


TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR POWER
BROWNS FERRY NUCLEAR PLANT

MONTHLY OPERATING REPORT TO NRC

May 1, 1985 - May 31, 1985

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

Submitted by:


Plant Manager

8508090270 850531
PDR ADOCK 05000259
R PDR

IE24
1/1

TABLE OF CONTENTS

Operations Summary.	1
Refueling Information	3
Significant Operational Instructions.	5
Average Daily Unit Power Level.	8
Operating Data Reports.	11
Unit Shutdowns and Power Reductions	14
Plant Maintenance	17
Outage Maintenance & Major Modification	25
Addenda (Corrected Operating Statistics - March/April 1985) . .	29

Operations Summary

May 1985

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 ten reportable occurrences and one revision to previous occurrences reported to the NRC during the month of May.

Unit 1

The unit was in cold shutdown the entire month as it undergoes several modifications including those necessary to bring it into compliance with environmental qualifications required under NUREG 0588.

Unit 2

The unit was in cold shutdown the entire month for the unit's end-of-cycle 5 refueling outage.

Unit 3

The unit was in cold shutdown the entire month on an administrative hold to resolve various TVA and NRC concerns.

Prepared principally by B. L. Porter.

Operations Summary (Continued)

May 1985

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	0.00620	0.00492	0.00430
Feedwater nozzle	0.29782	0.21319	0.16133
Closure studs	0.23910	0.17629	0.14326

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

Common System

Approximately $1.37\text{E}+06$ gallons of waste liquids were discharged containing
approximately $7.33\text{E}-02$ curies of activities.

Operations Summary (Continued)

May 1985

Refueling InformationUnit 1

Unit 1 is scheduled for its sixth refueling approximately June 1, 1985 with a scheduled restart date of March 31, 1986. This refueling will involve loading 8x8R (retrofit) fuel assemblies into the core, replacing recirculation piping, work on "A" and "B" low-pressure turbine, upgrade hangers and anchors, and environmentally qualify instrumentations. The unit was shut down on March 19, 1985, and will remain in cold shutdown until June 1, 1985, because of unfinished modifications to meet environmental concerns.

There are 764 assemblies in the reactor vessel. The spent fuel storage pool presently contains 252 EOC-5 assemblies, 260 EOC-4 assemblies; 232 EOC-3 assemblies; 156 EOC-2 assemblies; and 168 EOC-1 assemblies. The present fuel pool capacity is 3,471 locations.

Unit 2

Unit 2 was shut down for its fifth refueling outage on September 15, 1984 with a scheduled restart date of October 20, 1985. This refueling outage will involve loading additional 8X8R (retrofit) assemblies into the core, finishing torus modification, turbine inspection, piping inspection, TMI-2 modifications; post-accident sampling facility tie-ins, core spray change-out, and feedwater sparger inspection.

There are no assemblies in the reactor vessel. At month end, there were 273 new assemblies, 764 EOC-5 assemblies, 248 EOC-4 assemblies, 352 EOC-3 assemblies, 156 EOC-2 assemblies, and 132 EOC-1 assemblies in the spent fuel storage pool. The present available capacity of the spent fuel pool is 77 locations. All old racks have been removed from the pool and new HDR's are being installed.

Operations Summary (Continued)

May 1985

Unit 3

Unit 3 is scheduled for its sixth refueling outage approximately November 30, 1985, with a scheduled restart date of November 10, 1986. This refueling involves loading 8X8R (retrofit) assemblies into the core, and complete reinspection of stainless steel piping. The unit was shutdown on March 9, 1985, and will remain in cold shutdown until July 24, 1985, on an administrative hold to resolve various TVA and NRC concerns.

There are 764 assemblies presently in the reactor vessel. There are 248 EOC-5 assemblies, 280 EOC-4 assemblies, 124 EOC-3 assemblies, 144 EOC-2 assemblies, and 208 EOC-1 assemblies in the spent fuel storage pool. The present available capacity of the spent fuel pool is 914 locations.

