

OMAHA PUBLIC POWER DISTRICT
Fort Calhoun Station Unit No. 1

APRIL 1996
Monthly Operating Report

1. OPERATIONS SUMMARY

The Fort Calhoun Station (FCS) continued a power ascension on April 1, 1996 from 80% and reached 100% on April 3rd. The plant was at 80% power following a brief shutdown in March for condenser tube repairs. For the remainder of the month, FCS operated at a nominal 100% power. Normal plant maintenance, surveillance, equipment rotation activities and scheduled on-line modifications were conducted during the month.

On April 9th, at 1858 hours, Reactor Coolant System (RCS) letdown was aligned to rinse in Cation Exchanger CH-10. After rinsing in CH-10, letdown was returned to a normal lineup. Letdown Strainer CH-24 differential pressure increased causing high back pressure and letdown relief valves CH-223 and CH-224 to relieve to the Quench and Neutralization Tanks. At 0001 hour on April 10th, the leakage was estimated to be 3 gpm. Technical Specification (TS) 2.1.4(1) and Abnormal Operating Procedure AOP-22, *Reactor Coolant Leak*, were entered and appropriate notifications were made. Letdown was diverted to bypass the ion exchanger beds and the relief valves reseated. The letdown strainer was flushed and the differential pressure returned to normal. At 0529 hours, an RCS Leak Rate test was completed satisfactorily with a total leakage of 0.263 gpm and AOP-22 was exited.

On April 25th at 1644 hours, a four-hour non-emergency notification was made to the NRC pursuant to 10CFR50.72(b)(2)(iii)(D) upon discovering a discrepancy between the Operating Instruction (OI) procedure OI-FH-1, *Fuel Handling Equipment Operation*, and assumptions in an FCS Engineering Analysis, *Control Room Habitability Evaluation*. The analysis assumes the Control Room Charcoal Filtration System is in operation during movement of irradiated fuel, while the OI only requires it to be operable.

Four additional incore nuclear detectors failed in April 1996, rendering eight of the twenty-eight detector strings inoperable. Because less than 75% of the total incore strings are operable, an increase of 1% to the total uncertainties has been applied to the planar, integrated and total radial peaking factors. The frequency for surveillance test RE-ST-RX-0001, *Determination of the Total Integrated and Planar Radial Peaking Factors*, has been increased from monthly to a minimum of once every 15 days. All failures have occurred in detectors installed during the 1995 refueling outage. These failures are under investigation with assistance from ABB/CE and the incore detector vendor.

2. SAFETY VALVE OR PORV CHALLENGES OR FAILURES WHICH OCCURRED

During the month of April, no power operated relief valve (PORV) or primary system safety valve challenges or failures occurred.

3. RESULTS OF LEAK RATE TESTS

The RCS leak rate was relatively steady at a nominal 0.1 to 0.2 gpm throughout the month, following the March 1996 scheduled maintenance outage, with the exception of one incident during April. The exception was on April 10th when the Chemical and Volume Control System (CVCS) purification strainer clogged causing two letdown system relief valves to lift. This resulted in a temporary increase in the RCS leak rate to 3 gpm. Once the strainer was unclogged and the system was returned to normal operation, the leak rate returned to the previous trend of minimal RCS leakage.

4. CHANGES, TESTS AND EXPERIMENTS REQUIRING NUCLEAR REGULATORY COMMISSION AUTHORIZATION PURSUANT TO 10CFR50.59

<u>Amendment No.</u>	<u>Description</u>
No. 173	This amendment revises the Technical Specification (TS) requirements for the containment radiation high signal (CRHS) and the safety injection and refueling water (SIRW) tank low signal (SILS) in TS 2.15, Tables 2-3 and 2-4. TS 3.1, Table 3-2 was revised to include administrative changes to the CRHS surveillance methods to be consistent with the applicable surveillance functions. The Basis of TS 2.15 was revised to clarify that the number of installed channels for CRHS is two. The term "SOURCE CHECK" was deleted from the Definitions section.

