

TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER
BROWNS FERRY NUCLEAR PLANT

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

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

Submitted by: *A.T.J. am*
Plant Superintendent

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Operations Summary

July 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 14 reportable occurrences and three revisions to previous reportable occurrences reported to the NRC during the month of July.

Unit 1

There were no scrams on the unit during the month.

Unit 2

There were five scrams on the unit during the month. On July 19, the reactor scrambled on high APRM signals caused by a pressure transient when a main steam pressure sensing line for the EHC system failed. The reactor scrambled on July 20 when a boot was not removed from a MSIV relay during an instruction which gave the RPS logic a false signal of two MSIVs going closed. On July 21, the reactor scrambled when the turbine tripped on low condenser vacuum caused by a SJAЕ third stage isolating due to an increase in discharge pressure. The reactor scrambled again on July 21 after the turbine tripped from low condenser vacuum caused when the unit was placed in the run mode at less than optimal conditions on the SJAЕs. On July 30, the reactor was manually scrambled when power dropped to less than 30 percent and RWM/RSCS had not and could not be proven operable. Power dropped to less than 30 percent when a feedwater signal dropped out because of a leak at the feedwater flow transmitter which caused the recirculation pumps to run back to minimum speed. The last scram began the unit 2, EOC-4 refuel and maintenance outage.

Operations Summary

July 1982

Unit 3

There was one scram on the unit during the month. On July 31, the reactor was manually scrammed to comply with a limiting condition for operation (LCO) when secondary containment could not be verified.

Operations Summary (Continued)

July 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	0.00552	0.00448	0.00383
Feedwater nozzle	0.26960	0.19544	0.14503
Closure studs	0.21420	0.14759	0.12539

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

Common System

Approximately $2.40E+05$ gallons of waste liquids were discharged containing approximately $1.81E-01$ curies of activities.

Operations Summary (Continued)

July 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 is in progress to increase the spent fuel pool capacity to 3,471 assemblies.

Unit 2

Unit 2 began for its fourth refueling on July 30, 1982 with a scheduled restart date of January 31, 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 fuel assemblies into the core; TMI-2 modifications; post-accident sampling facility tie-ins, and changeout of jet pump hold-down beams.

There are 764 fuel assemblies in the reactor vessel. At the end of the month there were 248 new fuel assemblies; 353 EOC-3 fuel assemblies; 156 EOC-2 fuel assemblies; and 132 EOC-1 fuel assemblies in the spent fuel

Operations Summary (Continued)

July 1982

Refueling InformationUnit 2 (Continued)

storage pool. The present available capacity of the spent fuel pool is 861 locations.

Unit 3

Unit 3 is scheduled for its fifth refueling on or about August 1, 1983, with a scheduled restart date of November 28, 1983. 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

<u>Date</u>	<u>Time</u>	<u>Event</u>
7/01/82	0001	Reactor thermal power at 75% for control rod pattern adjustment.
	0100	Reactor thermal power at 72% for control rod pattern adjustment.
	0130	Commenced power ascension from control rod pattern adjustment.
	0400	Commenced PCIOMR from 77% thermal power (Sequence "A").
	1620	Commenced reducing thermal power from 86% to place "C" string high-pressure heater in service.
	1715	Reactor thermal power at 79%, "C" high-pressure heaters in service, commenced PCIOMR (Sequence "A").
	1930	Stopped PCIOMR to remove "B" string high-pressure heaters from service for maintenance, reactor power at 87%.
	2300	Commenced PCIOMR from 87% thermal power (Sequence "A").
7/02/82	0700	Reactor thermal power at 93%, for "B" string high-pressure heater maintenance.
	1400	Reactor thermal power at 92%, for "B" string high-pressure heater maintenance.
	2200	"B" string high-pressure heaters in service, commenced power ascension.
7/03/82	0001	Commenced PCIOMR from 94% thermal power (Sequence "A").
	0800	Reactor thermal power at 99%, maximum flow, rod limited.
7/04/83	0300	Commenced reducing thermal power for SI 3.4.3.A.2 (CRD Exercise).
	0400	Reactor thermal power at 96% for CRD exercise.
	0440	CRD exercise complete, commenced power ascension.
	0500	Reactor thermal power at 99%, maximum flow, rod limited.
7/05/82	0230	Commenced reducing thermal power for control rod pattern adjustment.
	0400	Reactor thermal power at 76% for control rod pattern adjustment.
	0452	Control rod pattern adjustment complete, commenced power ascension.
	0700	Commenced PCIOMR from 84% thermal power (Sequence "A").
	2200	Reactor thermal power at 99%, maximum flow, rod limited.

Significant Operational Event

Unit 1

<u>Date</u>	<u>Time</u>	<u>Event</u>
7/09/82	2130	Commenced reducing thermal power for removal of bus duct cooling fan from service for maintenance.
7/10/82	0300	Reactor thermal power at 52% for maintenance to bus duct cooling fan.
	0350	Bus duct cooling fan back in service, commenced power ascension.
	0630	Commenced PCIOMR from 88% thermal power.
	0800	Reactor thermal power at 99%, maximum flow, rod limited.
	1130	Adjusting control rods to clear rod blocks, reactor power at 99%.
	1500	Reactor power at 98% due to rod adjustment to get off of rod blocks.
	1835	Commenced power ascension from 98% thermal power.
	1900	Reactor thermal power at 99%, maximum flow, rod limited.
7/15/82	0930	Commenced reducing thermal power to remove "B" CCW pump froms service (high backpressure).
	1500	Reactor thermal power at 86%, holding due to high backpressure.
	1855	"B" CCW pump back in service, commenced power ascension.
	2000	Commenced PCIOMR from 95% thermal power.
	2300	Reactor thermal power at 73% for control rod pattern adjustment.
	2220	Commenced reducing thermal power from 98% for control rod pattern adjustment.
7/16/82	0050	Commenced PCIOMR from 73% thermal power (Sequence "A").
	1630	Stopped PCIOMR at 93% due to high backpressure.
	2330	Reduced thermal power to 90% for control rod exercise, turbine control valve tests and SIs.
7/17/82	0210	Control rod exercise, turbine control valve tests and SIs complete, commenced power ascension.
	0220	Commenced PCIOMR (Sequence "A").
	0700	Reactor thermal power at 97%, limited by high backpressure.
	1500	Reactor thermal power at 95% due to high back-pressure.

