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

December 14, 1990
LIC-90-0985

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

Reference: Docket No. 50-285

Gentlemen:

SUBJECT: November Monthly Operating Report (MOR)

Please find enclosed the November 1990 Monthly Operating Report for the Fort Calhoun Station Unit No. 1 as required by Technical Specification Section 5.9.1.

If you should have any questions, please contact me.

Sincerely,

W. G. 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)
Nuclear Safety Analysis Center
INPO Records Center
American Nuclear Insurers

IE24

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-285
UNIT Fort Calhoun Station
DATE December 10, 1990
COMPLETED BY D. L. Stice
TELEPHONE (402)636-2474

MONTH November 1990

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	484	17	486
2	483	18	487
3	484	19	329
4	485	20	0
5	486	21	0
6	486	22	106
7	486	23	447
8	486	24	486
9	486	25	487
10	486	26	488
11	486	27	487
12	484	28	487
13	486	29	487
14	487	30	487
15	486		
16	486		

CTIONS

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

OPERATING DATA REPORT

DOCKET NO. 50-285
UNIT Fort Calhoun Station
DATE December 10, 1990
COMPLETED BY D. L. Stice
TELEPHONE (402)636-2474

OPERATING STATUS

1. Unit Name: Fort Calhoun Station — Notes
2. Reporting Period: November 1990
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:
   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	8,016.0	150,626.0
12.	Number of Hours Reactor was Critical	667.3	5,273.6	116,439.9
13.	Reactor Reserve Shutdown Hours	0.0	0.0	1,309.5
14.	Hours Generator On-Line	659.7	5,084.8	115,090.2
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	965,605.0	7,165,546.5	150,780,657.7
17.	Gross Electrical Energy Generated (MWH)	327,878.0	2,368,418.0	49,578,526.2
18.	Net Electrical Energy Generated (MWH)	312,725.0	2,253,613.0	47,321,165.8
19.	Unit Service Factor	91.6	63.4	76.4
20.	Unit Availability Factor	91.6	63.4	76.4
21.	Unit Capacity Factor (Using MDC Net)	90.9	58.8	68.1
22.	Unit Capacity Factor (Using DER Net)	90.9	58.8	66.6
23.	Unit Forced Outage Rate	8.4	8.0	3.2

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
    NONE
25. If Shut Down at End of Report Period, Estimated Date of Startup: N/A
26. Units In Test Status (Prior to Commercial Operation): Forcast Achieved

INITIAL CRITICALITY			
INITIAL ELECTRICITY	N/A		
COMMERCIAL OPERATION			

Refueling Information
Fort Calhoun - Unit No. 1

Report for the month ending November 1990

1. Scheduled date for next refueling shutdown. — September 1991

2. Scheduled date for restart following refueling. — November 1991

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. — June 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. — 1994*

* Capability of full core offload of 133 assemblies lost.

Prepared by Kevin Hall — Date 12-7-90

DOCKET NO. 50-285
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DATE December 10, 1990
COMPLETED BY D. L. Stice
TELEPHONE (402) 636-2474

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH November, 1990

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
90-07	901119	F	60.3	A	2	LER 90-026	ZZ	ZZZZZZ	On November 19, 1990 the reactor was manually tripped due to loss of steam generator level following a solder joint failure on a 2" instrument air line in the turbine building. The necessary repairs were performed.** Additional solder joints on the instrument air line were inspected with some repairs performed and clamps installed. The Fort Calhoun Station Unit No. 1 was returned to service on November 22, 1990. **See LER 90-026 for further corrective actions.

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-Administative
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 1 - Same Source

OMAHA PUBLIC POWER DISTRICT
Fort Calhoun Station Unit No. 1

November 1990
Monthly Operating Report

I. OPERATIONS SUMMARY

Fort Calhoun Station operated at a nominal 100% power until November 19, 1990, when the reactor was manually tripped due to a solder joint failure on a two inch instrument air line in the turbine building. Additional solder joints on the instrument air line were inspected with some repairs performed and clamps installed. The reactor was made critical on November 21, 1990 and the plant was back to a nominal 100% power November 23, 1990.

While the reactor was shutdown, water was found dripping from the containment spray header. The water source is suspected to be small leakage through the low pressure loop injection valves from the reactor coolant system or Safety Injection Tank. While investigating the leakage flow path, the containment spray header isolation valves were found to be set improperly for the closed position. Reactor restart was delayed while the valves were setup to properly close. An analysis was performed and indicated this was not detrimental to the safety of the system.