5. SIGNIFICANT SAFETY RELATED MAINTENANCE FOR THE MONTH OF APRIL 1996

- Replaced Raw Water Pump AC-10D
- Replaced the check source and keyswitch for the Containment Noble Gas Radiation Monitor RM-051
- Added Boric Acid to the Safety Injection Tank SI-6C to restore concentration
- Replaced the solenoid valves for dampers YCV-871A, B and C

6. OPERATING DATA REPORT

Attachment I

7. AVERAGE DAILY UNIT POWER LEVEL

Attachment II

8. UNIT SHUTDOWNS AND POWER REDUCTIONS

Attachment III

9. REFUELING INFORMATION, FORT CALHOUN STATION UNIT NO. 1

Attachment IV

ATTACHMENT I
OPERATING DATA REPORT

DOCKET NO. 50-285
UNIT FORT CALHOUN STATION
DATE MAY 02, 1996
COMPLETED BY D. L. LIPPY
TELEPHONE (402) 533-6843

OPERATING STATUS

1. Unit Name: FORT CALHOUN STATION
2. Reporting Period: APRIL 1996

NOTES

3. Licensed Thermal Power (MWt): 1500
4. Nameplate Rating (Gross MWe): 502
5. Design Elec. Rating (Net MWe): 478
6. Max. Dep. Capacity (Gross MWe): 502
7. Max. Dep. Capacity (Net MWe): 478

8. If changes occur in Capacity Ratings (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.....	719.0	2903.0	198097.0
12. Number of Hours Reactor was Critical	719.0	2668.7	156376.7
13. Reactor Reserve Shutdown Hours.....	.0	.0	1309.5
14. Hours Generator On-line.....	719.0	2642.1	154622.6
15. Unit Reserve Shutdown Hours.....	.0	.0	.0
16. Gross Thermal Energy Generated (MWH)	1065302.5	3861428.3	206547736.6
17. Gross Elec. Energy Generated (MWH)..	361382.0	1309544.0	68243269.2
18. Net Elec. Energy Generated (MWH)....	345583.1	1250129.7	65107498.5
19. Unit Service Factor.....	100.0	91.0	78.1
20. Unit Availability Factor.....	100.0	91.0	78.1
21. Unit Capacity Factor (using MDC Net)	100.6	90.1	71.0
22. Unit Capacity Factor (using DER Net)	100.6	90.1	69.4
23. Unit Forced Outage Rate.....	.0	1.3	3.9

24. Shutdowns scheduled over next 6 months (type, date, and duration of each):
REFUELING OUTAGE SCHEDULED TO COMMENCE ON SEPTEMBER 21, 1996, WITH A
PLANNED DURATION OF 42 DAYS.

25. If shut down at end of report period, estimated date of startup: _____

26. Units in test status (prior to comm. oper.): Forecast Achieved

INITIAL CRITICALITY
INITIAL ELECTRICITY
COMMERCIAL OPERATION

N/A

ATTACHMENT II
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO.	50-285
UNIT	FORT CALHOUN STATION
DATE	MAY 02, 1996
COMPLETED BY	D. L. LIPPY
TELEPHONE	(402) 533-6843

MONTH APRIL 1996

DAY AVERAGE DAILY POWER LEVEL
 (MWe-Net)

1	<u>330</u>
2	<u>466</u>
3	<u>482</u>
4	<u>487</u>
5	<u>487</u>
6	<u>487</u>
7	<u>488</u>
8	<u>488</u>
9	<u>487</u>
10	<u>485</u>
11	<u>487</u>
12	<u>487</u>
13	<u>487</u>
14	<u>488</u>
15	<u>488</u>
16	<u>487</u>

DAY AVERAGE DAILY POWER LEVEL
 (MWe-Net)

17	<u>487</u>
18	<u>487</u>
19	<u>486</u>
20	<u>486</u>
21	<u>486</u>
22	<u>487</u>
23	<u>486</u>
24	<u>486</u>
25	<u>485</u>
26	<u>486</u>
27	<u>487</u>
28	<u>487</u>
29	<u>486</u>
30	<u>487</u>
31	<u>N/A</u>

INSTRUCTIONS

On this form, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

ATTACHMENT III
UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-285
UNIT NAME Fort Calhoun St.
DATE May 8, 1996
COMPLETED BY D. L. Lippy
TELEPHONE (402) 533-6843