Significant Operational Event

Unit 1

<u>Date</u>	<u>Time</u>	<u>Event</u>
7/18/82	0700	Reactor thermal power at 99%, high backpressure limited.
	0920	Reduced thermal power to 65% due to loss of reactor zone ventilation (main steam tunnel temperature increase)(bad coil found on relay K-73 in panel 9-42).
	0940	Reduced thermal power to 57% due to loss of reactor zone ventilation. (Main steam tunnel temperature increase).
	1040	Commenced PCIOMR from 57% power (Sequence "A").
	1500	Reactor thermal power at 99%, maximum flow, rod limited.
	1600	Reduced thermal power to 90% due to high backpressure.
	1800	Commenced PCIOMR from 90% thermal power (Sequence "A").
	2330	Reactor thermal power at 95%, holding due to high backpressure.
7/19/82	0145	Reduced thermal power to 86% due to high backpressure.
	0652	Commenced power ascension from 85% thermal power.
	0730	Reactor thermal power at 95%, holdig due to high backpressure.
7/20/82	1310	Commenced reducing thermal power due to high backpressure.
	1500	Reactor thermal power at 91% due to high backpressure.
7/21/82	0700	Reactor thermal power at 92% due to high backpressure.
	1500	Reactor thermal power at 91% due to high backpressure.
7/22/82	0130	Commenced reducing thermal power to backwash and precoat condensate demineralizers.
	0400	Reactor thermal power at 82% for backwash and precoat of condensate demineralizers.
	0500	Backwash and precoat of condensate demineralizers complete, commenced power ascension.
	0800	Reactor thermal power at 94% due to high backpressure.
	1327	Commenced reducing thermal power to backwash and precoat condensate demineralizers.
	1900	Reactor thermal power at 83% for backwash and precoat of condensate demineralizers.

Significant Operational Event

Unit 1

<u>Date</u>	<u>Time</u>	<u>Event</u>
7/23/82	0555	Commenced power ascension from 83% thermal power. Reactor thermal power at 90%, high backpressure limited.
	1500	
7/24/82	2300	Reactor thermal power at 89%, high backpressure limited.
	1005	Commenced power ascension from 89% thermal power. Reactor thermal power at 90%, high backpressure limited.
1100		
7/24/82	1437	Reducing thermal power due to high temperatures in cooling towers.
	1500	Reactor thermal power at 85% due to cooling tower high temperatures.
	1600	Commenced power ascension from 85% thermal power. Reactor thermal power at 89%, high backpressure limited.
	2300	
7/26/82	0400	Reactor thermal power at 90%, high backpressure limited.
7/27/82	0700	Reactor thermal power at 89%, high backpressure limited.
	1500	Reactor thermal power at 88%, high backpressure limited.
	1640	Reduced thermal power to 86% due to high backpressure.
7/28/82	0435	Commenced power ascension from 86% thermal power. Reactor thermal power at 91%, high backpressure limited.
	0700	
	0800	Reactor thermal power at 90%, high backpressure limited.
	1000	Reactor thermal power at 89%, high backpressure limited.
	1100	Reactor thermal power at 88%, high backpressure limited.
	2005	Reduced thermal power to 82% due to high backpressure.
7/29/82	0200	Reactor thermal power at 83%, high backpressure limited.
	0640	Commenced power ascension from 83% thermal power. Commenced reducing thermal power from 94% for maintenance on "B" string high-pressure heaters.
	0700	
	0715	Reactor thermal power at 89% for maintenance on "B" string high-pressure heaters.

Significant Operational Event

Unit 1

<u>Date</u>	<u>Time</u>	<u>Event</u>
	0730	Commenced PCIOMR from 89% thermal power (Sequence "A").
	1500	Reactor thermal power at 94%, "B" string high-pressure heater maintenance limited.
	1635	Reduced thermal power to 90% to remove "B" CCWP from service for cooling tower level control.
	2050	Commenced reducing thermal power due to high back-pressure.
7/29/82	2300	Reactor thermal power at 85%, high backpressure limited.
7/30/82	2345	Commenced power ascension from 85% thermal power.
7/31/82	0600	Reactor thermal power at 91%, high backpressure limited.
	0720	Commenced reducing thermal power to remove "B" string high-pressure heaters from service for maintenance.
	1015	"B" string high-pressure heaters out of service for maintenance, reactor power at 85%.
	1200	"B" string high-pressure heaters back in service, reactor power at 85%, holding to remove "A" string high-pressure heaters from service for maintenance.
	1445	"A" string high-pressure heaters out of service for maintenance, reactor power at 85%.
	1715	"A" string high-pressure heaters back in service.
	1855	"B" string high-pressure heaters out of service for maintenance, reactor power at 85%.
7/30/82	2400	Reactor power at 86%.
7/31/82	1250	"B" string high-pressure heaters back in service, reactor power at 85%.
	1400	Commenced PCIOMR from 85% thermal power (Sequence "A").
	1500	Stopped PCIOMR at 88% thermal power due to "B" string feedwater heater problems.
	2010	"B" string high-pressure heaters out of service for maintenance on channel relief valve.
	2400	Reactor thermal power at 88% due to maintenance on "B" string high-pressure heaters channel relief valve.