Significant Operational Events

<u>Date</u>	<u>Time</u>	<u>Event</u>
		Unit 1
5/01	0001	The unit remains in a shutdown condition until it undergoes several modifications including those necessary to bring it into compliance with environmental qualifications required under NUREG 0588.
5/31	2400	The unit remains in a shutdown condition until it undergoes several modifications including those necessary to bring it into compliance with environmental qualifications required under NUREG 0588.

Significant Operational Events

<u>Date</u>	<u>Time</u>	<u>Event</u>
		Unit 2
5/01	0001	End-of-cycle 5 refuel and modifications outage continues.
5/31	2400	End-of-cycle 5 refuel and modifications outage continues.

Significant Operational Events

<u>Date</u>	<u>Time</u>	<u>Event</u>
		Unit 3
5/01	0001	The unit has been placed on administrative hold until various TVA and NRC concerns are resolved.
5/31	2400	The unit has been placed on administrative hold until various TVA and NRC concerns are resolved.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-259
 UNIT Browns Ferry One
 DATE 6-1-85
 COMPLETED BY T.. Thom
 TELEPHONE 205/722-2509

MONTH May

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

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	-9
18	-10
19	-10
20	-10
21	-9
22	-10
23	-9
24	-10
25	-9
26	-9
27	-9
28	-10
29	-10
30	-10
31	-10

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. 50-260UNIT Browns Ferry TwoDATE 6-1-85COMPLETED BY T. ThomTELEPHONE 205/729-2509MONTH May

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

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>-2</u>
18	<u>-2</u>
19	<u>-2</u>
20	<u>-2</u>
21	<u>-2</u>
22	<u>-2</u>
23	<u>-2</u>
24	<u>-2</u>
25	<u>-2</u>
26	<u>-2</u>
27	<u>-2</u>
28	<u>-2</u>
29	<u>-2</u>
30	<u>-2</u>
31	<u>-2</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 ThreeDATE 6-1-85COMPLETED BY T. ThomTELEPHONE 205/729-2505MONTH MayDAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	-10
2	-9
3	-9
4	-9
5	-10
6	-9
7	-9
8	-9
9	-9
10	-9
11	-9
12	-9
13	-9
14	-10
15	-9
16	-9

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	-9
18	-9
19	-9
20	-9
21	-9
22	-9
23	-9
24	-9
25	-9
26	-9
27	-9
28	-10
29	-10
30	-9
31	-9

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 6-1-85
 COMPLETED BY T. Thom
 TELEPHONE 205-228-2509

OPERATING STATUS

1. Unit Name: Browns Ferry One
 2. Reporting Period: May 1985
 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

Notes

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	744	3,623	95,023
12. Number Of Hours Reactor Was Critical	0	1647.78	59,521.38
13. Reactor Reserve Shutdown Hours	0	512.22	6,997.44
14. Hours Generator On-Line	0	1,626.67	58,267.28
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	0	4,982,981	168,144,427
17. Gross Electrical Energy Generated (MWH)	0	1,652,650	55,398,150
18. Net Electrical Energy Generated (MWH)	-6,989	1,589,819	53,803,611
19. Unit Service Factor	0	44.9	61.3
20. Unit Availability Factor	0	44.9	61.3
21. Unit Capacity Factor (Using MDC Net)	0	41.2	53.2
22. Unit Capacity Factor (Using DER Net)	0	41.2	53.2
23. Unit Forced Outage Rate	100	55.1	23.6

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

June 1, 1985 - Refuel outage begins.

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 6-1-85
 COMPLETED BY T. Thompson
 TELEPHONE 205/225-2503

