

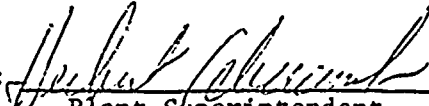
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION
BROWNS FERRY NUCLEAR PLANT

MONTHLY OPERATING REPORT

December 1, 1979 - December 31, 1979

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

Submitted By:


Plant Superintendent

8001150

488

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Operations Summary

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

There were fourteen reportable occurrences reported to the NRC during the month of December.

Unit 1

There were no scrams on the unit during the month.

Unit 2

There were three scrams on the unit during the month. On December 2, the reactor scrammed due to abrupt movement of the turbine control valves apparently caused by EHC pressure control problems. The turbine control valves abruptly opened, then started closing, leading to a high neutron flux scram. The reactor was manually scrammed on December 13 to investigate vibration on the 2A recirculation motor, pump, and associated piping. On December 17, the reactor was manually scrammed for implementation of modifications of certain PCIS valves and the installation of acoustic monitoring instrumentation on the MSRVS.

Unit 3

Operations Summary (Continued)Unit 3

Unit startup (BOC-3) following a refuel outage began on December 6. The unit scrambled once during the month. On December 30, the reactor was manually scrambled to install overhead cables from the cooling tower switch gear to the bus tie boards.

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	0.00421	0.00317	0.00283
Feedwater nozzle	0.20264	0.13592	0.10480
Closure studs	0.17644	0.11572	0.08561

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

Common Systems

Approximately 1.13E+06 gallons of waste liquid were discharged containing 2.75E+00 curies of activity.

Refueling InformationUnit 1

Unit 1 is scheduled for its third refueling beginning on or about January 3, 1980, with a restart date of February 19, 1980. This refueling will involve loading additional 8 x 8 R (retrofit) fuel assemblies into the core, replacing presently loaded 7 x 7 fuel, LPCI modifications, installing acoustical monitors on MSRVS, and containment isolation modifications.

There are 764 fuel assemblies in the reactor vessel. The spent fuel storage pool presently contains 322 spent 7 x 7 fuel assemblies, two 8 x 8 R fuel assemblies, and 252 new fuel assemblies. Because of modification work to increase spent fuel pool capacity to 3471 assemblies, present capacity is limited to 720 assemblies. With present capacity, Unit 1 does not have full core discharge capability in the pool.

Unit 2

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

There are 764 fuel assemblies in the reactor vessel. At the end of the month, there were 132 discharged cycle 1 fuel assemblies and 268 discharged cycle 2 fuel assemblies in the spent fuel storage pool. The present storage capacity of the spent fuel pool is 1080 assemblies. With present capacity, the 1979 refueling would be the last refueling that could be discharged to the spent fuel pool without exceeding that capacity and maintaining full core discharge capability in the pool.

Refueling Information (Continued)Unit 3

Unit 3 resumed power operation December 8, 1979, after its second refuel outage which began August 24, 1979. Unit 3 is scheduled for its third refueling beginning on September 6, 1980, with a scheduled restart date of October 11, 1980. This EOC-3 refueling involves loading additional 8 x 8 R (retrofit) assemblies into the core.

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

Significant Operational Events

Unit 1

<u>Date</u>	<u>Time</u>	<u>Event</u>
12/01/79	0001	Reactor thermal power at 92%, core limited
	0020	Reduced thermal power from 92% to 80% for turbine C.V. tests and SI's
	0150	Turbine C.V. tests and SI's completed, commenced power ascension
	0700	Reactor thermal power at 91%, core limited
12/03/79	1500	Reactor thermal power at 90%, core limited
12/05/79	0700	Reactor thermal power at 89%, core limited
12/07/79	2115	Reduced thermal power from 89% to 75% for turbine C.V. tests and SI's
	2143	Turbine C.V. tests and SI's completed, commenced power ascension
	2310	Commenced PCIOMR from 82% thermal power
12/08/79	1500	Reactor thermal power at 89%, core limited
12/10/79	0700	Reactor thermal power at 88%, core limited
	1500	Reactor thermal power at 88%, core limited
12/12/79	1500	Reactor thermal power at 87%, core limited
12/14/79	2300	Reactor thermal power at 86%, core limited
12/17/79	1500	Reactor thermal power at 85%, core limited
12/21/79	1500	Reactor thermal power at 84%, core limited
12/30/79	0930	Reduced thermal power from 84% to 73% for control rod scram testing
	1620	Control rod scram testing completed, commenced power ascension
	1730	Reactor thermal power at 84%, core limited
12/31/79	2400	Reactor thermal power at 84%, core limited