Significant Operational Event

Unit 2

<u>Date</u>	<u>Time</u>	<u>Event</u>
7/01/82	0001	Reactor thermal power at 74%, maximum flow, EOC-4 coastdown.
7/19/82	0352	Reactor Scram No. 135(1) from 67% thermal power on APRM high from a pressure transient caused by failure of the main steam pressure sensing line for the EHC system.
	2148	Commenced rod withdrawal for startup.
7/20/82	0052	Reactor Critical No. 146.
	0304	Rolled T/G.
	0333	Synchronized generator, commenced power ascension.
	1000	Reactor thermal power at 87%, EOC-4 coastdown (Xenon transient).
	1315	Reactor Scram No. 136(2) from 84% thermal power while performing SI 4.1.A.11 (Main Steam Isolation Valve Closure).
	1815	Commenced rod withdrawal for startup.
	2140	Reactor Critical No. 147.
	2220	Stopped rod withdrawal due to maintenance on "B" and "E" IRMs.
	2300	Commenced rod withdrawal for startup.
7/21/82	0110	Rolled T/G.
	0145	Synchronized generator, commenced power ascension.
	0630	Reactor Scram No. 137(1) from 79% thermal power on condenser low vacuum.
	1402	Commenced rod withdrawal for startup.
	1630	Reactor Critical No. 148.
	1740	Reactor Scram No. 138(2) from 4% while going into run mode, on condenser low vacuum.
	2205	Commenced rod withdrawal for startup.
7/22/82	0015	Reactor Critical No. 149.
	0300	Rolled T/G.
	0316	Synchronizd generator, commenced power ascension.
	0348	Reactor power at 19% due to isolation of third stage SJAE "B".
	0410	Reactor thermal power at 23% going on bypass valves due to SJAE "B" problems.
	0437	Generator offline, due to problems with SJAE "B", reactor power at 23%.
	0525	Reducing thermal power by inserting control rods.
	0603	Rolled T/G, reactor thermal power at 22%.
	0625	Synchronized generator, commenced power ascension from 22% thermal power.

Significant Operational Event

Unit 2

<u>Date</u>	<u>Time</u>	<u>Event</u>
7/22/82	1300	Reactor thermal power at 88%, maximum flow, EOC-4 coastdown: (Xenon transient).
7/25/82	0335	Commenced reducing thermal power from 69%, load not needed by system.
	0500	Reactor thermal power at 65%, holding, load not needed by system.
7/25/82	0635	Commenced power ascension from 64% thermal power.
	1200	Reactor thermal power at 69%, maximum flow, EOC-4 coastdown.
7/28/82	1125	Commenced reducing thermal power from 59% due to high backpressure.
	1500	Reactor thermal power at 63% due to high backpressure.
7/29/82	0632	Commenced power ascension from 63% thermal power.
	0652	Reactor thermal power at 68%, maximum flow, EOC-4 coastdown.
7/30/82	1336	Commenced reducing thermal power from 67% due to high backpressure.
	1500	Reactor power at 61% due to high backpressure.
	1700	Commenced reducing thermal power for shutdown for EOC-4 refuel outage.
	1944	Reactor manual Scram No. 139(1) from 28% thermal power on loss of feedwater signal which caused recirculation pump runback, power reduced to 28% without proving RWM and RSCS; therefore a manual scram was initiated in order to control reactor. The unit remains offline for EOC-4 refuel outage.
7/31/82	1215	Reactor in cold shutdown.
	2400	EOC-4 refuel outage.

Significant Operational Event

Unit 3

<u>Date</u>	<u>Time</u>	<u>Event</u>
7/01/82	0001	"A" CCW pump back in service, commenced power ascension from 88% thermal power.
	0200	Reactor thermal power at 99%, maximum flow, rod limited.
7/02/82	0600	Reactor thermal power at 99%, maximum flow, "B" recirculation pump vibration limited.
7/04/82	0555	Commenced reducing thermal power for control rod pattern adjustment.
	0700	Reactor thermal power at 79% for control rod pattern adjustment.
	0730	Control rod pattern adjustment complete, commenced PCIOMR (control cell core).
7/05/82	0500	Reactor thermal power at 99%, maximum flow, rod limited.
7/08/82	0950	Reduced thermal power to 97% to decrease load line due to "B" recirculation pump vibration limits.
	2300	Reactor thermal power at 98%, maximum flow, "B" recirculation pump vibration limited.
7/09/82	2325	Commenced reducing thermal power for turbine control valve tests and SIs.
	2335	Reactor thermal power at 90% for turbine control valve tests and SIs.
7/10/82	0015	Turbine control valve tests and SIs complete, commenced power ascension.
	0035	Reactor thermal power at 99%, maximum flow, "B" recirculation pump vibration limited.
7/15/82	1145	Reduced thermal power to 90% due to high back-pressure.
	1230	Reduced thermal power to 86% due to high back-pressure.
	1832	Commenced power ascension from 86% thermal power.
	2300	Reactor thermal power at 99%, maximum flow, rod limited.
7/16/82	0902	Commenced reducing thermal power due to high back-pressure.
	0915	Reactor thermal power at 90% due to high back-pressure.