OPERATING STATUS

1. Unit Name: Browns Ferry Two
 2. Reporting Period: May 1985
 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

Notes

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>3623</u>	<u>89,910</u>
12. Number Of Hours Reactor Was Critical	<u>0</u>	<u>0</u>	<u>55,860.03</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>14,200.44</u>
14. Hours Generator On-Line	<u>0</u>	<u>0</u>	<u>54,338.36</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>0</u>	<u>0</u>	<u>153,245.167</u>
17. Gross Electrical Energy Generated (MWH)	<u>0</u>	<u>0</u>	<u>50,771.798</u>
18. Net Electrical Energy Generated (MWH)	<u>-1575</u>	<u>-13,687</u>	<u>49,289.286</u>
19. Unit Service Factor	<u>0</u>	<u>0</u>	<u>60.4</u>
20. Unit Availability Factor	<u>0</u>	<u>0</u>	<u>60.4</u>
21. Unit Capacity Factor (Using MDC Net)	<u>0</u>	<u>0</u>	<u>51.5</u>
22. Unit Capacity Factor (Using DER Net)	<u>0</u>	<u>0</u>	<u>51.5</u>
23. Unit Forced Outage Rate	<u>0</u>	<u>0</u>	<u>23.0</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: September 1985

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

Forecast

Achieved

INITIAL CRITICALITY
 INITIAL ELECTRICITY
 COMMERCIAL OPERATION

OPERATING DATA REPORT

DOCKET NO. 50-286
 DATE 6-1-85
 COMPLETED BY T. Thom
 TELEPHONE 205/729-2509

OPERATING STATUS

1. Unit Name: Browns Ferry Three
 2. Reporting Period: May 1985
 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

Notes

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>3623</u>	<u>72,335</u>
12. Number Of Hours Reactor Was Critical	<u>0</u>	<u>1517.65</u>	<u>45,306.08</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>508.05</u>	<u>5,149.55</u>
14. Hours Generator On-Line	<u>0</u>	<u>1,496.96</u>	<u>44,194.76</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>0</u>	<u>4,649,840</u>	<u>131,868,267</u>
17. Gross Electrical Energy Generated (MWH)	<u>0</u>	<u>1,572,770</u>	<u>43,473,755</u>
18. Net Electrical Energy Generated (MWH)	<u>-6,781</u>	<u>1,512,056</u>	<u>42,177,817</u>
19. Unit Service Factor	<u>0</u>	<u>41.3</u>	<u>61.1</u>
20. Unit Availability Factor	<u>0</u>	<u>41.3</u>	<u>61.1</u>
21. Unit Capacity Factor (Using MDC Net)	<u>0</u>	<u>39.2</u>	<u>54.8</u>
22. Unit Capacity Factor (Using DER Net)	<u>0</u>	<u>39.2</u>	<u>54.8</u>
23. Unit Forced Outage Rate	<u>100</u>	<u>58.7</u>	<u>20.5</u>

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

November 1985

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 One
 DATE 6-1-85
 COMPLETED BY T. Thom
 TELEPHONE 205/729-2509

REPORT MONTH May

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
314 Cont	5/1/85	F	744	D					The unit remains in a shutdown condition until it undergoes several modifications, including those necessary to bring it into compliance with environmental qualifications required under NUREG 0588.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance or Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Expiration
 F-Administrative
 G-Operator 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 May

DOCKET NO. 50-260
 UNIT NAME Brow's Ferry Two
 DATE 6-1-85
 COMPLETED BY T. Thom
 TELEPHONE 205/729-2509

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
305 Cont	5/1/85	5	744	C	4				EOC-5 Refuel Outage (Controlled Shutdown 9/15/84)

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)

(9/77)

⁵
 Exhibit I - Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-296
 UNIT NAME Browns Ferry Three
 DATE 6-1-85
 COMPLETED BY T. Thom
 TELEPHONE 205/729-2509

REPORT MONTH May

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
156 Cont	5/1/85	F	744	F					The unit remains on administrative hold until various TVA and NRC concerns are resolved.

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 F - Same Source

(9/77)

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of May 19 85

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
1985 5/3	RHRWS	PT-23-0004 RHRWS header A pressure transmitter	Resplice cable R118 in J.B. 1274		Grounded cable to PT-23-4	Pressure transmitter inoperable	Respliced cable MR 556183
5/24	4-kV shutdown boards & busses	BKR-211-0C/022 ACB 1718 - normal supply breaker, 4kV shutdown bd C	Troubleshoot/repair breaker		Broken secondary connector block	Breaker slow to trip	Replaced contact block and one contact pin MR 125000