Significant Operational Events

Unit 2

<u>Date</u>	<u>Time</u>	<u>Event</u>
12/01/79	0001	Reactor thermal power at 65%, sequence "B" with power ascension in progress
	1200	Commenced PCIOMR from 80% thermal power
12/02/79	0555	Reactor scram no. 89 ⁽¹⁾ from 100% thermal power (suspected EHC pressure regulator printed circuit board problems caused the turb control valves to open excessively and then abruptly began closing)
	0755	Commenced rod withdrawal
	1202	Reactor critical no. 100
	1417	Rolled T/G
	1439	Synchronized generatory, commenced power ascension
12/03/79	0020	Reduced thermal power from 70% to 65% for control rod pattern adjustment
	0755	Control rod pattern adjustment completed, commenced power ascension
	1500	Reactor thermal power at 70%, holding for "A" reactor feedpump vibration checks
12/05/79	0040	Commenced power ascension from 70% thermal power
	0400	Reduced thermal power from 90% to 70% for removal of "A" reactor feedpump from service for maintenance
12/08/79	0030	Commenced turbine C.V. tests and SI's
	0220	Completed turbine C.V. tests and SI's, commenced power ascension from 70% thermal power
	0730	Reactor thermal power at 75%, holding for "A" reactor feedpump maintenance
12/09/79	2200	"A" reactor feedpump maintenance completed, commenced power ascension
12/10/79	0130	Commenced PCIOMR from 80% thermal power
	2348	Reactor thermal power at 96%, holding due to excessive vibration on "A" recirculation pump
12/10/79	0700	Reduced thermal power from 96% to 94% due to excessive vibration on "A" recirculation pump
12/13/79	2000	Commenced reducing thermal power to shutdown for "A" recirculation pump maintenance
	2204	Reactor scram no. 90 manual from 40% thermal power to accommodate maintenance to "A" recirculation pump
12/14/79	2005	Maintenance completed on 2A recirculation pump, holding for maintenance on FCV-1-55 valve



Significant Operational Events

Unit 2

<u>Date</u>	<u>Time</u>	<u>Event</u>
12/15/79	1821	Maintenance completed on FCV-1-55 valve, commenced rod withdrawal for startup
	1930	Reactor critical no. 101
	2347	Rolled T/G - could not reach rated speed, EHC problems (electronic card)
12/16/79	0118	Turbine tripped
	0125	Rolled T/G
	0330	Synchronized generator, commenced power ascension
	2300	Commenced PCIOMR from 78% thermal power
12/17/79	0035	Reactor thermal power at 85%, holding for turbine C.V. tests and SI's
	0245	Turbine C.V. tests and SI's completed, commenced PCIOMR from 85% thermal power
	2122	Commenced reducing thermal power from 90% for shutdown for modifications
	2220	Reactor scram no. 91 manual from 35% thermal power to accommodate PCIS post modification
12/18/79	0910	Reactor at cold shutdown
12/22/79	2300	PCIS post modification tests completed, commenced rod withdrawal
	2345	Reactor critical no. 102
12/23/79	1535	Rolled T/G
	1611	Synchronized generator, commenced power ascension
12/24/79	0135	Commenced PCIOMR from 50% thermal power
12/25/79	1500	Reactor thermal power at 85%, flow limited
12/28/79	2325	Reduced thermal power from 85% to 50% for control rod scram testing
12/29/79	0200	Control rod scram testing completed, commenced power ascension
	0500	Commenced PCIOMR from 65% thermal power
12/30/79	1500	Reactor thermal power at 98%, flow limited
12/31/79	2400	Reactor thermal power at 98%, flow limited