Significant Operational Event

Unit 3

<u>Date</u>	<u>Time</u>	<u>Event</u>
7/16/82	0930	Increased thermal power to 95%, holding due to high backpressure.
	1650	Reduced thermal power to 92% due to high backpressure.
7/18/82	1500	Increased thermal power to 93%, high backpressure limited.
	2300	Increased thermal power to 94%, high backpressure limited.
7/19/82	0645	Commenced power ascension from 94% thermal power.
	0830	Commenced PCIOMR from 95% thermal power (control cell core).
	1500	Reactor thermal power at 99%, maximum flow, "B" recirculation pump vibration limited.
	2300	Reactor thermal power at 98%, maximum flow, "B" recirculation pump vibration limited.
7/22/82	1020	Commenced reducing thermal power due to high backpressure.
	1340	Reactor thermal power at 82% due to high backpressure.
	2300	Reactor thermal power at 83% due to high backpressure.
7/23/82	0905	Commenced power ascension from 83% thermal power.
	1000	Reactor thermal power at 90%, holding due to high backpressure.
	1945	Reducing thermal power due to problems with "B" recirculation pump.
	2100	Reactor thermal power at 85%, problems with "B" recirculation pump.
7/24/82	0034	Commenced power ascension from 85% thermal power.
	0130	Commenced pulling rods for control rod pattern adjustment from 87% thermal power.
	0522	Reactor thermal power at 91%, holding due to high backpressure.
	1440	Commenced reducing thermal power due to high backpressure.
	1500	Reactor thermal power at 87% due to high backpressure.
	1635	Commenced power ascension from 87% thermal power.
	1700	Reactor thermal power at 91%, holding due to high backpressure.

Significant Operational Event

Unit 3

<u>Date</u>	<u>Time</u>	<u>Event</u>
7/25/82	0010	Commenced power ascension from 91% thermal power.
	0100	Reactor thermal power at 96%, holding due to high backpressure.
	0338	Reduced thermal power to 92%, load not needed by system.
	0635	Commenced power ascension from 92% thermal power.
	0700	Reactor thermal power at 95% due to high backpressure.
	2300	Reactor thermal power at 94% due to high backpressure.
7/26/82	1820	Commenced reducing thermal power due to high backpressure.
	1900	Reactor thermal power at 90% due to high backpressure.
7/27/82	1647	Reduced thermal power to 86% due to cooling tower high temperatures.
7/28/82	0438	Commenced power ascension from 86% thermal power.
	1000	Reactor thermal power at 93%, due to high backpressure.
	1140	Commenced reducing thermal power due to high backpressure.
	1500	Reactor thermal power at 89% due to high backpressure.
7/29/82	0640	Commenced power ascension from 89% thermal power.
	0700	Commenced PCIOMR from 92% thermal power (control cell core).
	1728	Commenced reducing thermal power from 97% to remove "B" CCWP from service due to high level in cooling towers hot water channel.
	2300	Reactor thermal power at 90% due to high level in hot water channel.
7/30/82	2000	3B CCWP back in service, reactor thermal power at 90%, holding due to high backpressure.

Significant Operational Event

Unit 3

<u>Date</u>	<u>Time</u>	<u>Event</u>
7/31/82	2000	Commenced reducing thermal power from 90% to remove unit from service due to failure of SI 4.7.C.1 (Secondary Containment Capabilities).
	2132	Reactor Scram Manual No. 107(1) from 38% thermal power due to failure of SI 4.7.C.1.
	2400	Unit offline to investigate problems with secondary containment.

(1) Equipment Malfunction

(2) Operator Error

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 5C 259
 UNIT Browns Ferry - 1
 DATE 8-1-82
 COMPLETED BY T. Thom
 TELEPHONE 205/729/0834

MONTH July

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>826</u>	17	<u>949</u>
2	<u>944</u>	18	<u>946</u>
3	<u>1012</u>	19	<u>939</u>
4	<u>1023</u>	20	<u>933</u>
5	<u>933</u>	21	<u>920</u>
6	<u>1029</u>	22	<u>871</u>
7	<u>1015</u>	23	<u>876</u>
8	<u>1016</u>	24	<u>881</u>
9	<u>979</u>	25	<u>901</u>
10	<u>909</u>	26	<u>865</u>
11	<u>1021</u>	27	<u>872</u>
12	<u>1023</u>	28	<u>861</u>
13	<u>1027</u>	29	<u>885</u>
14	<u>1024</u>	30	<u>885</u>
15	<u>943</u>	31	<u>867</u>
16	<u>871</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 8-1-82
 COMPLETED BY T. Thom
 TELEPHONE 205/729/0834

MONTH July

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>746</u>	17	<u>676</u>
2	<u>737</u>	18	<u>691</u>
3	<u>731</u>	19	<u>86</u>
4	<u>728</u>	20	<u>256</u>
5	<u>723</u>	21	<u>80</u>
6	<u>723</u>	22	<u>509</u>
7	<u>712</u>	23	<u>701</u>
8	<u>730</u>	24	<u>669</u>
9	<u>719</u>	25	<u>665</u>
10	<u>714</u>	26	<u>645</u>
11	<u>711</u>	27	<u>664</u>
12	<u>707</u>	28	<u>632</u>
13	<u>700</u>	29	<u>653</u>
14	<u>706</u>	30	<u>563</u>
15	<u>687</u>	31	<u>-20</u>
16	<u>687</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. 50-296
 UNIT Browns Ferry - 3
 DATE 8-1-82
 COMPLETED BY T. Thom
 TELEPHONE 205/729/0834

MONTH July

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>1020</u>	17	<u>931</u>
2	<u>1018</u>	18	<u>960</u>
3	<u>1021</u>	19	<u>971</u>
4	<u>913</u>	20	<u>1015</u>
5	<u>1009</u>	21	<u>1013</u>
6	<u>1030</u>	22	<u>909</u>
7	<u>1024</u>	23	<u>875</u>
8	<u>1011</u>	24	<u>911</u>
9	<u>1011</u>	25	<u>981</u>
10	<u>1021</u>	26	<u>918</u>
11	<u>1020</u>	27	<u>891</u>
12	<u>1022</u>	28	<u>896</u>
13	<u>1027</u>	29	<u>935</u>
14	<u>1024</u>	30	<u>924</u>
15	<u>993</u>	31	<u>791</u>
16	<u>976</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 8-1-82
 COMPLETED BY T. Thom
 TELEPHONE 205-729-0834