REPORT MONTH April 1996

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report No.	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
None									

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
H-Other (Explain)

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

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

5
Exhibit H - Same Source

Attachment IV
Refueling Information
Fort Calhoun Station - Unit No. 1

Report for the month ending April 30, 1996

1. Scheduled date for next refueling shutdown. September 21, 1996
2. Scheduled date for restart following refueling. November 2, 1996
3. Will refueling or resumption of operations thereafter require a technical specification change or other license amendment? Yes
 - a. If answer is yes, what, in general, will these be? Enrichment limit of spent fuel racks is to be increased to at least 4.5 w/o from 4.2 w/o. This is necessary based upon the preliminary Cycle 17 core pattern development.
 - b. If answer is no, has the reload fuel design and core configuration been reviewed by your Plant Safety Review Committee to determine whether any unreviewed safety questions are associated with the core reload. N/A
 - c. If no such review has taken place, when is it scheduled? N/A
4. Scheduled date(s) for submitting proposed licensing action and support information. Spent fuel rack enrichment limit change was submitted February 1, 1996.
5. Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures. N/A
6. The number of fuel assemblies:
 - a) in the core 133 Assemblies
 - b) in the spent fuel pool 618 Assemblies
 - c) spent fuel pool storage capacity 1083 Assemblies
7. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity. 2007 Outage

Prepared by John Bortolone

Date 5/3/96

LIC-96-0066
Enclosure 2

OMAHA PUBLIC POWER DISTRICT
Fort Calhoun Station Unit No. 1

MARCH 1996
Monthly Operating Report

*Corrections to the
Operations Summary,
Operating Data Report &
Unit Shutdowns and Power Reductions Form*

On March 18th, while starting a containment purge release, a valid Ventilation Isolation Actuation Signal (VIAS) occurred. A four-hour non-emergency notification was made to the NRC pursuant to 10 CFR 50.72(b)(2)(ii) for Engineered Safety Feature (ESF) Actuation. The Containment Stack Radiation Monitor (RM-052) initiated the VIAS while monitoring the Auxiliary Building Ventilation Stack. The RM-052 count rate exceeded its setpoint; however, through operator action to reduce the purge flowrate, the RM-052 count rate decreased below its setpoint and VIAS was reset. No release limits were exceeded at the site boundary. This event is described in Licensee Event Report (LER) 96-001.

On March 21st, the circulating water outfall to the Missouri River was sampled for hydrazine, which is used as an oxygen scavenger in the condensate system, and was found to be 143 ppb. The National Pollution Discharge Elimination System (NPDES) permit limit is 100 ppb. A four-hour non-emergency notification was made to the NRC pursuant to 10 CFR 50.72(b)(2)(vi) due to the notification of other government agencies. The condensate system flush, which was the source of the hydrazine release, was terminated. A second sample was taken and indicated the release level dropped to 3 ppb. The cause for the high level of hydrazine is currently being investigated.

The maintenance outage was completed and the reactor was taken critical on March 24th. On March 25th at 0457 hours, the turbine was placed on-line. A nominal 100% power was achieved on March 28th.

Following return to power operations, indications of a condenser tube leak appeared. On March 29th, a power reduction from 99% to 50% was started to allow a condenser to be isolated in order to troubleshoot and repair the suspected tube leak(s). At 2000 hours, during the power reduction, the condenser tube leakage increased significantly, causing the plant to enter steam generator chemistry Action Level 2, requiring a power reduction to 30% power. At 2048 hours, a NOUE was declared to heighten management's awareness of a degrading plant condition. At 2108 hours, notification of the NOUE was made to the NRC pursuant to 10 CFR 50.72(a)(1)(i). At 2200 hours, the condenser inleakage increased to a Chemistry Action Level 3, requiring the plant to reduce power below 5%. On March 29th, at 2235 hours, the reactor was manually tripped due to lowering condenser vacuum. The NRC was notified of the termination of the NOUE and the manual reactor trip at 2312 hours on March 29th per 10 CFR 50.72(b)(2)(ii). The condenser tubes were tested; the leaking tube was identified and plugged; and the plant was placed on-line on March 31st at 0942 hours.