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of May 19 85

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
1984 10/24	CO ₂ storage & fire protection	BATT-39-0001 fire protection battery No. 1	Replace battery		Cell 5 would not read on hydro-meter. Voltage borderline	Preventative maintenance	Replaced battery MR 320031
1985 4/30	Control bay heat, vent & ac	CHR-31-0007 control bay chiller 1-B	Work with factory rep on repairs		Bad proportional controller	Chiller would not load up	Replaced proportional controller MR 563586
5/6	RPS	FLY-99-5AK13A Al neu mon non-coincident trip sensor relay	Monthly inspection of RPS HFA relays (EMSIL 102.1)		Generic problem with GE type HFA relay coils	Coil very hot	Replaced coil MR 553007. NRC Inspection & Enforcement Bulletin 84-02
5/9	4kV shutdown bds & busses	27-211-001B undervoltage relay-4kV shutdown bd A	Remove and bench check relay		Defective undervoltage relay	Preventative maintenance	Replaced relay MR 553055

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of May 19 85

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
1984	Standby diesel generator	NVR relay d/g 3D no voltage relay	Replace NVR relay		Defective no voltage relay in 3D d/g engine control cabinet	Loss of control room annunciation	Replaced NVR relay MR 255006
1985 1/2	Standby diesel generator	D/g exhaust fan motor	Troubleshoot oil leaking on floor		Bad actuator	Oil leaking from actuator on floor	Replaced actuator MR 320560
3/27	Control bay heating vent & ac	CHR-31-1943 3A control bay chiller	Troubleshoot CB chiller 3A		Low pressure switch out of adjustment	Chiller tripped on low suction pressure and would not restart	Adjusted setting on low pressure switch MR 558018
4/23	Standby diesel generator	PC-82-FTSND d/g 3D fuel oil transfer pump controller	Troubleshoot 3D d/g fuel oil transfer pump low level start switch		Bad low level start switch	Starts the fuel oil transfer pump No. 1 too soon	Replaced and adjusted switch MR 521570
5/2	480 volt reactor MOV bds	GEN-268-3EN LPCI mg set 3EN	Replace 3EN LPCI mg set voltage regulator		Unknown	Voltage fluctuation	Replaced voltage regulator from ur LPCI mg set 2EA-MR 552290-from LPCI mg set 2DA-MR 591823
5/6	HPCI	FCV-73-0027 HPCI suppression pool out-board suction valve	Perform SI 4.5.E.1.c to take strobe light readings		Wires rolled at board & motor	Caused valve to cycle too fast	Rolled wiring on board & motor MR 258678

CSSC EQUIPMENT

ELECTRICAL MAINTENANCE SUMMARY

For the Month of May 19 85

Date	System	Component	Nature of Maintenance	Effect on Safe Operation of The Reactor	Cause of Malfunction	Results of Malfunction	Action Taken To Preclude Recurrence
1985 May 6	480V reactor MOV bds	GEN-268-3DN LPCI mg set 3DN	Troubleshoot cause of low voltage		Unknown	Low voltage	Replaced voltage regulator from LPCI mg set 2DN MR 521634
5/9	Radiation monitoring	RM-90-0265 off gas post treatment rad monitor sample pump 1	Motor not running - trouble-shoot		Bad pump motor	Radiation monitor sample pump 1 will not run	Replaced motor MR 567150
5/16	Standby diesel generator	PNLA-82-003D d/g 3D elect control cabinet	Troubleshoot d/g 3D		Bad diodes in annunciation	Engine started when air compressor No. 1 switch was turned from auto to stop	Replaced diodes on 1, 3, 4, 16, and 16A relays MR 557226

BROWNS FERRY NUCLEAR PLANT UNIT 0CSSC EQUIPMENT

MECHANICAL MAINTENANCE SUMMARY

For the Month of May 19 85

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
5/6/85	23	A1 RHRSW Pump	MMI-29 and retorqued baseplate bolts	NONE	normal use	vibration increased	Impeller gap adjusted on MR-A-317765

BROWNS FERRY NUCLEAR PLANT UNIT 1CSSC EQUIPMENT

MECHANICAL MAINTENANCE SUMMARY

For the Month of May 19 85

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
4/30/85	78	FPC Pump A Dis- charge Check Valve 78-502	Replaced Linge pin	NONE	worn excessively	Leaking valve	MR 592543 fabricated new pin