OPERATING STATUS

1. Unit Name: Browns Ferry - 1
2. Reporting Period: July 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:
NA

Notes

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

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	<u>744</u>	<u>5,087</u>	<u>70,129</u>
12. Number Of Hours Reactor Was Critical	<u>744</u>	<u>4799.87</u>	<u>44114.67</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>238.73</u>	<u>5453.93</u>
14. Hours Generator On-Line	<u>744</u>	<u>4754.4</u>	<u>43184.57</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>2,177,750</u>	<u>14,634,194</u>	<u>121,509,101</u>
17. Gross Electrical Energy Generated (MWH)	<u>720,160</u>	<u>4,773,370</u>	<u>40,065,820</u>
18. Net Electrical Energy Generated (MWH)	<u>697,038</u>	<u>4,635,354</u>	<u>38,904,263</u>
19. Unit Service Factor	<u>100</u>	<u>93.5</u>	<u>61.6</u>
20. Unit Availability Factor	<u>100</u>	<u>93.5</u>	<u>61.6</u>
21. Unit Capacity Factor (Using MDC Net)	<u>88.0</u>	<u>85.6</u>	<u>52.1</u>
22. Unit Capacity Factor (Using DER Net)	<u>88.0</u>	<u>85.6</u>	<u>52.1</u>
23. Unit Forced Outage Rate	<u>0</u>	<u>6.5</u>	<u>25.3</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 8-1-82
 COMPLETED BY T. Thom
 TELEPHONE 205/729/0834

OPERATING STATUS

1. Unit Name: Browns Ferry - 2
2. Reporting Period: July 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:
NA

Notes

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

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	<u>744</u>	<u>5,087</u>	<u>65,070</u>
12. Number Of Hours Reactor Was Critical	<u>669.73</u>	<u>4,846.51</u>	<u>43,293.47</u>
13. Reactor Reserve Shutdown Hours	<u>45.34</u>	<u>203.06</u>	<u>13,684.82</u>
14. Hours Generator On-Line	<u>656.98</u>	<u>4,778.36</u>	<u>41,975.45</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>1,517,431</u>	<u>13,827,550</u>	<u>120,480,340</u>
17. Gross Electrical Energy Generated (MWH)	<u>475,700</u>	<u>4,592,260</u>	<u>40,024,908</u>
18. Net Electrical Energy Generated (MWH)	<u>453,425</u>	<u>4,450,929</u>	<u>38,873,075</u>
19. Unit Service Factor	<u>88.3</u>	<u>93.9</u>	<u>64.5</u>
20. Unit Availability Factor	<u>88.3</u>	<u>93.9</u>	<u>64.5</u>
21. Unit Capacity Factor (Using MDC Net)	<u>57.2</u>	<u>82.2</u>	<u>56.1</u>
22. Unit Capacity Factor (Using DER Net)	<u>57.2</u>	<u>82.2</u>	<u>56.1</u>
23. Unit Forced Outage Rate	<u>8.2</u>	<u>5.5</u>	<u>27.1</u>

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
Unit 2 Refuel Outage EOC-4 began July 30, 1982

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 8-1-82
 COMPLETED BY T. Thom
 TELEPHONE 205/729/0834

OPERATING STATUS

1. Unit Name: Browns Ferry - 3
 2. Reporting Period: July 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:
NA

Notes

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

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	5,087	47,495
12. Number Of Hours Reactor Was Critical	741.53	1,786.25	34,253.23
13. Reactor Reserve Shutdown Hours	2.47	916.67	3,058.20
14. Hours Generator On-Line	741.53	1,704.26	33,455.04
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,311,452	5,059,306	98,917,926
17. Gross Electrical Energy Generated (MWH)	745,650	1,612,050	32,610,240
18. Net Electrical Energy Generated (MWH)	721,509	1,552,917	31,640,963
19. Unit Service Factor	99.7	33.5	70.4
20. Unit Availability Factor	99.7	33.5	70.4
21. Unit Capacity Factor (Using MDC Net)	91.1	28.7	62.6
22. Unit Capacity Factor (Using DER Net)	91.1	28.7	62.6
23. Unit Forced Outage Rate	0.3	35.7	11.1
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: _____
 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 - 1
 DATE 8-1-82
 COMPLETED BY T. Thom
 TELEPHONE 205/729/0834

REPORT MONTH July

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
228	7/05/82	S		H					Derated for control rod pattern adjustment
229	7/09/82	F		B					Derated to remove bus duct cooling fan for maintenance
230	7/15/82	S		H					Derated for control rod pattern adjustment
231	7/18/82	F		H					Derated due to loss of reactor zone ventilation

23

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 (NURIG-0161)

⁵
 Exhibit I - Same Source

(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-260
 UNIT NAME Browns Ferry - 2
 DATE 8-1-82
 COMPLETED BY T. Thom
 TELEPHONE 205/729/0834

REPORT MONTH July

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
238	7/19/82	F	23.68	A	3				Reactor scram due to failure of the main steam pressure sensing line for the EHC system
239	7/20/82	F	12.50	H	3				Reactor scram while performing SI 4.1.A.11 (MSIV Isolation Valve Closure)
240	7/21/82	F	11.17	H	3				Reactor scram on condenser low vacuum (no generator synch)
241	7/21/82	F	9.60	H	3				Reactor scram on condenser low vacuum
242	7/22/82	F	1.80	H					Turbine tripped due to isolation of 3rd stage SJAE "B" (no reactor scram) (generator offline)
243	7/30/82	S	28.27	H	2				Reactor scram to accommodate EOC-4 refuel outage

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

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH July

DOCKET NO. 50-296
 UNIT NAME Browns Ferry - 3
 DATE 8-1-82
 COMPLETED BY T. Thom
 TELEPHONE 205/729/0834

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
101	7/04/82	S		H					Derated for control rod pattern adjustment
102	7/31/82	F	2.47	H	2				Reactor scram due to failure of SI 4.7.C.1 (Secondary Containment Capabilities)

