Factor (Using MDC Net)	<u>89.8</u>	<u>84.5</u>	<u>53.6</u>
22. Unit Capacity Factor (Using DER Net)	<u>89.8</u>	<u>84.5</u>	<u>53.6</u>
23. Unit Forced Outage Rate	<u>8.2</u>	<u>8.5</u>	<u>24.4</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):	Forecast	Achieved
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____



## OPERATING DATA REPORT

DOCKET NO. 50-260  
 DATE 1-1-83  
 COMPLETED BY T. Thom  
 TELEPHONE 205/729-0834

## OPERATING STATUS

1. Unit Name: <u>Browns Ferry - 2</u> 2. Reporting Period: <u>December 1982</u> 3. Licensed Thermal Power (MWt): <u>3293</u> 4. Nameplate Rating (Gross MWe): <u>1152</u> 5. Design Electrical Rating (Net MWe): <u>1065</u> 6. Maximum Dependable Capacity (Gross MWe): <u>1098.4</u> 7. Maximum Dependable Capacity (Net MWe): <u>1065</u> 8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons: <u>N/A</u>	Notes
9. Power Level To Which Restricted, If Any (Net MWe): <u>N/A</u>	
10. Reasons For Restrictions, If Any: <u>N/A</u>	

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	8,760	68,743
12. Number Of Hours Reactor Was Critical	0	4,846.51	43,293.47
13. Reactor Reserve Shutdown Hours	0	203.06	13,684.82
14. Hours Generator On-Line	0	4,778.36	41,975.45
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	0	13,827,550	120,480,340
17. Gross Electrical Energy Generated (MWH)	0	4,592,260	40,024,908
18. Net Electrical Energy Generated (MWH)	0	4,450,929	38,873,075
19. Unit Service Factor	0	54.5	61.1
20. Unit Availability Factor	0	54.5	61.1
21. Unit Capacity Factor (Using MDC Net)	0	47.7	53.1
22. Unit Capacity Factor (Using DER Net)	0	47.7	27.1
23. Unit Forced Outage Rate	0	5.5	27.1
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:	<u>February 1983</u>	
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 1-1-83  
 COMPLETED BY T. Thom  
 TELEPHONE 205/729-0834

## OPERATING STATUS

1. Unit Name: Browns Ferry - 3  
 2. Reporting Period: December 1982  
 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	744	8,760	51,168
12. Number Of Hours Reactor Was Critical	744	5,145.30	37,612.28
13. Reactor Reserve Shutdown Hours	0	1,230.62	3,372.15
14. Hours Generator On-Line	744	5,023.28	36,774.06
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,326,246	15,477,484	109,336,104
17. Gross Electrical Energy Generated (MWH)	766,790	5,041,600	36,039,790
18. Net Electrical Energy Generated (MWH)	748,175	4,892,858	34,980,904
19. Unit Service Factor	100	57.3	71.9
20. Unit Availability Factor	100	57.3	71.9
21. Unit Capacity Factor (Using MDC Net)	94.4	52.4	64.2
22. Unit Capacity Factor (Using DER Net)	94.4	52.4	64.2
23. Unit Forced Outage Rate	0	20.6	17.4
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

REPORT MONTH December

DOCKET NO. 50-259  
 UNIT NAME Browns Ferry 1  
 DATE 1-1-83  
 COMPLETED BY T. Thom  
 TELEPHONE 205/729-0834

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
249	12/04/82	F	53.97	B	1				Reactor scram to repair leak on discharge line of "B" reactor feedwater pump.
250	12/06/82	F	6.85	A	3				Reactor scram on "A" and "F" IRM spike when control rod 18-51 double notched.
251	12/08/82	F		B					Derated to repair an oil leak on "A" recirculation pump M-G set.
252	12/20/82	S		B					Derated for MSIV 10% and full closure SI's.