Significant Operational Events

Unit 3

<u>Date</u>	<u>Time</u>	<u>Event</u>
12/01/79	0001	Reactor shutdown for EOC 2, with BOC 3 fuel loaded in vessel
	1245	Commenced pressurizing reactor vessel for hydrostatic test
	1325	Reactor vessel pressure at 1005 PSI, holding for hydrostatic test
	1450	Commenced reducing reactor pressure to 570 PSI, holding for drywell leak checks
	2045	Reduced reactor pressure to zero
12/06/79	0400	Commenced rod withdrawal for startup
	0645	Reactor critical no. 88
12/08/79	1441	Rolled T/G
	1615	Synchronized generator, commenced power ascension as conditions allow
12/15/79	2330	Reduced thermal power from 80% to 66% for RTI's 23A, 22 and 32A
12/17/79	2000	RTI's completed, commenced power ascension
12/18/79	1145	Reactor thermal power at 79%, flow limited
12/20/79	0830	Reduced thermal power from 79% to 60% for control rod pattern adjustment
	2005	Commenced power ascension
12/21/79	0300	Commenced PCIOMR from 64% thermal power
12/23/79	0706	Reduced thermal power from 98% to 70% due to "A" and "B" string high pressure heaters isolation
	0745	High pressure heaters "A" and "B" returned to service, commenced power ascension
	1100	Commenced PCIOMR from 88% thermal power
	2200	Reactor thermal power at 97%, flow limited
12/24/79	1926	Reduced thermal power from 97% to 57% for control rod sequence exchange from "A" to "B"
	2114	Control rod sequence exchange completed, commenced power ascension
	2300	Commenced PCIOMR from 67% thermal power

Significant Operational Events

Unit 3

<u>Date</u>	<u>Time</u>	<u>Event</u>
12/26/79	0850	Reduced thermal power from 92% to 86% for condensate demineralizer backwash and precoat
	1145	Condensate demineralizer backwash and precoat completed, commenced PCIOMR from 86% thermal power
12/27/79	0600	Reactor thermal power at 98%, flow limited
	1800	Reduced thermal power from 98% to 80% for condensate demineralizers "A" and "B" backwash and precoat
	1930	"A" and "B" condensate demineralizer placed in service, holding for "C" and "H" condensate demineralizer backwash and precoat
	2245	"C" and "H" condensate demineralizer placed in service, commenced power ascension
12/28/79	0300	Commenced PCIOMR from 90% thermal power
	0700	Reactor thermal power at 98%, flow limited
	1257	Reduced thermal power from 98% to 85% for condensate demineralizer maintenance
12/29/79	2002	Condensate demineralizer maintenance completed, commenced power ascension
12/30/79	0700	Reactor thermal power at 98%, flow limited
	2000	Commenced reducing thermal power for shutdown to install overhead cables from cooling tower switchgear to bus tie boards
	2230	Reactor scram no. 79 manual from 35% thermal power to accommodate maintenance
12/31/79	2400	Unit at cold shutdown

(1) Equipment malfunction

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-259UNIT Browns Ferry 1DATE 1-5-80COMPLETED BY Ted ThomTELEPHONE 205/729-6846MONTH December 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	964	17	915
2	983	18	910
3	963	19	908
4	966	20	905
5	953	21	895
6	953	22	910
7	933	23	895
8	934	24	897
9	952	25	890
10	938	26	892
11	943	27	870
12	929	28	916
13	926	29	844
14	926	30	838
15	915	31	877
16	920		

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 1-5-80
 COMPLETED BY Ted Thom
 TELEPHONE 205/729-6846