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)

CSSC EQUIPMENT

INSTRUMENT MAINTENANCE SUMMARY
 FOR THE MONTH OF July 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
U-1							
7-6	74	FR-74-64	Repair	None	Faulty slide wire contact	Erratic indication	None
7-14	65	FIS-65-70B	Repair	None	Faulty photocell	Improper switch operation	None
7-20	73	VR-73-50	Repair	None	Faulty Switch	Loss of channel	None
U-2							
7-12	90	RM-90-249	Repair	None	Faulty flow control motor	Improper sample flow control	None
7-19	46	SC-46-9A	Repair	None	Failed capacitors	Erratic control	None
7-20	64	TIS-64-55	Replace	None	Instrument drift	Incorrect indication	None
U-3							
7-4	90	RM-90-142B	Repair	None	Failed relay	Invalid alarm	None
7-15	77	ET-77-16	Replace	None	Instrument drift	Incorrect output	None

BROWNS FERRY NUCLEAR PLANT UNIT 1 & Common

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of July 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
6/23/82	Air Conditioning (Cooling-Heating)	Shutdown board room exhaust fan 1A	Exhaust fan feeder breaker breaker was tripping	None	Bad fan motor	1A exhaust fan inoperable	The fan motor was repaired at PSS and re-installed per EMI 33. The fan operated properly. TR #342871
7/1/82	Fire Protection	Fire protection panel 1-25-325	Received a trouble alarm for panel 1-25-325	None	The trouble alarm resulted from a power failure to the smoke detectors connected to the panel. The circuit breaker which feeds power to the smoke detectors is soldered to the 'EE' circuit board in the control panel. These soldered connections failed as a result of mechanical stress normally associated with resetting the breaker.	All smoke detectors associated with panel 1-25-325 was inoperable	Patrolling fire watch was established. The 'EE' circuit board assembly was replaced and tested per SI 4.11.3 & 4, then returned to service. TR #310500 LER-BFRO-50-259/8245

BROWNS FERRY NUCLEAR PLANT UNIT 1 & Common

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of July 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
7/3/82	Fire Protection	Fire protection panel 1-25-311	Received a trouble alarm for panel 1-25-311	None	Bad "zone" circuitry card	Required fire zone circuits to be taken out of service in order to replace the bad card	Fire watch was established, circuit card replaced, SI 4.11.C. 3 & 4 successfully performed and the zones returned to service. On 7/5/82 a trouble alarm for panel 1-25-311 re-occurred. The main circuitry card for the panel was replaced, SI 4.11.C.3 & 4 successfully performed and panel returned to service. TR #310419 TR #342896 LER-BFRO-50-259/8246

BROWNS FERRY NUCLEAR PLANT UNIT 1 & Common

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of July 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
7/13/82	Air Conditioning (Cooling-Heating)	1A control bay chiller	Chiller temperature controller failed to operate properly	None	Bad proportional controller module	Temperature controller inoperable	Replaced the proportional controller module and performed EMI 60. The chiller operated properly. TR #282468
7/14/82	EECW	PS-67-55 circuitry	Breaker #305 in panel 9-9 I & C tripped when D-1 RHRSW pump was run	None	Ground wire at cable strap screw in PS-67-55	EECW south header and indications inoperable	Cleared ground, replaced relays AB3X and AD3X in panel 9-36 which were damaged as a result of grounded circuit. TR #310482 TR #282471
7/18/82	Containment Inerting	Relay 16A-K37	Partial primary containment isolation	H ₂ O ₂ Analyzer "A" and "B" inoperable	The coil for relay 16A-K37 burned out causing the relay to fail	Partial primary containment isolation. The isolation resulted in the closure of the isolation valves for "A" and "B" H ₂ O ₂ Analyzers, thereby preventing sampling of the Torus and drywell atmospheric conditions	The bad relay coil was replaced and the H ₂ O ₂ analyzers and other systems affected by the partial primary containment isolation were returned to normal. TR #273285 LER-BFRO-50 259/8248

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of July 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
7/27/82	4KV Shut-down Boards and Buses	Degraded voltage relays	During the performance of recurrence control calibration (BFRO-50-296/8213) of degraded voltage relays (SI 4.9.A.4.C) 1 degraded voltage on 4KV shtd. bd. A, 1 on 4KV shtd. bd. B, and 2 on 4KV shtd. bd. C were found to operate slightly above the required 3900 to 3940 volt range.	None, setpoint drifts were in the conservative (higher voltage) range	Increased temperature in the boardrooms is suspected	All 4 relays' trip setpoints were found to operate at 3941.7 as opposed to the required 3900 to 3940 volt range.	The relays were recalibrated to the correct setpoint. The setpoint drift problem is now being evaluated by TVA Engineering Design. TR #342718 LER-BFRO-50-259/8250

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of July 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
7/1/82	Radiation Monitoring	RA 90-272 circuitry	"Drywell Radiation High" (RA 90-272) annunciation came in and would not clear	None	Wire 2M610 in cable 2A2369 shorted to shield	Received a false "Drywell Radiation High" annunciation	Used spare cable to replace cable 2A2369. Returned RA 90-272 to service. TR #170902 TR #252221
7/20/82	Containment Inerting	FSV-2-76-65	During the performance of SI 4.7.D.1.B.1-(A) H ₂ monitor "B" (FSV-2-76-65) failed	H ₂ monitor "B" was made incapable of monitoring the torus	Bad solenoid valve (FSV-2-76-65)	H ₂ monitor "B" was made incapable of monitoring the torus	The solenoid assy. was replaced. The valve failed again during the performance of SI 4.7.D.1.B.1-(A). The solenoid valve will be repaired during the refueling outage. TR #282482 LER-BFRO-50-260/8221