<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

REPORT MONTH December

DOCKET NO. 50-260  
 UNIT NAME Browns Ferry 2  
 DATE 1-1-83  
 COMPLETED BY T. Thom  
 TELEPHONE 205/729-0834

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
243	12/1/82	S	744	H	2				EDC-4 Refuel Outage Continues

<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

REPORT MONTH December

DOCKET NO. 50-296  
 UNIT NAME Browns Ferry 3  
 DATE 1-1-83  
 COMPLETED BY T. Thom  
 TELEPHONE 205/729-0834

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
117	12/3/82	F		B					Derated to remove "A" reactor feed pump from service for maintenance.
118	12/11/82	S		H					Derated for control rod pattern adjustment.
119	12/28/82	F		B					Derated to remove "A" reactor feed-water pump from service for maintenance.
120	12/29/82	F		B					Derated to remove "C" reactor feed-water pump from service for maintenance.
121	12/31/82	F		B					Derated to remove "C" reactor feed-water pump from service for maintenance.

<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)

CSSC EQUIPMENT

## MECHANICAL MAINTENANCE SUMMARY

For the Month of December 19 82

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
2-13	Radiation Monitoring	cam 90-256	air leak	none	faulty o'rings & loose handles	air leak	replaced o'rings & tightened handles TR# 216762
2-10	Fuel pool cooling	pump 1A	water leak	none	worn packing	packing leak in shaft	installed new packing TR# 339337
1-27	Drywell Air Compressor	drywell air compressor valves 2B & 1B	remove 2B valve & install on 1B	none	unknown	interchange of air compressor valve	removed valve internal to unit 1B TR# 308229
2-01	Radiation Monitoring	CAM 90-250 sample inlet valve	inlet valve on suction valve needs inverting	none	moisture collecting in sample line	inlet valve not functioning properly	inverted inlet valve TR# 216726
2-06	CRD	1B CRD discharge filter	faulty filter	none	bad filter	unknown	replaced with discharge filter TR# 308253

BROWNS FERRY NUCLEAR PLANT UNIT 2

## MECHANICAL MAINTENANCE SUMMARY

CSSC EQUIPMENTFor the Month of December 19 82

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
1-27	Control Air	HCV-32-307A	switch valve internals	none	unknown	unknown	replaced valve internal TR# 291708
1-28	RHR	FCV-74-53	packing leak	none	worn packing	valve nonfunctional	replaced packing TR# 276141
1-29	CRD	module 38-07 isolation valve	leakage	none	faulty valve	pressure switch leaks through	replaced o'ring seal, body o'ring & body back-up ring TR# 309985

CSSC EQUIPMENT

BROWNS FERRY NUCLEAR PLANT UNIT 2  
 MECHANICAL MAINTENANCE SUMMARY  
 For the Month of December 19 82

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
1-16	Standby Liquid Control	SLC pump A	water leak	none	worn packing	packing leak	replaced packing TR# 314587 TR# 339077
1-29	Control Air	copper pipe n.e. wall	air leak	none	unknown	air leak in copper pipe	resweated joint TR# 231389
2-15	Standby Liquid Control	SLC pump B	water leak	none	worn packing	packing leak	repacked pump TR# 342911
2-03	Standby Liquid Control	valve 63-529 drain cap	faulty cap	none	cap inoperable	test connection drain cap leaking	replaced existing cap TR# 245108
12-02	RHR	FCV-74-67	water leak	none	worn packing	valve needed repacking	repacked valve TR# 276143
11-10	HPCI	3" pipe stop valve cylinder to oil sump	oil leak	none	threads on pipe	pipe leaking oil at pipe thread into sump	took apart, retapped thread & tightened bolted-up flanges TR# 297702



BROWNS FERRY NUCLEAR PLANT UNIT <sup>3</sup>

## MECHANICAL MAINTENANCE SUMMARY

CSSC EQUIPMENT

For the Month of December 19 82

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
-13	Radiation Monitoring	cam 90-250	faulty cam	none	worn belt broke	cam inoperable	replaced belt TR# 265332
1-03	Radiation Monitoring	D.W. cam 90-256 sample pump	noisy cam	none	pump worn out	sample pump inoperable	replaced with spare cam vac pump (rebuilt) TR# 275244
2-20	Radiation Monitoring	cam 90-250 inlet vent line hose	faulty cam	none	unknown	unknown	installed new white hose TR# 216763
2-13	Radiation Monitoring	cam 90-256	faulty cam	none	bad o'rings & handle broken	air leak	replaced o'ring & repaired handle, replaced latch.
2-22	LPCI	LPCI MG set 3DA	faulty coupling	none	coupling inoperable, needs replacing	MG set inoperable	replaced coupling on generator end TR# 296734

