

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

MONTHLY OPERATIONS REPORT

NO. 66

JUNE, 1979

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, DPR-34. This report is for the month of June, 1979.

1.0 NARRATIVE SUMMARY OF OPERATING EXPERIENCE AND MAJOR SAFETY RELATED MAINTENANCE

The reactor was operated intermittantly at various power levels, not exceeding 2% of rated power during the month of June.

Main turbine generator overhaul has been completed, with the pinning of the three throttle valve seats and the installation of the outer insulating material.

The installation of the time delay relays in the Loop 1 steam/water dump valves control circuitry was completed per Change Notice 1066. The time delay relays will insure that a two loop dump cannot occur and will allow the plant to be operated at power. The installation of the time delay relays was required when the functional tests revealed that high moisture trips will occur on restoration of power following a loss of bus voltage.

Reheat attemperation valves FV-22119, FV-22120, PV-22151, and PV-22152, were removed and two Masoneilan single high pressure drop flow control valves (one per loop) were installed. The single stage reheat spray water pressure and flow control valves tended to oscillate in the automatic mode for flows less than 20K pounds per hour. The multistage, critical service valves will provide better flow control and longer life.

Nuclear Regulatory Commission testing of the license candidates was accomplished on June 11 and 12, 1979. The testing consisted of bringing the reactor critical and the control room portion of the walk around.

Main turbine generator stop valves were removed for inspection and lapping after excessive leakage was observed in the area of the valve stems. After re-installation the valves continued to leak around the valve stems. General Electric representatives advised that the leakage rate was acceptable. No further action is planned.

Emergency condensate check valves V-2256 and V-2257 were tending to stick shut. Disassembly of the check valves revealed that the disc and seat area appeared to be in good condition. At the recommendation of the manufacturer the seat angle of the disc was increased from approximately 20 degrees to approximately 22 degrees by machining. The check valves were tested after reassembly and did not exhibit any tendency to stick shut.

The testing of all Class I snubbers were successfully completed on June 18, 1979.

On June 26, 1979, at 1724 hours, 480 volt switchgear 5 tripped due to a short circuit caused by water spray from a hose which was being used for resin barrel flushing. Two phases of the transformer shorted accompanied by yellow and gray smoke. The plant was operating at approximately 1.5% of rated power. The fault on the 480 volt switchgear 5 was reflected into the 4160 volt buses and 480 volt buses resulting in a decrease in the essential 480 volt bus voltage before the high and low side breakers on switchgear #5 tripped to isolate the transformer. As a result of the voltage drop on the 480 volt buses the operating bearing water pumps tripped in both loops and all four circulators tripped on loss of bearing water. Backup bearing water was not in service, nor required by applicable LCO's 4.2.1 and 4.2.2. A Loop 1 shutdown and two loop trouble scram automatically occurred. The temporary auxiliary boiler tripped causing an interruption of steam flow to the 1A boiler feed pump and subsequent decrease in feedwater flow to Loop 2 steam generators. Condenser vacuum was lost as was control of both startup bypass valves, PV-22129-1 and PV-22130-1. The primary coolant flow was interrupted for a period of 15 minutes. Technical Services believes this event is a reportable occurrence per Fort St. Vrain Technical Specification AC 7.5.2(a)5. Damage to equipment as a result of the short circuit to the load center #5 transformer was limited to the transformer and the 2/0 feeder cable between the 4160 switchgear and the #5 load center. The transformer and 2/0 feeder cable have been replaced and load center #5 has been returned to service. Calibration checks of the associated protective 4160 relays was completed by the Relay Department. All protective relaying components were found to be accurately calibrated and functioning properly.

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

639226

OPERATING DATA REF. II

DOCKET NO. 50-267

DATE 790701

COMPLETED BY J. W. Gahm

TELEPHONE (303) 785-2253

OPERATING STATUS

NOTES

1. Unit Name: Fort St. Vrain, Unit No. 1
2. Reporting Period: 790601 to 790630
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): 231
10. Reasons for Restrictions, If Any: Nuclear Regulatory Commission restriction (70%) pending resolution of certain Final Safety Analysis Report and Technical Specification bases discrepancies. This unit is in the power ascension phase of startup testing.