BROWNS FERRY NUCLEAR PLANT UNIT 3CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of July 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
7/1/82	Diesel Generators	3D diesel generator relay LWD	Low water annunciation would not clear during annual inspection (SI 4.9.A.1.d)	None	LWD relay contacts (bad) stuck	Low water annunciation would not clear	Replaced the bad relay per EMI 23. SI 4.9.A.1.d was successfully completed. TR #282456 TR #200626
7/15/82	RHRWS	"D1" RHRWS pump "running" auxiliary relay (ADIX)	Bad relay	None	Relay was damaged due to ground. (See 7-14-82 on U-1, TR #310482)	Bad relay	Replaced relay per EMI 23, ran pump, relay operated properly. TR #282472
7/16/82	4KV Shutdown Boards and Buses	Degraded voltage relay timers	While performing SI 4.9.A.4, C 2 degraded voltage relay timers, 1 each on 4KV shtd. bd. 3EC and 3ED, were found set at 0.26 second as opposed to 0.27 to 0.33 second. One timer on 4KV shtd. bd. 3EC was found set at 7.63 seconds as opposed to 6.21 to 7.59 seconds	None, loss of voltage relays were operable	The degraded voltage timer setpoints were changed slightly in a 3/29/82 unit 3 Tech. Spec. revision. SI 4.9.A.4.C was revised to incorporate these minor setpoint changes and performed to assure timer settings were in conformance with new settings.	Three degraded voltage relay timers were found slightly out of new setpoint range	The timers were adjusted to bring within tolerance and returned to service. TR #196525 LER-BFRO-50-296/8231

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of July 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
7/19/82	High-Pressure Fire Protection	"A" Fire pump strainer circuitry	Bad "2T" relay coil	None	Relay coil burned	"A" fire pump strainer inoperable	Replaced the bad relay per EMI 23 and timed per EMI 15. TR #273291
7/22/82	4KV Shutdown Boards and Buses	Degraded voltage relays	During the performance of recurrence control calibration (BFRO-50-296/8213) of degraded voltage relays (SI 4.9.A.4.C) 2 degraded voltage relays on 4KV shutdown bd. 3EB and 1 on 4KV shutdown 3ED were found to operate slightly above the required 3900 to 3940 volt range.	None, setpoint drifts were in the conservative (higher voltage) range	Increased temperature in the box rooms is suspected	These relays' trip setpoints were found to range from 3940.3 to 3944.15 volts as opposed to the required 3900 to 3940 volt range.	The relays were recalibrated to the correct setpoint. The setpoint drift problem is now being evaluated by TVA Engineering Design. TR #225034 LER-BFRO-50-296/8232

BROWNS FERRY NUCLEAR PLANT UNIT COMMONCSSC EQUIPMENT

MECHANICAL MAINTENANCE SUMMARY

For the Month of July 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
7-13	D/G	C Engine U-1&2	change oil in governor	None	Unknown	None	Changed oil in governor TR# 337840
7-20	D/G	D Engine U-1&2	oil needed changing	None	oil needed changing	None	Changed oil TR# 337841
7-20	D/G	Diesel Fire Pump	radiator cap blew & needs replacing	None	diesel fire pump hot & blew cap	cap was beyond repair	Replaced radiator cap TR# 207167

CSSC EQUIPMENT

MECHANICAL MAINTENANCE SUMMARY

For the Month of July 1982

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
7- 2	HPCI	HPCI turbine	water in oil.	None	Unknown	water in oil.	Pumped old oil out, clear d sump & added new oil. TP# 311939
7-6	HPCI	pipe hanger on fire protection line	faulty hanger on line	None	Unknown	loose pipe	Tightened pipe hanger on line TR# 310432
7-19	HPCI	HPCI turbine	drain water from bottom of hyd. oil tank				
7-14	RHR	check valves	faulty valves	None	worn gaskets & dirty piston	valve not operating properly	Cleaned piston & installed new gasket TR# 315960
7-23	RHR SW	pump B-1	leak	None	faulty valve	vacuum breaker leaking thru	Replaced air release valve 4" & 1" TR# 316090
7- 3	LPCI MG	LPCI MG Set 1EN	high vibration	None	bad bearings	flywheel bearings noisy & vibrating	Changed bearings TR# 311938
7-7	RCIC	LCV-71-5	leak	None	worn packing	steam leak	Replaced valve TR# 338917
7-8	Control Air	1B control bay chiller	faulty chiller	None	metal around flange bolt holes breaking away	chiller would not function properly	Replaced filter, o'ring & psi gauge TR# 316060

CSSC EQUIPMENT

MECHANICAL MAINTENANCE SUMMARY

For the Month of July 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
7- 8	HPCI	HPCI turbine	moisture analysis	None	None	oil sample taken	Took oil sample & reinstalled drain plug TR# 216478
7- 6	Fuel Pool Cooling	pumps A & B	lubricate bearings	None	None	bearings needed lubrication	Lubricated bearings on A & B pumps C-P-1 TR# 170912

BROWNS FERRY NUCLEAR PLANT UNIT 3CSSC EQUIPMENT

MECHANICAL MAINTENANCE SUMMARY

For the Month of July 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
7- 8	HPCI	HPCI turbine	moisture analysis	None	None	check for water in oil	Took sample of lube oil & replaced plug TR# 216477
7- 6	D/G	B engine standby	oil needed changing	None	None	changed oil & refilled with MO-3	Changed oil in governor TR# 337837
7- 8	D/G	#1 air compressor	blown head gasket	None	Unknown	blown head gasket	Replaced head gasket TR# 273349
7- 8	D/G	#2 air compressor on 3EA D/G	blown head gasket	None	Unknown	blown head gasket	Replaced head gasket TR# 315950

FIELD SERVICES SUMMARY

July 1982

WORK SYNOPSIS

Work completed during this monthly period: completed EPA modifications, prefabrication of the "N" and "M" MSRV tailpipes, and preparing the fabrication shop with a stainless steel work area for the unit 2 cycle 4 refueling outage. Work that is continuing: prefabrication work on the scram discharge header modification (P0392); rebuild of Atwood Morrel 26-inch valve manifold and air operator; set up of Field Services welding facility; provide temporary operations training facility in the hypochlorite building; security diesel generator building (P0286); update of the CCTV system (P0287); post accident sampling facility (P0314); installation of temporary power feeders for power pack supplies for Field Services outage work; LPCI MG set (L1845); automatic backwash modification (L2052); and emergency lighting installation (P0479). The unit 2 cycle 4 refueling and major modification outage started at 1944 hours on July 30, 1982.