BROWNS FERRY NUCLEAR PLANT UNIT Common

## MECHANICAL MAINTENANCE SUMMARY

CSSC EQUIPMENTFor the Month of December 19 82

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
1-15	RHRSW	pump 1D	Packing needs replacing	none	worn out packing	unknown	replaced packing TR# 312597
1-10	RHRSW	pump 3D	packing needs replacing	none	worn out packing	unknown	repacked pump TR# 312596
1-10	D/G	u-1&2 D/G D bank A air compressor	bad leak	none	head gasket worn	leak around HP cylinder head gasket	replaced head gasket TR# 266983
11-09	RHRSW	pump 3C	packing needs replacing	none	worn out packing	unknown	repacked pump TR# 312598
11-19	D/G	D/G 1C air start motor	faulty start motor	none	starter worn out	starter inoperable	replaced starter, cleaned and inspected TR# 245179



CSSC EQUIPMENT

## ELECTRICAL MAINTENANCE SUMMARY

For the Month of December 19 82

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
12/1/82	Diesel Generators	D/G B speed sensing relay ZSR1.	While performing redundant start test (EMI 3) on D/G B start circuit 1 failed to function.	None, start circuit 2 was operable.	Bad speed sensing relay ZSR1.	D/G B failed to start by starting circuit 1 during the redundant start test.	The bad relay was replaced, SI 4.9. A.1 Supplement A performed, and the diesel generator returned to service. TR #334812 TR #306702 LER#BFRO-50-259/8295
12/3/82	RHR	LPCI M/G set 1EA voltage regulator.	Low output voltage.	None	Motor generator output voltage had drifted down.	LPCI M/G set 1EA output voltage was 470 volts as opposed to 490 volts $\pm$ 5 volts.	Adjustments were made to the M/G set voltage regulator to bring the voltage level to 490 volts. The output voltage was monitored and found to remain stable. TR #308244

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of December 19 82

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
12/7/82	CRD	Handswitch 85-48 located on panel 9-5.	HS 85-48 was not operating properly.	None	Broken stop plate.	Required operator to take care not to rotate the handswitch past desired setting.	Replaced the broken stop, the handswitch operated properly. TR #341285
12/7/82	CRD	Level annunciator LA-85-85A (CRD Discharge Header Water Level High or Equipment Failure) located on XA-55-6C of panel 9-6.	LA-85-85A was not operating properly.	None	Bad annunciator circuitry card.	LA-85-85A inoperable.	Replaced the bad circuitry card, annunciator operated properly. TR #339330
12/18/82	High-Pressure Fire Protection	"B" fire pump strainer breaker.	Breaker chattering excessively.	None	Bad coils and contacts on forward and reversing starters	Excessive chattering of starters.	Replaced the bad starter coils and contacts. The contactors operated properly. TR #326361
12/21/82	Diesel Generators	D/G D annunciator circuitry.	Received a ground fault alarm on panel 9-23-7.	None	Bad annunciator circuitry card.	Received a false ground fault alarm on panel 9-23-7.	Replaced the bad card and the annunciator circuitry operated properly. TR #244909