As part of the procedures upgrade project, the feedwater temperature indicators that input to the reactor power calorimetric were found to be calibrated with the incorrect resistance settings. The temperature inputs are now properly calibrated. The uncorrected power indication was conservative by approximately two MW thermal at 100% power, therefore, it was not a safety concern.

The modifications to the Water Plant are complete and the installed system start-up is in progress.

During November, two individuals were issued instant Senior Reactor Operator Licenses and two individuals were issued Reactor Operator licenses. Annual licensed operator requalification examinations are in progress.

The following NRC inspections took place in November:

IR 90-43	Fitness for Duty Program
IR 90-44	Emergency Planning Annual Exercise

The following LER was submitted in November:

LER 90-14, Rev. 1	Component Cooling Water Containment Isolation Valves Outside Design Basis

A. SAFETY VALVE OR PORV CHALLENGES OR FAILURES WHICH OCCURRED

None

B. RESULTS OF LEAK RATE TESTS

The results of the Reactor Coolant System (RCS) Leak Rate Tests for November, 1990 show a continuation of the adverse trend that began in October, 1990. The RCS total leak rate reached 0.433 gpm by November 30. The "known" RCS leakage to the Reactor Coolant Drain Tank and the quench tank remained low, therefore, the source of the excessive leakage is considered "unknown". On November 19, the plant was tripped after a turbine building instrument air line ruptured. Extensive walkdown of the containment building during the two days that the reactor was subcritical did not pinpoint the source of the leakage. Investigation of some of the normally inaccessible areas of the auxiliary building was, also, inconclusive. A team of technicians and engineers has recently been assembled to find the source of the leakage.

Presently, there is no evidence that either steam generator has a primary to secondary leak, nor is there any substantial evidence that there is excessive RCS leakage to the containment sump.

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

Amendment No.	Description
134	The amendment makes changes to the Fort Calhoun Station's Technical Specifications to address two administrative changes. These changes include the following: 1) A reference to "FSAR" was changed to "USAR". 2) Changes were made to the Plant Review Committee membership.

D. SIGNIFICANT SAFETY RELATED MAINTENANCE FOR THE MONTH OF NOVEMBER 1990

Significant safety related maintenance activities completed in the month of November are outlined below:

The handwheel assembly on containment spray header isolation valves (HCV-344 and 345) allowed the valves to go past full closed. These are Vee Ball valves, thus, traveling past full-closed caused them to leak. Per temporary modification, shims were fabricated and securely installed. Operability testing required the valves to be cycled and pressure tested to ensure the valves were closed on a close signal.

The Nuclear Instrument and Reactor Protection System Channel A was found to be drifting excessively. The cause of the failure was due to a dirty spot on the potentiometer. Post Maintenance Testing required performance of the "CECOR/EXCORE Offset Check" surveillance test and the system was returned to service.

The transducer for component cooling water outlet valve, HCV-484, had an air leak coming out of the electronic/pneumatic housing. The nature of the failure was a worn gasket. Post Maintenance Testing required cycling the valve, a snoop check of all affected fittings and performance of the "Component Cooling Category B Valve Exercise Test", prior to returning it to service.

An auxiliary lockout relay on the engineered safeguards system failed to trip upon demand during the performance of a surveillance test. The cause of failure was due to the trip latch binding causing high current and subsequent coil burn up. The coil was replaced and Post Maintenance Testing required re-performance of applicable steps of the "Channel A Safety Injection, Containment Spray and Recirculation Actuation Signal Test", prior to returning it to service.

Charging Pump activities included:

CH-1B A water and oil mixture was discovered in the crankcase. The lube oil was changed after the crankcase was wiped clean of all traces of water. The rotating assembly was flushed with clean oil and the lube oil filter was replaced. The hydraulic end of the pump was repacked and the top and front caps received new gaskets. Quality Control checked the valves and visually checked the block and stops for cracks. The oil packing on the crankcase pluggers was snugged to insure sealing between the crankcase and packing cooling well. The packing cooling well drain line was checked for obstructions, none were found. The pump was run to prove operability per the "Chemical and Volume Control System Pump Inservice Test".

CH-1C Experienced low flow conditions. Removed the coolant tank cover, cleaned and inspected the internals. Found worn valve seats and valve guides. Replaced the suction valves and seats, replaced the discharge valves and seats and replaced the packing, guides, springs and plugs. The pump was run to prove operability per the "Chemical and Volume Control System Pump Inservice Test".

Replaced the discharge drain valve CH-256 due to excessive leakage. Post Maintenance Test included a dye penetrant test and a ten minute operating pressure test.