

October 14, 1991  
LIC-91-258R

Omaha Public Power District  
444 South 16th Street Mall  
Omaha, Nebraska 68102-2247  
402/636-2000

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station P1-137  
Washington, DC 20555

Reference: Docket No. 50-285

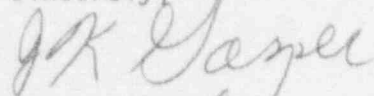
Gentlemen:

SUBJECT: September Monthly Operating Report (MOR)

Enclosed is the September 1991 MOR for Fort Calhoun Station (FCS) Unit No. 1 as required by FCS Technical Specification Section 5.9.1.

If you should have any questions, please contact me.

Sincerely,



W. Gates  
Division Manager  
Nuclear Operations

WGG/sel

Enclosures

c: LeBoeuf, Lamb, Leiby & MacRae  
R. D. Martin, NRC Regional Administrator, Region IV  
R. P. Mullikin, NRC Senior Resident Inspector  
D. K. Sentell, Combustion Engineering  
R. J. Simon, Westinghouse  
Office of Management & Program Analysis (2)  
INPO Records Center  
American Nuclear Insurers

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# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-285  
 UNIT Fort Calhoun Station  
 DATE October 3, 1991  
 COMPLETED BY M.L. Edwards  
 TELEPHONE (402)636-2451

MONTH September 1991

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1	466
2	468
3	469
4	470
5	471
6	472
7	472
8	470
9	470
10	470
11	470
12	366
13	0
14	0
15	0
16	0

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0

## 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.

# OPERATING DATA REPORT

DOCKET NO. 50-285  
UNIT Fort Calhoun Station  
DATE October 3, 1991  
COMPLETED BY M.L. Edwards  
TELEPHONE (402)636-2451

## OPERATING STATUS

- |  |       |
|--|-------|
| 1. Unit Name: Fort Calhoun Station   | Notes |
| 2. Reporting Period: September 1991  |       |
| 3. Licensed Thermal Power (MWt): 1500  |       |
| 4. Nameplate Rating (Gross MWe): 502   |       |
| 5. Design Electrical Rating (Net MWe): 478   |       |
| 6. Maximum Dependable Capacity (Gross MWe): 502  |       |
| 7. Maximum Dependable Capacity (Net MWe): 478  |       |
| 8. If changes occur in Capacity Ratings (Item Numbers 3 through 7) Since Last Report, Give Reasons:<br>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	720.0	6,551.0	157,921.0
12. Number of Hours Reactor was Critical	286.5	5,937.5	122,726.2
13. Reactor Reserve Shutdown Hours	0.0	0.0	1,309.5
14. Hours Generator On-Line	285.0	5,911.7	121,341.6
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	423,141.3	7,416,972.1	158,700,461.4
17. Gross Electrical Energy Generated (MWH)	139,400.0	2,435,744.0	52,185,870.2
18. Net Electrical Energy Generated (MWH)	132,851.0	2,305,224.0	49,790,000.3
19. Unit Service Factor	39.6	90.2	76.8
20. Unit Availability Factor	39.6	90.2	76.8
21. Unit Capacity Factor (Using MDC Net)	38.6	73.6	68.3
22. Unit Capacity Factor (Using DER Net)	38.6	73.6	66.8
23. Unit Forced Outage Rate	60.4	9.8	3.8
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): Refueling outage scheduled to start on January 31, 1992 and last approximately three months.			
25. If Shut Down at End of Report Period, Estimated Date of Startup: N/A			
26. Units In Test Status (Prior to Commercial Operation):	Forecast	Achieved	

INITIAL CRITICALITY  
INITIAL ELECTRICITY  
COMMERCIAL OPERATION

N/A

Refueling Information  
Fort Calhoun - Unit No. 1

Report for the month ending September 1991

1. Scheduled date for next refueling shutdown. January 31, 1992
  2. Scheduled date for restart following refueling. May 1, 1992
  3. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? Yes
    - a. If answer is yes, what, in general, will these be?  
Incorporate specific requirements resulting from reload safety analysis.
    - 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. November 1991
  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. New fuel supplier  
New LOCA Analysis
  6. The number of fuel assemblies:
    - a) in the core 133 Assemblies
    - b) in the spent fuel pool 477 Assemblies
    - c) spent fuel pool storage capacity 729 Assemblies
    - d) planned spent fuel pool storage capacity Planned to be increased with higher density spent fuel racks.
  7. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity. 1995 \*
- \* Capability of full core offload of 133 assemblies lost. Reracking to be performed between the 1993 and 1995 Refueling Outages.