CSSC EQUIPMENT

## ELECTRICAL MAINTENANCE SUMMARY

For the Month of December 19 82

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
11/25/82	Annunciator & Sequential Events Recording	821T annunciator inverter control cards.	Replacement of 821T annunciator inverter control cards with $\frac{1}{2}$ watt resistors with repaired cards having a 1 watt resistor per manufacturer suggestion.	None	Generic problem with the power rating of a resistor in the inverter control card.	Resistors were overheating and failing at an excessive rate.	<p>Replaced 821T annunciator inverter control cards with <math>\frac{1}{2}</math> watt resistors with repaired cards having a 1 watt resistor. The following annunciator panel's inverter control cards were replaced.</p> <p><u>Panel 9-3</u> XA-55-3A, 3B, 3C, 3D, 3E and 3F</p> <p><u>Panel 9-4</u> XA-55-4A, 4B, and 4C</p> <p><u>Panel 9-6</u> XA-55-6A, 6B, and 6C</p> <p><u>Panel 9-7</u> XA-55-7A, 7B, and 7C XA-55-1(1st out printer)</p> <p><u>Panel 9-8</u> XA-55-8B, 8C, 8D, and 8E</p> <p><u>Panel 9-20</u> XA-55-20A, 20B, and 20C</p> <p><u>Panel 9-53</u> XA-55-53</p> <p>TR #225220</p> <p>Ref. Sept.1982 monthly report for U1 and Cannon</p>

CSSC EQUIPMENT

## ELECTRICAL MAINTENANCE SUMMARY

For the Month of December 19 82

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
12/10/82	Primary Containment	Annunciation relay 16A-K39 on panel 9-42 for torus vacuum relief valve 16-19-11A inboard valve (GE Type CR120A)	Received a false closed annunciation.	None	Bad coil on relay 16A-K39.	Receive a false closed annunciation for valve 16-19-11A.	Replaced the bad relay coil, relay operated properly. TR #303527
12/20/82	RBCCW	Feeder breaker (shtd. bd. 2A, compt. 2C) for 2A-1 drywell blower.	2A-1 drywell blower motor would not start from panel 9-25.	None	Dirty contacts on breaker relay 52X and breaker latch out-of-adjustment.	2A-1 drywell blower inoperable.	Cleaned contacts and adjusted latch. Meggered motor and returned blower to service. TR #339208

CSSC EQUIPMENT

## ELECTRICAL MAINTENANCE SUMMARY

For the Month of December 19 82

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
11/27/82	CRD	Power Supply 3A-PS6.	No power to CRD select panel.	None, no scram functions effected.	Bad (3A-PS6) power supply.	Lost power to the rod select push-button panel and select relay modules located in panel 9-18. Operator was unable to manually select (move) rods.	Replaced the bad power supply. The rod select panel was functionally checked and returned to service. TR #275492
12/2/82	Diesel Generators	D/G 3D annunciator circuitry.	Received a D/G 3D control circuit ground annunciation.	None	Bad annunciator circuitry card.	Received a false annunciation.	Replaced the bad annunciator card, trouble alarm cleared. TR #269571
12/3/82	Air Conditioning (Cooling-Heating)	Shutdown boardroom air handling unit 3B1.	Air handling unit 3B1 fan motor base twisted.	None	Air handling unit fan bearings were bad.	Fan locked up which twisted the fan motor base off.	Replaced motor, unit operated properly. TR #277447
12/13/82	Containment Inerting	Drywell supply chamber H <sub>2</sub> O <sub>2</sub> analyzer failure annunciator circuitry.	Annunciator failed.	None	Loose annunciator circuitry card.	Ann. 76-89 inoperable.	Inserted card full in and the annunciator operated properly. TR #265311



CSSC EQUIPMENT

## ELECTRICAL MAINTENANCE SUMMARY

For the Month of December 19 82

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
12/18/82	Diesel Generators	D/G 3C control power "off" annunciation relay NVR.	While D/G 3B was inoperable for scheduled battery discharge test, annunciation "Diesel Generator 3C Control Power OFF" was received.	D/G 3C was declared inoperable, an IP-2 was declared, and an orderly shutdown of unit 3 was initiated. Diesel Gen. 3B was returned to service before unit trip was necessary.	Failed coil in relay NVR.	This relay's only function is annunciation, therefore this relay's failure in itself did not make the diesel generator inoperable. However, the diesel generator was taken out of service for corrective maintenance.	The NVR relay was replaced, SI 4.9. A.1 Supplement A was performed and D/G 3C returned to service. TR #314310 LER#BFRO-296/8265
12/23/82	Air Conditioning (Cooling-Heating)	3B control bay chiller.	3B control bay chiller was not cooling properly.	None	Low of freon, bad pilot expansion valve.	Chiller would not cool properly.	Replaced the pilot expansion valve, charged unit and performed EMI 60. The chiller operated properly. TR #277484