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	<u>720</u>	<u>4343</u>	<u>-----</u>
12. Number of Hours Reactor Was Critical	<u>328.7</u>	<u>1146.4</u>	<u>14620.1</u>
13. Reactor Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
14. Hours Generator On-Line	<u>0.0</u>	<u>665.3</u>	<u>8,507.9</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>2653</u>	<u>315,745</u>	<u>3,518,743</u>
17. Gross Electrical Energy Generated (MWH)	<u>0</u>	<u>109,852</u>	<u>1,058,122</u>
18. Net Electrical Energy Generated (MWH)	<u>0</u>	<u>101,177</u>	<u>952,628</u>
19. Unit Service Factor	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
20. Unit Availability Factor	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
21. Unit Capacity Factor (Using MDC Net)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
22. Unit Capacity Factor (Using DER Net)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
23. Unit Forced Outage Rate	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):	<u>Maintenance</u>		
	<u>Shutdown, October 20, 1979, 30 days</u>		
25. If Shut Down at End of Report Period, Estimated Date of Startup:	<u>N/A</u>		

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

INITIAL CRITICALITY

INITIAL ELECTRICITY

COMMERCIAL OPERATION

Forecast

Achieved

740201

740131

7612

761211

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699227

## REPORT MONTH June, 1979

DOCKET NO. 50-267

UNIT NAME Fort St. Vrain, Unit No. 1

DATE 790701

COMPLETED BY J. W. Gahm

TELEPHONE (303) 785-2253

[illegible]

SUMMARY: Plant at less than 2% rated power to allow cleanup of secondary coolant chemistry.

659228

# AVERAGE DAILY UNIT POWER LEVEL

Docket No. 50-267

Unit Fort St. Vrain, Unit No. 1

Date 790701

Completed By J. W. Gahm

Telephone (303) 785-2253

Month June, 1979

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1	<u>0</u>
2	<u>0</u>
3	<u>0</u>
4	<u>0</u>
5	<u>0</u>
6	<u>0</u>
7	<u>0</u>
8	<u>0</u>
9	<u>0</u>
10	<u>0</u>
11	<u>0</u>
12	<u>0</u>
13	<u>0</u>
14	<u>0</u>
15	<u>0</u>
16	<u>0</u>

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

17	<u>0</u>
18	<u>0</u>
19	<u>0</u>
20	<u>0</u>
21	<u>0</u>
22	<u>0</u>
23	<u>0</u>
24	<u>0</u>
25	<u>0</u>
26	<u>0</u>
27	<u>0</u>
28	<u>0</u>
29	<u>0</u>
30	<u>0</u>
31	<u>N/A</u>

\*Generator on line but no net generation.

698229

# REFUELING INFORMATION

1. Name of Facility.	Fort St. Vrain, Unit No. 1
2. Scheduled date for next refueling shutdown.	September 1, 1980
3. Scheduled date for restart following refueling.	November 1, 1980
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?	No
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 10CFR Section 50.59)?	The Plant Operations Review Committee will review any questions associated with the core reload
If no such review has taken place, when is it scheduled?	March 1, 1980
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) 245 spent HTGR fuel elements.
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.

633230

REFUELING INFORMATION (CONTINUED)

9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity.	1986 under the Three Party Agreement (Contract AT (04-3)-633) between DOE, Public Service Company of Colorado (PSCo), and General Atomic Company.*
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\*The 1986 data is based on the understanding that spent fuel discharged during the term of the Three Party Agreement will be shipped to the Idaho National Engineering Laboratory for storage by DOE at the Idaho Chemical Processing Plant (ICPP). The storage capacity has evidently been sized to accomodate fuel which is expected to be discharged during the eight year period covered by the Three Party Agreement.