BROWNS FERRY NUCLEAR PLANT UNIT 2

CSSC EQUIPMENT

MECHANICAL MAINTENANCE SUMMARY

For the Month of May 19 85

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

BROWNS FERRY NUCLEAR PLANT UNIT 3CSSC EQUIPMENT

MECHANICAL MAINTENANCE SUMMARY

For the Month of May 19 85

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
5/10/85	71	Flow Element 71-36	Repair Flange onflow element	NONE	Flow element leaking	NONE	Replace gasket & repaired flange on MR 592634

OUTAGE MAINTENANCE & MAJOR MODIFICATION MANAGEMENT
May 1985

MAJOR WORK COMPLETED

A. Refuel Floor

1. The fuel pool cleanup contractors arrived onsite May 6, 1985. Cut up of unit 3 control rod guide surfaces was completed. The unit 2 and 3 fuel pools were sampled and the contractors left on May 24, 1985.

B. Turbine

No major work completed. The units 1 and 3 cranes were released for lifting. The unit 2 crane has not been released.

C. Drywell

1. Vessel drain was completed on May 2, 1985.
2. J. P. Instrument nozzle replacement:
 - Cut-outs complete: May 5
 - Weld preps complete: May 7
 - Nozzle weld complete: May 15
 - "B" nozzle and piping complete: May 20
 - "A" nozzle and piping (rework) complete: May 30
3. Torus heat cure was completed on May 15.
4. Radiographs were performed on SCRAM discharge headers (ECN P0392), J. P. Instrument line nozzles and piping, and two Residual Heat Removal (RHR) and one Control Rod Drive (CRD) weld during the weekend of May 17-20.
5. Weld GR-2-15 seal weld was completed on May 22, 1985. Final overlay still remains to be done.

OUTAGE MAINTENANCE & MAJOR MODIFICATION MANAGEMENT
May 1985

MAJOR WORK COMPLETED (Continued)

D. Major Valves

1. Recirculation pump seal water valve replacement complete: May 8.
2. Valve 23-582 maintenance complete: May 8
3. H_2O_2 valve replacements complete: May 8

E. Balance-of-Plant

1. "C" condenser work, including replacement of an 8" elbow, was completed on May 22.
2. "2B" RHR pump motor was shipped to Atlanta for rewinding.

F. Modifications

1. ECN P0392 (Scram Discharge Header Modification) - tie-ins were complete and welds were accepted. Hanger work is in progress. Electrical work is 30% complete.
2. ECN P0533 (Torus Temperature Monitoring) - panels are set, conduit and cable installation is 50% complete.
3. ECN P0415 (Feedwater Header Temperature Monitors) - work is in progress, 15% complete.
4. ECNs P0322 and P0323 (Wide Range Drywell Pressure/Torus Level) - are 20% complete.
5. ECN P0354 (Effluent High Range Radiation Monitors) - work is 5% complete.
6. ECN P0085 (Drywell Temperature/Pressure Monitors) - work is 5% complete.
7. IE Bulletin 79-01B modifications are 5% complete.

MAJOR WORK COMPLETED (Continued)

8. Three Main Steam Isolation Valves will be disassembled due to vendor oversight.

A. Work Plan Approvals; Modifications Group

	<u>May 1</u>	<u>June 1</u>	<u>Change</u>
Total Workplans	269	277	+ 8
Approved Workplans	100	118	+18
Outstanding Workplans	169	159	-10
Workplans in Approval Cycle	78	81	N/A

<u>Conduit Installation Location</u>	<u>May 1</u>	<u>June 1</u>
Auxiliary Instrument Room	60%	90%
Elev. 565'	99%	100%
Turbine Building	99%	100%
Spreader Room	90%	100%
Elev. 593'	20%	20%
Elev. 541'	20%	60%

Hanger Status by System:	May 1	June 1
HPCI	41%	44%
RCIC	44%	44%
RHR I	66%	73%
RHR II	64%	64%
CS I	79%	90%
CS II	49%	80%
Drywell Torus Purge	59%	75%
Total Number of Hangers (of 318)	161	193

RETURN TO SERVICE DATE: June 1: October 5, 1985
May 1: September 20, 1985

OUTAGE MAINTENANCE & MAJOR MODIFICATION MANAGEMENT
May 1985

REMARKS

Slippage of the scheduled end date from September 20 to October 5 (15 day slip in last 30 days) is attributed to increased work scope of ECN P0126 and to lack of priority on unit 2 efforts due to shift in priority to unit 3 work and support.