FIELD SERVICES SUMMARY

December 1982

Major Work AreasI. Work Synopsis

The principle work efforts completed during this December report period include torus internal modifications necessary for torus fill, torus coating, torus fill, the piping portion of PO392 (CRD Scram Discharge Header Modification - Less Hangers and Supports) and CCW Inlet Tunnel Joint Modification.

Major work still in progress at the close of this report period includes LPCI modification (L1845) tie-in work on Loop I (Loop II tie-in and testing was completed), MSIV reassembly work (all valves have now passed LLRT).

II. Major Work Areas

- A. Refuel area - the primary effort on the refuel floor during the month of December was the installation of 20 jet pump plugs. The plug installation required to drain down the recirculation risers to allow x-rays to be performed on recirculation riser weld indications. The jet pump plugs have not been removed but will be removed prior to fuel loading.
- B. Turbine - the thermocouple modification on the "B" low-pressure turbine (PO630) was completed this month. This modification installed two thermocouples from the 12th stage diaphragm turbine end to a junction box on the turbine. This required bringing in a portable milling machine to mill the diaphragm and the horizontal joint.

FIELD SERVICES SUMMARY

December 1982

II. Major Work Areas

## B. (Continued)

The number one coupling boring task was also completed. Eighteen of 18 holes required boring, and fabrication of 18 new bolts was also required.

Currently reassembly of the "B" low-pressure turbine is in progress with installation of the heat shields on the inner cylinder.

The RFPT's governor checks and alignment of controls was also completed on December 1.

- C. Electrical - Work continued this month on the LPCI modification. LPCI loop II tie-ins were complete along with a successful post-mod test. Loop II is required for fuel loading. The Loop I tie-in is approximately 98 percent complete and projected to be completed by January 4, 1983. It should be noted that the original plan required Loop I completion prior to Loop II. The electrical portion of P0392 was completed and awaits instrumentation calibration and post-modification testing to see if any additional adjustments in the last monthly report were resolved by receipt of the original valve design and resolution of level transmitter response time. Other electrical work performed this month includes: LPRM testing, additional conduit hanger work on P0590, and cable-pulling in support of the two new MSRV's that have been installed (L2115).



FIELD SERVICES SUMMARY

December 1982

II. Major Work Areas

## C. (Continued)

Emergency lighting (PO479) was continued on a manpower availability routine, and PO624 (new cables to torus vacuum breakers) was started this month. The recirculation MG set brush holder modification (PO600) is still being fabricated at the service shop. Preparation is underway to install the limit switches on the inboard MSIV's in order to support fuel loading. The torus feeders, etc., were removed in support of torus fill.

D. Mechanical - The mechanical portion of PO392 was completed this month with the exception of approximately 14 hangers which were added during the month on the vent and drain piping. A successful hydrostatic test was conducted on December 24. Preparations are underway to install water scram discharge header sleuths and manometers to support instrument calibration prior to post-modification testing.

All MSIV's have been modified and reassembled to a point where the LLRT was performed and all valves passed. Final assembly is in progress with emphasis being placed on the inboard valves in order that limit switches can be completed to give proper indication of the valve position in the control room.