Prepared by Kenn Schell Date 10-7-91

## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH SEPTEMBER 1991DOCKET NO. 50-285UNIT NAME Fort Calhoun StationDATE October 8, 1991COMPLETED BY M. L. EdwardsTELEPHONE (402) 636-2451

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
91-05	910912	F	435.0	A	1	91-18	EC	BATTERY	FCS entered hot shutdown as a result of cracks discovered in battery #1 of the 125 vdc system caused by stresses from corrosion buildup at the positive post seal area. The 125 vdc system is designed to supply an uninterruptable source of power for plant instrumentation and control for a minimum of 8 hours without any outside power source. On September 13, the plant was on shutdown cooling in preparation for the installation of batteries which allow for corrosion product build up without inducing stresses on the battery cell cover or jar.

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  
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

OMAHA PUBLIC POWER DISTRICT  
Fort Calhoun Station Unit No. 1

SEPTEMBER 1991  
Monthly Operating Report

I. OPERATIONS SUMMARY

Fort Calhoun Station operated at 100% power until a forced shutdown began on September 12, 1991 when the station batteries were declared inoperable. On September 11, 1991, a jar in one of the 125 vdc station batteries cracked and began leaking electrolyte. On September 12, 1991, a determination was made that propagating cracks found on the battery jars disqualified them seismically and a plant shutdown was initiated per Technical Specifications. The plant was placed in cold shutdown on September 13, 1991. Both station batteries have since been replaced and start-up is in progress.

Significant maintenance activities during the month of September included: removal of feedwater pump FW-4C motor and pump for overhaul, bearing replacement on component cooling water pump AC-3C, repair of two of the four wide range nuclear instrument channels, and replugging of condenser tubes. Modifications included: removal of the control element assembly change machine from the reactor refueling cavity and removal of a section of waste piping containing a hot spot greater than 1,000 R.

New fuel receipt was completed for 44 of the 52 assemblies to be used for Cycle 14. The last 8 assemblies are scheduled for delivery in December.

The INPG plant evaluation and simulator evaluation occurred during September, 1991.

The following NRC inspections took place in September:

IR 91-21      Resident's Routine Inspection

The following LERs were submitted:

LER 91-017    Potential for Radiological Release Due to SIRWT Vents

LER 91-SO2    Microwave Zone Inoperable

A.    SAFETY VALVES OR PORV CHALLENGES OR FAILURES WHICH  
      OCCURRED

None



B. RESULTS OF LEAK RATE TESTS

The results of the Reactor Coolant (RC) leak rate tests for September, 1991, indicate that the Reactor Coolant System (RCS) and Chemical and Volume Control System (CVCS) are both relatively leak tight. Total RCS leakage averaged 0.18 gpm during September.

The maximum leak rate was recorded on September 7, 1991 when the total leak rate was 0.235 gpm and the unknown leak rate was 0.119 gpm. Known leakage to the RC drain tank was 0.116 gpm. The plant was taken to cold shutdown following a declaration of station battery inoperability on September 12, 1991. As a result, no additional leak rate tests were performed in September.

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

<u>AMENDMENT NO.</u>	<u>DESCRIPTION</u>
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None	
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D. SIGNIFICANT SAFETY RELATED MAINTENANCE FOR THE MONTH OF SEPTEMBER 1991

1. Component Cooling Water Pump AC-3C showed increased vibration during performance of the quarterly Inservice Inspection (ISI) surveillance test. Both inboard and outboard bearings were replaced. Post maintenance and operability testing required performance of the applicable surveillance tests.

During surveillance testing conducted in August the initial attempt to start diesel generator number 2 (DG-2) using the secondary air start motors failed. The cause of the failure could not be determined nor could the failure be reproduced. On September 4, 1991, the pressure solenoid valve (SA-191) was replaced. Operability testing using the secondary air start system to start DG-2 was performed satisfactorily.

During plant shutdown the reactor protection system "B" channel (AI-31B) wide range Nuclear Instrumentation (NI) was found one-half (1/2) decade lower than the next closest channel during surveillance testing. When the channel went into extended range, counts went to three (3) counts per second which seemed unreasonably low as compared to the other channels. The discriminator board was replaced and the discriminator portion of the wide range channel was recalibrated.

The reactor protection system "D" channel NI wide range indication did not operate properly during plant shutdown. Possible cause of failure was a bad connection on the preamp assembly mating with the detection cable assembly in the gamma metrics preamp box. Post maintenance testing required performance of the applicable section of the surveillance test.

2. Maintenance activities during the forced outage included:

Adjusted the bistable trip units for the reactor protective system surveillance test.

Replaced the 125 vdc batteries #1 (EE-8A) and #2 (EE-8B).

Installed new "O" Rings and gaskets and adjusted the air regulator setting on component cooling water heat exchanger AC-1A.

Repaired the middle coupling on the north side bypass damper and the south coupling on the west side bypass damper on inlet damper HCV-725B for containment cooling and filter unit VA-15B.

Doble tested the breaker (1A3-10) for raw water pump AC-10C.

Replaced relay 94-B2/DSS in auxiliary instrumentation panel AI-66B.