MONTH December 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>814</u>	17	<u>787</u>
2	<u>510</u>	18	<u>-12</u>
3	<u>676</u>	19	<u>-10</u>
4	<u>791</u>	20	<u>-9</u>
5	<u>819</u>	21	<u>-9</u>
6	<u>805</u>	22	<u>-10</u>
7	<u>810</u>	23	<u>136</u>
8	<u>800</u>	24	<u>680</u>
9	<u>807</u>	25	<u>865</u>
10	<u>965</u>	26	<u>897</u>
11	<u>1031</u>	27	<u>867</u>
12	<u>1013</u>	28	<u>887</u>
13	<u>916</u>	29	<u>801</u>
14	<u>-13</u>	30	<u>1045</u>
15	<u>-13</u>	31	<u>1062</u>
16	<u>541</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. 50-296UNIT Browns Ferry 3DATE 1-5-80COMPLETED BY Ted ThomTELEPHONE 205/729-6846MONTH December 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>-10</u>	17	<u>689</u>
2	<u>-10</u>	18	<u>839</u>
3	<u>-9</u>	19	<u>837</u>
4	<u>-9</u>	20	<u>633</u>
5	<u>-10</u>	21	<u>747</u>
6	<u>-9</u>	22	<u>959</u>
7	<u>-11</u>	23	<u>1008</u>
8	<u>38</u>	24	<u>983</u>
9	<u>163</u>	25	<u>808</u>
10	<u>223</u>	26	<u>974</u>
11	<u>353</u>	27	<u>1002</u>
12	<u>477</u>	28	<u>1049</u>
13	<u>515</u>	29	<u>871</u>
14	<u>689</u>	30	<u>963</u>
15	<u>812</u>	31	<u>-12</u>
16	<u>724</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 1-5-80
 COMPLETED BY Don Green
 TELEPHONE (205) 729-6846

OPERATING STATUS

1. Unit Name: Browns Ferry 1
2. Reporting Period: December 1979
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>47,498</u>
12. Number Of Hours Reactor Was Critical	<u>744</u>	<u>8,045.69</u>	<u>28,277.28</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>290.48</u>	<u>4,689.61</u>
14. Hours Generator On-Line	<u>744</u>	<u>7,921.39</u>	<u>27,612.73</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>2,127,139</u>	<u>23,363,821</u>	<u>74,136,493</u>
17. Gross Electrical Energy Generated (MWH)	<u>702,360</u>	<u>7,700,460</u>	<u>24,518,460</u>
18. Net Electrical Energy Generated (MWH)	<u>683,103</u>	<u>7,495,748</u>	<u>23,801,968</u>
19. Unit Service Factor	<u>100</u>	<u>90.4</u>	<u>58.1</u>
20. Unit Availability Factor	<u>100</u>	<u>90.4</u>	<u>58.1</u>
21. Unit Capacity Factor (Using MDC Net)	<u>86.2</u>	<u>80.3</u>	<u>47.1</u>
22. Unit Capacity Factor (Using DER Net)	<u>86.2</u>	<u>80.3</u>	<u>47.1</u>
23. Unit Forced Outage Rate	<u>0</u>	<u>4.4</u>	<u>33.0</u>

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

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

	Forecast	Achieved
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____

OPERATING DATA REPORT

DOCKET NO. 50-260
 DATE 1-5-80
 COMPLETED BY Don Green
 TELEPHONE (205) 729-6846

OPERATING STATUS

1. Unit Name: Browns Ferry 2
2. Reporting Period: December 1979
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>42,409</u>
12. Number Of Hours Reactor Was Critical	<u>571.03</u>	<u>7,766.19</u>	<u>24,484.48</u>
13. Reactor Reserve Shutdown Hours	<u>172.97</u>	<u>298.23</u>	<u>11,774.94</u>
14. Hours Generator On-Line	<u>543.98</u>	<u>7,596.45</u>	<u>23,664.31</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>1,458,581</u>	<u>22,703,212</u>	<u>66,155,000</u>
17. Gross Electrical Energy Generated (MWH)	<u>475,610</u>	<u>7,636,280</u>	<u>21,950,068</u>
18. Net Electrical Energy Generated (MWH)	<u>461,952</u>	<u>7,441,305</u>	<u>21,331,469</u>
19. Unit Service Factor	<u>73.1</u>	<u>86.7</u>	<u>55.8</u>
20. Unit Availability Factor	<u>73.1</u>	<u>86.7</u>	<u>55.8</u>
21. Unit Capacity Factor (Using MDC Net)	<u>58.3</u>	<u>79.8</u>	<u>47.2</u>
22. Unit Capacity Factor (Using DER Net)	<u>58.3</u>	<u>79.8</u>	<u>47.2</u>
23. Unit Forced Outage Rate	<u>10.3</u>	<u>2.7</u>	<u>36.8</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. 50-296
 DATE 1-5-80
 COMPLETED BY Don Green
 TELEPHONE (205) 729-6846

OPERATING STATUS.

