

PUBLIC SERVICE COMPANY OF COLORADO  
FORT ST. VRAIN NUCLEAR GENERATING STATION

MONTHLY OPERATIONS REPORT

NO. 186

July, 1989

8908220169 890825  
PDR ADOCK 05000267  
R PDC

This report contains the highlights of the Fort St. Vrain, Unit No. 1, activities operated under the provisions of the Nuclear Regulatory Commission Operating License No. DPR-34. This report includes the monthly partial scram/maximum temperature reports for control rod drive and orificing assemblies. This report is for the month of July, 1989.

#### 1.0 NARRATIVE SUMMARY OF OPERATING EXPERIENCE AND MAJOR SAFETY RELATED MAINTENANCE

The reactor remained critical the entire month of July, 1989.

On July 1, 1989, at 0444 hours, the turbine generator was manually tripped due to a load swinging problem. The reactor and turbine were stabilized and the problem was corrected. The turbine generator was again placed on line at 1114 hours the same day. The turbine generator remained on line the rest of the month of July.

On July 6, 1989, Bypass Ratio Controller Valve PV-2243 went to a full open position, resulting in Loop I helium circulators to drop in speed. Reactor power and turbine generator load were reduced to stabilize reheat temperature. The situation was corrected and the reactor was returned to power and the turbine generator load was increased.

Reactor building HVAC systems were a priority work item this month due to the very high outside ambient temperatures that were being experienced. Maintenance continued throughout the month.

On July 10, 1989, the hydraulic operator oil leak on valve HV-2224 resumed. On July 24, 1989, the valve was repaired and tested successfully.

On July 25, 1989, the engine driven firewater pump was removed from service for a minor leak repair. This is a 24-hour grace period item for LCO 4.2.6. The firewater pump was returned to service on July 26, 1989.

Toward the end of the month adjustments of core orifice valve positions were performed to accommodate partial insertion of control rods in high power regions.

Construction was completed on the Security Diesel Generator. Functional testing is in progress. Several maintenance items were successfully completed on the ACM and Emergency Diesel Generators.

Fort St. Vrain also achieved 5,000,000 production hours without a disabling injury in July, 1989.

No major problems occurred during this month, thus making July 1989, the highest production month in the history of Fort St. Vrain. The net generation for July 1989, was 178,221 MWe.

2.0 SINGLE RELEASES OF RADIOACTIVITY OR RADIATION EXPOSURE IN EXCESS  
OF 10% OF THE ALLOWABLE ANNUAL VALUE

None

3.0 INDICATION OF FAILED FUEL RESULTING FROM IRRADIATED FUEL EXAMINATIONS

None

4.0 MONTHLY OPERATING DATA REPORT

Attached

5.0 CONTROL ROD DRIVE PARTIAL SCRAM TEST RESULTS AND MAXIMUM DAILY TEMPERATURE REPORT

Attached

OPERATING DATA REPORT

DOCKET NO. 50-267  
 DATE August 15, 1989  
 COMPLETED BY M.L. Block  
 TELEPHONE (303) 620-1180

OPERATING STATUS

NOTES

1. Unit Name: Fort St. Vrain, Unit Number 1
2. Reporting Period: 890701 through 890731
3. Licensed Thermal Power (MWt): 842
4. Nameplate Rating (Gross MWe): 342
5. Design Electrical Rating (Net MWe): 330
6. Maximum Dependable Capacity (Gross MWe): 342
7. Maximum Dependable Capacity (Net MWe): 330
8. If Changes Occur In Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:  
None.
9. Power Level To Which Restricted, If Any (Net MWe): 270.6 (82%)
10. Reasons For Restrictions, If Any: Reanalysis of safe shutdown cooling following a 90 minute interruption of forced cooling.