NUCLEAR PLANT OPERATING STATUS

Browns Ferry Nuclear

Plant

*Corrected

Period Hours 719

Month April 19 85

	Item No.	Unit No.	Unit-1	Unit-2	Unit-3	Plant
Generation	1	Average Hourly Gross Load, kW	0	0	0	0
	2	Maximum Hour Net Generation, MWh	0	0	0	0
	3	Core Thermal Energy Gen, GWD (t) ²	0	0	0	0
	4	Steam Gen. Thermal Energy Gen., GWD (t) ²				0
	5	Gross Electrical Gen., MWh	0	0	0	0
	6	Station Use, MWh	6,223	3,880	7,638	17,741
	7	Net Electrical Gen., MWh	-6,223	-3,880	-7,638	-17,741
	8	Station Use, Percent	0	0	0	0
	9	Accum. Core Avg. Exposure, MWD/Ton ¹	0	0	0	0
	10	CTEG This Month, 10 ⁶ BTU	0	0	0	0
	11	SGTEG This Month, 10 ⁶ BTU				
	12					
Factors & Use	13	Hours Reactor Was Critical	0	0	0	0
	14	Unit Use, Hours-Min.	0	0	0	0
	15	Capacity Factor, Percent	0	0	0	0
	16	Turbine Avail. Factor, Percent	100	0	100	66.7
	17	Generator Avail. Factor, Percent	100	0	100	66.7
	18	Turbogen. Avail. Factor, Percent	100	0	100	66.7
	19	Reactor Avail. Factor, Percent	100	0	100	66.7
	20	Unit Avail. Factor, Percent	0	0	0	0
	21	Turbine Startups	0	0	0	0
	22	Reactor Cold Startups	0	0	0	0
	23					
Efficiency	24	Gross Heat Rate, Btu/kWh	0	0	0	0
	25	Net Heat Rate, Btu/kWh	0	0	0	0
	26					
	27					
Temp & Press	28	Throttle Pressure, psig	0	0	0	0
	29	Throttle Temperature, °F	0	0	0	0
	30	Exhaust Pressure, InHg Abs.	0	0	0	0
	31	Intake Water Temp., °F	0	0	0	0
	32					
Flows	33	Main Feedwater, M lb/hr	0	0	0	0
	34					
	35					
	36					
Misc.	37	Full Power Capacity, EFPD (3)	(4)	(5)	375	
	38	Accum. Cycle Full Power Days, EFPD (3)	(4)	(5)	70	
	39	Oil Fired for Generation, Gallons				6839
	40	Oil Heating Value, Btu/Gal.				139,500
	41	Diesel Generation, MWh				*42.0
	42					
Station Data	Max. Hour Net Gen.		Max. Day Net Gen.		Load Factor, %	
	MWh	Time	MWh	Date		
	0		0		0	
Remarks: ¹ For BFNP this value is MWD/STU and for SQNP and WBNP this value is MWD/MTU.						
² (t) indicates Thermal Energy.						
(3) Information furnished by Reactor Analysis Group, Chatt						
(4) Environmental qualification modifications outage						
(5) End of cycle-5 refuel outage						