1. Unit Name: Browns Ferry 3
 2. Reporting Period: December 1979
 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

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>74,864</u>
12. Number Of Hours Reactor Was Critical	<u>591.75</u>	<u>5,816.35</u>	<u>18,907.55</u>
13. Reactor Reserve Shutdown Hours	<u>131.50</u>	<u>552.9</u>	<u>1,658.31</u>
14. Hours Generator On-Line	<u>534.25</u>	<u>5,708.30</u>	<u>18438.28</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>1,231,495</u>	<u>16,956,484</u>	<u>53,107,866</u>
17. Gross Electrical Energy Generated (MWH)	<u>403,790</u>	<u>5,635,080</u>	<u>17,402,580</u>
18. Net Electrical Energy Generated (MWH)	<u>390,613</u>	<u>5,482,585</u>	<u>16,887,773</u>
19. Unit Service Factor	<u>71.8</u>	<u>65.2</u>	<u>74.2</u>
20. Unit Availability Factor	<u>71.8</u>	<u>65.2</u>	<u>74.2</u>
21. Unit Capacity Factor (Using MDC Net)	<u>49.3</u>	<u>58.8</u>	<u>63.8</u>
22. Unit Capacity Factor (Using DER Net)	<u>49.3</u>	<u>58.8</u>	<u>63.8</u>
23. Unit Forced Outage Rate	<u>4.6</u>	<u>8.0</u>	<u>9.0</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

25. If Shut Down At End Of Report Period, Estimated Date of Startup: _____

26. Units In Test Status (Prior to Commercial Operation):

INITIAL CRITICALITY
 INITIAL ELECTRICITY
 COMMERCIAL OPERATION

Forecast

Achieved

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH December

DOCKET NO. 50-259
 UNIT NAME Browns Ferry 1
 DATE 1-5-80
 COMPLETED BY Don Green
 TELEPHONE 205/729-6846

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

¹
 F: Forced
 S: Scheduled

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

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

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

⁵
 Exhibit I - Same Source

(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH December

DOCKET NO. 50-260
 UNIT NAME Browns Ferry 2
 DATE 1-5-80
 COMPLETED BY Don Green
 TELEPHONE 205/729-6846

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
109	791202	F	8.73	A	3				Suspected EHC pressure regulator printed circuit board problems, caused control valve closure and turbine trip.
110	791213	F	53.44	B	2				Maintenance to "A" recirc pump and FCV-1-5.
111	791217	S	137.85	H	2				Post modifications to the primary containment isolation system.
112	791228	S		B					Derated for control rod scram testing.

17

¹
 F: Forced
 S: Scheduled

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

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

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

⁵
 Exhibit I - Same Source

(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH December

DOCKET NO. 50-296
 UNIT NAME Browns Ferry 3
 DATE 1-5-80
 COMPLETED BY Don Green
 TELEPHONE 205/729-6846

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
109	791201	S	184.25	C					Refueling
110	791220	S		H					Derated for control rod pattern adjustment.
111	791924	S		H					Derated for control rod sequence exchange.
112	791230	F	25.50	A	2				Ground in auxiliary power supply cables from cooling towers to bus tie boards. Installation of overhead cables in progress.