	This Month	Year To Date	Cumulative
11. Hours In Reporting Period	<u>744.0</u>	<u>5,087.0</u>	<u>88,416.0</u>
12. Number Of Hours Reactor Was Critical	<u>744.0</u>	<u>2,908.0</u>	<u>40,152.8</u>
13. Reactor Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
14. Hours Generator On-Line	<u>737.5</u>	<u>2,286.1</u>	<u>27,358.9</u>
15. Unit Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
16. Gross Thermal Energy Generated (MWH)	<u>488,537.0</u>	<u>1,290,066.0</u>	<u>14,177,776.1</u>
17. Gross Electrical Energy Generated (MWH)	<u>187,226.0</u>	<u>472,464.0</u>	<u>4,732,868.0</u>
18. Net Electrical Energy Generated (MWH)	<u>178,221.0</u>	<u>434,580.0</u>	<u>4,184,574.0</u>
19. Unit Service Factor	<u>99.1</u>	<u>44.9</u>	<u>30.9</u>
20. Unit Availability Factor	<u>99.1</u>	<u>44.9</u>	<u>30.9</u>
21. Unit Capacity Factor (Using MDC Net)	<u>* 72.6(88.5)</u>	<u>* 25.9(31.6)</u>	<u>* 14.3(17.5)</u>
22. Unit Capacity Factor (Using DER Net)	<u>* 72.6(88.5)</u>	<u>* 25.9(31.6)</u>	<u>* 14.3(17.5)</u>
23. Unit Forced Outage Rate	<u>.9</u>	<u>54.3</u>	<u>63.4</u>

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

Units In Test Status (Prior To Commercial Operation):	Forecast	Achieved
INITIAL CRITICALITY	<u>N/A</u>	<u>N/A</u>
INITIAL ELECTRICITY	<u>N/A</u>	<u>N/A</u>
COMMERCIAL OPERATION	<u>N/A</u>	<u>N/A</u>

\* Figures in parenthesis represent Net Capacity Factor based on 82%/270.6 MWe.

AVERAGE DAILY UNIT POWER LEVEL

Docket No. 50-267  
Unit Fort St. Vrain Unit No. 1  
Date August 15, 1989  
Completed By M. L. Block  
Telephone (303) 620-1180

Month JULY

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	159.6	17	214.0
2	239.5	18	246.9
3	241.3	19	242.9
4	236.0	20	244.4
5	236.9	21	243.7
6	230.6	22	245.6
7	240.2	23	244.5
8	240.0	24	246.5
9	243.0	25	245.8
10	239.9	26	246.1
11	240.1	27	245.4
12	244.4	28	244.0
13	247.2	29	244.6
14	237.1	30	244.4
15	242.7	31	240.2
16	243.4		

\* Generator on line but no net generation.

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-267

UNIT NAME Fort St. Vrain Unit No. 1

DATE August 15, 1989

COMPLETED BY M. L. Block

TELEPHONE (303) 620-1180

REPORT MONTH JULY 1989

NO.	DATE	TYPE	DURATION	REASON	METHOD OF SHUTTING DOWN REACTOR	LER #	SYSTEM CODE	COMPONENT CODE	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE
85-07	890701	F	6.5	H	4	N/A	TA	TG	Manually Tripped The Turbine Generator Due To A Load Swinging Problem. The Problem Was Corrected And The Turbine Generator Was Again Placed On Line The Same Day.

REFUELING INFORMATION

1. Name of Facility	Fort St. Vrain Unit No. 1
2. Scheduled date for next refueling shutdown.	None, no further refueling at FSV is expected.
3. Scheduled date for restart following refueling.	N/A
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?	N/A
If answer is yes, what, in general, will these be?	-----
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 (Reference 10 CFR Section 50.59)?	N/A
If no such review has taken place, when is it scheduled?	N/A
5. Scheduled date(s) for submitting proposed licensing action and supporting information.	-----
6. 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.	-----
7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.	a) 1482 HTGR fuel elements b) 0 spent fuel elements



REFUELING INFORMATION (CONTINUED)

8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned, in number of fuel assemblies.	Capacity is limited in size to about one-third of core (approximately 500 HTGR elements). No change is planned.
9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity.	No further refueling is anticipated at Fort St. Vrain. *

\* Under Agreements AT(04-3)-633 and DE-SC07-79ID01370 between Public Service Company of Colorado, General Atomic Company, and DOE, spent fuel discharged during the defueling process will be stored by DOE at the Idaho Chemical Processing Plant. The storage capacity is presently sized to accommodate eight fuel segments. It is estimated that the eighth fuel segment will be discharged in 1992. Discussions concerning the disposition of ninth fuel segment are in progress with DOE.