REFUEL AREA

Quadrex completed decontamination of the old spent fuel racks. The repair of the hydrolazer machine was completed. The reactor building overhead crane 125-ton wire rope was replaced and tested satisfactorily.

TURBINE

The IQT contract for sandblasting was let to Newsom and Work Metallizing Company. The materials were ordered the reactor feed pump rotating elements were received this month. Preparations for turbine disassembly have been completed.

FIELD SERVICES SUMMARY

July 1982

ELECTRICAL

The major work during the past month has been: (1) LPCI modifications (L1845) - installation of conduit and hangers on elevation 621 and 639 is continuing. (2) L2052 automatic backwash system for RCW strainers unit 1, 2, and 3 - installing brackets, conduit, and junction boxes. Completion: unit 1 - 52%, unit 2 - 54%, and unit 3 - 26%. This modification has suffered gaps in work continuity due to manpower availability. (3) Update CCTV System (P0287) - continued power and control wiring at various cameras and wiring at CAS. (4) Illuminate exterior of the protected area (P0286) - installation of the diesel generator control wiring, doors, and locks is continuing. (5) Install emergency lighting (P0479) - mounting lighting brackets in all three units was completed and review of these work plans is in progress. Work plan 8539 for the electrical connections is in the approval cycle. (6) Other electrical work: torus feeder preparations, support work, electrical inspections of cords, tools, and lights and telephone maintenance.

MECHANICAL

During the month of July, the Field Services Group Mechanical Section devoted most of its time to preparing for the unit 2 cycle 4 refueling outage. This work primarily consisted of prefabrication work for modifications such as the scram discharge header, tailpipe installations, and various TRs which support the unit 2 cycle 4 outage. The major work activities in progress are: (1) replace automatic deluge valves to the

FIELD SERVICES SUMMARY

July 1982

MECHANICAL (Continued)

unit 1 HPCI fire protection (P0520), (2) prefabrication of CRD scram discharge header materials (P0392). Other mechanical work includes: fabrication of segregated stainless steel work area, fabrication of weld stations, and hanger inspections (IEB 79-14 and 79-02).

MODIFICATIONS

Review of unit 2 cycle 4 modification work and processing work plans.

PLANNING AND SCHEDULING

The unit 3 cycle 4 outage report is being written and assimilated. Development of the computerized project management program and the overall modification and maintenance planning effort has suffered from lack of a firm modification listing and frequent changes to the outage work scope. Changes to the outage work scope at this late date will have a significant impact on the quality of the planning effort.

TORUS

During the first week of July all torus tie-down work was completed with the exception of weldout of MKIIs which will be accomplished during the outage.

Temporary ECCS Supports: Work continued with the installation of the temporary ECCS supports followed by permanent ECCS header support. By the end of the month the status was as follows: #2 - 15%, 3 - 10%, 6 - 20%, 7 - 0%, 8 - 90%, 10 - 0%, 11 - 10%, 12 - 95%, 14 - 10%, 15 - 0%, and 1, 4, 5, 9, 13 and 16 are 100% complete.

External Ring Reinforcing: # 1, 2, 3, 4, 5, 8, 9, 12, 13 and 16 are complete with partial weldouts until shutdown.

FIELD SERVICES SUMMARY

July 1982

TORUS (Continued)

Torus Snubbers: Installation of brackets for torus snubbers started the first week of July. Anchor bolt drilling for wall brackets was completed at RG #1 and 13 and RG #4 and 5 are 50 percent completed. RG lugs and gussets were installed on external RG reinforcing #1 - 90%, 2 - 20%, 3 - 20%, 4 - 85%, 5 - 85%, 8 - 90%, 9 - 85%, 12 - 80%, 13 - 80%, and 16 - 25% complete. Preparatory work for the scheduled shutdown on July 30, 1982 continued throughout the month of July.

SPECIAL PROJECTS

(1) Dewatering pump modification (P0252) - the vendor was onsite last week and the diesel pump was satisfactorily functionally tested. (2) Hypo-chlorite building - The construction work on the operations classroom facilities is essentially completed with the exception of some interior finish work.

ADMINISTRATIVE

As of June 6, 1982, fiscal year-to-date straight-time hours worked were 1,443,938 and overtime hours worked were 360,868.5. The overtime percentage is 20 percent. The overtime percentage for month of June was 3 percent based on 91,119 straight time hours and 3,215.5 overtime hours. The overtime percentage for July is approximately 9 percent.

The O&M budget through June 30 was \$23,657,564 and expenditures were \$21,755,657. The capital budget through June 30 was \$25,471,420 and expenditures were \$24,556,590. Overall budget was \$49,074,984 and expenditures were \$46,312,247. Overall actual expenditures on the budget were \$2,762,737 less than the YTD estimate.

FIELD SERVICES SUMMARY

July 1982

ADMINISTRATIVE (Continued)

On July 12, 1982 staffing for the unit 2 cycle 4 refueling/torus outage began. During the period from July 12 through July 31, 144 additional employees were hired. Two payroll clerks were reassigned to better utilize personnel.

Plans were implemented to conduct initial employee training outside the security area to reduce escort requirements.