¹ F: Forced
 S: Scheduled

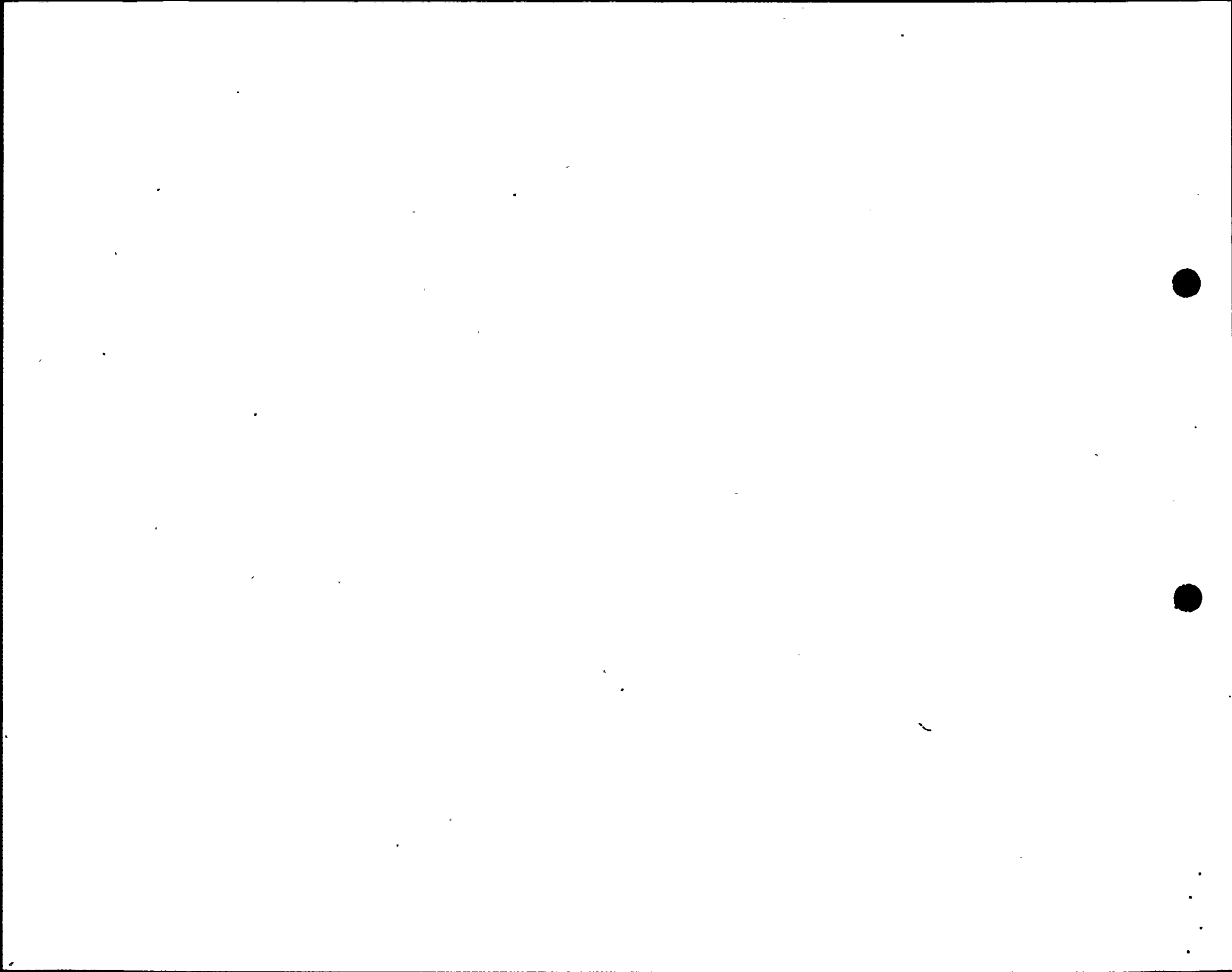
² Reason:
 A-Equipment Failure (Explain)
 B-Maintenance or Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Examination
 F-Administrative
 G-Operational Error (Explain)
 H-Other (Explain)

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)



BROWNS FERRY NUCLEAR PLANT UNIT 1

MECHANICAL MAINTENANCE SUMMARY

For the Month of December 1979

CSSC EQUIPMENT

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
12/9	HPCI	FCV 73-16	Bad pinion gear	With HPCI inoperable it could force unit shutdown	Operation	HPCI inoperable	Replaced pinion gear in valve limiter
12/13	Rx. Bldg. Vent.	Computer Room Exhaust damper	Damper closed	None	Unknown	None	Opened damper and hooked linkage back u
12/13	Fuel Pool Cooling	"1A" FPC pump discharge check valve	Disc pins broken	None	Operation	None	Replaced with new valve
12/22	Fuel Pool Cooling	"1A" FPC pump	Internal parts worn	None	Operation	None	Replaced all internal parts