Date Submitted

Date Revised

D.T. Jones

NUCLEAR PLANT OPERATING STATISTICS

30
Browns Ferry Nuclear Plant

*Corrected

744

Period Hours

Month March

19 85

	Item No.	Unit No.	Unit-1	Unit-2	Unit-3	Plant
Generation	1	Average Hourly Gross Load, kW	985,558	0	1,072,171	1,013,963
	2	Maximum Hour Net Generation, MWh	1031	0	1086	2079
	3	Core Thermal Energy Gen, GWD (t) ²	54.5401	0	26.9945	81.5346
	4	Steam Gen. Thermal Energy Gen., GWD (t) ²				
	5	Gross Electrical Gen., MWh	427,190	0	226,850	654,040
	6	Station Use, MWh	14,788	2,528	11,675	28,991
	7	Net Electrical Gen., MWh	412,402	-2,528	215,175	625,049
	8	Station Use, Percent	3.46	0	5.15	4.43
	9	Accum. Core Avg. Exposure, MWD/Ton ¹	18,401	0	11,012	29,413
	10	CTEG This Month, 10 ⁶ BTU	*4,758,751	0	2,220,739	*6,979,490
	11	SGTEG This Month, 10 ⁶ BTU				
	12					
Factors & Use	13	Hours Reactor Was Critical	433.45	0	213.70	647.15
	14	Unit Use, Hours-Min.	433:27	0	211:35	645:02
	15	Capacity Factor, Percent	52.3	0	27.8	26.7
	16	Turbine Avail. Factor, Percent	100	0	100	66.7
	17	Generator Avail. Factor, Percent	100	0	100	66.7
	18	Turbogen. Avail. Factor, Percent	100	0	100	66.7
	19	Reactor Avail. Factor, Percent	100	0	81.9	60.6
	20	Unit Avail. Factor, Percent	58.3	0	28.4	28.9
	21	Turbine Startups	0	0	0	0
	22	Reactor Cold Startups	0	0	0	0
	23					
Efficiency	24	Gross Heat Rate, Btu/kWh	*11,140	0	9,790	*10,680
	25	Net Heat Rate, Btu/kWh	*11,540	0	10,320	*11,170
	26					
	27					
Temp & Press	28	Throttle Pressure, psig	949	0	937	945
	29	Throttle Temperature, °F	538	0	537	538
	30	Exhaust Pressure, InHg Abs.	1.22	0	1.25	1.23
	31	Intake Water Temp., °F	58.8	0	54.6	57.4
	32					
Flows	33	Main Feedwater, M lb/hr	11.9	0	12.7	12.2
	34					
	35					
	36					
Misc.	37	Full Power Capacity, EFPD (3)	346	(4)	375	
	38	Accum. Cycle Full Power Days, EFPD (3)		(4)		
	39	Oil Fired for Generation, Gallons				25,322
	40	Oil Heating Value, Btu/Gal.				140,900
	41	Diesel Generation, MWh				21.0
	42					
Station Data	Max. Hour Net Gen.		Max. Day Net Gen.		Load Factor, %	
	MWh	Time	MWh	Date		
	43	2079	1300	3/1/85	50,113	3/3/85
					40.4	
Remarks: ¹ For BFNP this value is MWD/STU and for SQNP and WBNP this value is MWD/MTU.						
² (t) indicates Thermal Energy.						
(3) Information Furnished by Reactor Analysis Group, Chattanooga						
(4) End of Cycle 5 Refuel Outage						

Date Submitted

Date Revised

A.T.R. om

TENNESSEE VALLEY AUTHORITY

Browns Ferry Nuclear Plant

P. O. Box 2000

Decatur, Alabama 35602

50-259
50-260
50-296

JUN 13 1985

Nuclear Regulatory Commission
Office of Management Information
and Program Control
Washington, DC 20555

Gentlemen:

Enclosed is the May 1985 Monthly Operating Report to NRC for Browns Ferry Nuclear Plant Units 1, 2, and 3.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


G. T. Jones
Plant Manager

Enclosures

cc: Director, Region II
Nuclear Regulatory Commission
Office of Inspection and Enforcement
101 Marietta Street
Atlanta, GA 30303 (1 copy)

INPO Records Center
Institute of Nuclear Power
Suite 1500
1100 Circle 75 Parkway
Atlanta, GA 30389

Director, Office of Inspection
and Enforcement
Nuclear Regulatory Commission
Washington, D. C. 20555 (10 copies)

Mr. A. Rubio, Director
Electric Power Research Institute
P. O. Box 10412
Palo Alto, CA 94304