FIELD SERVICES SUMMARY

December 1982

II. Major Work Areas (Continued)

## D. (Continued)

## Other Mechanical Work:

1. All probolog has been completed and the final two feedwater heaters are being plugged. All other heaters/coolers/water-boxes have been plugged, if required, and closed up. The retubed hydrogen cooler "D" was also received and installed.
2. The MSRV's have been installed on the header and the inlet flanges torqued.
3. The "M" and "N" tailpipe work continued with hangers and supports taking most of the effort. Three x-ray welds remain on "N" line.
4. Work in the H2/O2 modification (P0361M) continued but not on a full-time basis. This work will be complete in time to support ILRT.
5. The inlet tunnel seal joint repairs P0311/400 were completed with five joints requiring repairs. We were unable to pump down the outlet tunnel to conduct inspection.
6. The 2D RHR heat exchanger modification locking tab modification P0366 was completed and returned to service.
7. P0386 stroke time on containment purge valves is still in work but is approximately 90 percent complete.

FIELD SERVICES SUMMARY

December 1982

II. Major Work Areas (Continued)

## D. (Continued)

## Other Mechanical Work: (Continued)

8. PO#28 install 2 debris screens - One screen was installed this month and the other is working as manpower is available.
9. The repairs on the dampers and ventilation ducts on "A" and "B" drywell coolers is approximately 85 percent complete and will be complete in early January.
10. Eighty-six trouble reports have been generated by the ISI inspection, and so far 79 have been closed out.
11. Changeout of hydraulic snubber seals continued during the month of December.
12. The field work was completed on the Yarway column snubbers.
13. PO580 ILRT flanges to prefilter for drywell control air - No work was performed on this modification due to material availability. The material was received in late December and only one shift of work remains.
14. PO612 - Install 1/2-inch SS flex line from control air to MSRV solenoids; 7 of 13 lines are installed and all pre-fabrication is complete.
15. Condenser - All condenser work was completed this month and the condenser was released to operations.

FIELD SERVICES SUMMARY

December 1982

II. Major Work Areas (Continued)

E. Modifications - Reviewed work plans in support of the U2 C4 outage. Expedited the solution of modification-related problems through EN DES via Chattanooga Field Services Modification Group. Started preparatory work for unit 1 cycle 5 outage. Responded to LER's and CCPR's.

F. Torus

During the early part of December, sandblasting and painting efforts continued and setup for heatcuring started. Modification work inside of torus continued in bays 15 and 16 which were released on December 4, 1982 for painting. On December 6, 1982 heatcuring of bay 9 was started, but problems with heat controllers delayed completion until December 7, 1982 and setup started immediately in bay 10. Heatcure was completed on December 12, 1982. By this time strong efforts were being made to move out of the torus and to prepare for fill. SRV test instrumentation inside and outside of the torus was proceeding on schedule. Sandblasting and painting efforts started on November 18, 1982 and painting was completed on December 11, 1982 leaving touchup and washdown prior to torus fill. On December 21, 1982 the torus was mechanically complete for water-fill but closeout of workplans delayed torus fill until December 23/82 at 2400 hours. After the holidays, work resumed inside the torus with punchlist work such as installation of new hatch, vacuum breaker conduit, grating boltdown, etc. (above waterline work).

FIELD SERVICES SUMMARY

December 1982

II. Major Work Areas (Continued)

## F. (Continued)

Outside the torus, lap-plate work and ECCS header snubber installation continued throughout the month of December. On December 16, 1982 several torus snubbers were found to have leaking seals and installation of snubbers stopped until the vendor's recommendations were obtained. By the end of December the vendor had completed preliminary inspection and made arrangements to start repair of 10 snubbers of 16 total.

G. Administrative - The overtime percentage for the month of November was 27 percent, with 139,351 straight-time hours and 51,034 overtime hours. As of November 30, 1982, year-to-date overtime percentage was 24 percent, with 294,216 hours straight time hours and 95,048 overtime hours. The overall overtime goal is 17 percent.

The O & M budget for November was \$2,933,602; expenditures were \$2,593,700, with YTD budget being \$5,360,228; and actual YTD expenditures were \$4,988,700. The capital budget was \$3,885,987; expenditures were \$2,003,222, with YTD budget being \$7,659,773; and actual YTD expenditures were \$3,831,982. Overall budget was \$6,819,589 and the overall expenditures were \$4,596,922 with YTD budget being \$13,020,001. Actual YTD expenditures were \$8,820,681. The December overall budget is \$6,308,234.