BROWNS FERRY NUCLEAR PLANT UNIT 2CSSC EQUIPMENT

MECHANICAL MAINTENANCE SUMMARY

For the Month of December 1979

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
12/17	CRD	"B" CRD discharge filter	Dirty filter	None	Operation	None	Changed filter
12/17	Main Steam	FCV-1-55	Pressure seal leak	None	Operation	None	Disassembled, cleaned and installed new pressure seal ring
12/20	Radwaste	FCV 2-77-2A	Bad solenoid	None	Operation	None	Installed new solenoid valve

BROWNS FERRY NUCLEAR PLANT UNIT 3

MECHANICAL MAINTENANCE SUMMARY

CSSC EQUIPMENTFor the Month of December 19 79

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	Control Bay Vent	"3A" Control Bay Chiller Water Regulating Valve	Bad Valve	None	Operation	None	Rebuilt valve
12/12	Auxiliary Boiler	HCV 3-12-708	Bad packing gland leak	None	Operation	None	Repacked valve
12/19	Rx. Water Cleanup	FCV 69-60B	Packing leak	None	Operation	None	Repacked valve

BROWNS FERRY NUCLEAR PLANT UNIT 2CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of December 19 79

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor.	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
12/14/79	Main steam	FCV 2-1-55 steam line drain valve motor	Green light and open limit switch not working right	Not applicable	Limit switch drive frozen	False indication	Replaced limit switch drive and gear key per EMI 16 and 18. Checked OK. TR 134713
12/20/79	Ventilation	B-3 drywell air blower motor	Breaker trips out when trying to start	None	Motor grounded	Motor failed to operate	Replaced motor. Checked OK. TR 122352

CSSC EQUIPMENT

BROWNS FERRY NUCLEAR PLANT UNIT 3

ELECTRICAL MAINTENANCE SUMMARY

For the Month of December 19 79

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor.	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
12/4/79	Diesel generator	D/G 3C failed to accept load on emergency load acceptance test	Hi voltage supply	None	U-3C diesel generator frequency generator was supplying too high voltage to SSP1 and SSP2	Too high voltage	Adjusted air gap on frequency generator pickup to reduce supplied voltage to correct valve. Checked OK. TR 96702 BFRO 50-296/7923.
12/5/79	Core spray	FCV 75-50 (core spray II test valve) motor	Motor failed to operate	None	SBM switch controls HIY were not making up	Valve would not operate.	Replaced SBM switch, functional. Checked OK. TR 146429.
							24

BROWNS FERRY NUCLEAR PLANT UNIT _____

INSTRUMENT MAINTENANCE SUMMARY

CSSC EQUIPMENTFOR THE MONTH OF December 19 79

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
<u>Init 1</u>							
2-10	EECW	FI-67-9A	Calibrate	None	Instrument Drift	Flow Indicator Pegged Upscale	None
2-31	Neutron Monitoring	AFRM-A	Calibrate	None	Instrument Drift	Rod Block came in with 15 LPRM's instead of 13	None
<u>Init 2</u>							
NONE							
<u>Init 3</u>							
2-13	Standby Diesel Generator	3D Air Compressor Pressure Switches	Calibrate	None	Setpoint Drift	Air Compressor shut off 3 FSI low	None
2-26	Standby Diesel Generator	3A Diesel Generator Fuel Pressure Gage	Replace	None	Leaking Gage	Diesel Fuel in gage	None
2-26	Radwaste	Lls-77-14B	Clean	None	Static on Meter Face	Static Charge Caused Indicator to Stick	None

OUTAGE SUMMARY

December 1979

The Unit 3, cycle 2 refuel outage was completed on Saturday, December 8, 1979, marking the completion of a 107 day modification, maintenance, and refuel outage.

Unit 2 was shutdown on December 17 for modifications to the primary containment isolation system and installation of an acoustic monitoring system for the main steam relief valves. During this outage, approximately 80 percent of the repair items on the Unit 2 short outage list were completed as well as the PCIS and acoustic monitoring mods. Unit 2 was returned to service on December 23.

Unit 3 was shutdown on December 30 for a modification to install an alternate power supply from the cooling tower transformers to the Unit 3 shutdown bus tie board. This modification should be completed and the unit returned to service by the middle of January.

Preparations have been underway for the upcoming Unit 1, cycle 3 refueling outage and should be completed by January 1. Unit 1 is scheduled for a 48 day refueling outage to begin January 3, 1980.

