

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

MONTHLY OPERATIONS REPORT

NO. 90

JUNE, 1981

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, 1981.

1.0 NARRATIVE SUMMARY OF OPERATING EXPERIENCE AND MAJOR SAFETY RELATED MAINTENANCE

1.1 Summary

The reactor was shutdown during the entire reporting period for main turbine generator inspection and repair, refueling, 1B helium circulator change-out, general plant outage maintenance, and surveillance requirements.

Once each week, during the month, an unannounced fire drill was held in the Control Room with a followup critique for the swing shift personnel.

1.2 Operations

Non-interruptible plant protective system instrument bus 3 tripped on June 2 from excessive temperature in the 480V Room. It was connected to interruptible bus 3 until June 26, at which time it was returned to normal inverter feed.

Severe weather conditions (high winds and tornadoes sighted in the area) on June 3 were reported to the State Division of Disaster Emergency Services.

1B helium circulator was physically removed from the prestressed concrete reactor vessel on June 4.

Region 4 refueling and control rod drive installation were completed on June 5 and preparations for refueling region 36 began.

Various types of problems were experienced with the fuel handling machine on June 7. These problems continued to plague the fuel handling machine throughout the month.

Loop 1 was shutdown on June 9 for system component repair work and calibrations. Reactor cooling was maintained on Loop 2 via the decay heat exchanger.

On June 11, General Electric conducted ultrasonic testing on the low pressure turbine blading which revealed no problems other than the loose blocks on the 16 stage shroud.

Work on the main cooling tower and basin was completed, and the circulating water system was returned to service.

On June 12, auxiliary boiler #1 was shutdown and cleared out for safety modifications. This required taking the deaerator out of service and cycling secondary coolant flows to maintain System 46 (prestressed concrete reactor vessel liner cooling) temperatures within Technical Specification limits.

Loop 1 was returned to normal on June 14.

1B helium circulator replacement was installed and the primary seal bolted down on June 16, with the brake and seal manually set.

Region 36 refueling was completed on June 18, and Region 4 and region 36 control rod drives were tested for operability.

Flushing of 1B helium circulator bearing water piping commenced on June 25.

The main turbine generator oil system was returned to service on June 26, and the turbine was placed on the turning gear to check for rubs. None were evident.

Platteville Fire Department was called out on June 28 to extinguish a fire in a cottonwood tree next to, but outside, the exclusion area fence.

Bearing water makeup pump, P-2105, suction casing washed out and was cleared out for repairs on June 29.

On June 30, the condenser clearance was returned, vacuum was pulled, and the bypass flash tank drains were rerouted from the decay heat exchanger to the main condenser.

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

OPERATING DATA REPORT

DOCKET NO. 50-267

DATE 810701

COMPLETED BY L. M. McBride

TELEPHONE (303) 785-2224

OPERATING STATUS

NOTES

1. Unit Name: Fort St. Vrain
2. Reporting Period: 810601 through 810630
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: NRC restriction 70% pending resolution of
temperature fluctuations

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	<u>720</u>	<u>4,343</u>	<u>17,544</u>
12. Number of Hours Reactor Was Critical	<u>0.0</u>	<u>2,665.5</u>	<u>11,800.7</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>2,131.5</u>	<u>7,824.8</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>0.0</u>	<u>1,102,586.8</u>	<u>3,810,679.6</u>
17. Gross Electrical Energy Generated (MWH)	<u>0.0</u>	<u>400,445</u>	<u>1,272,239</u>
18. Net Electrical Energy Generated (MWH)	<u>0.0</u>	<u>369,305</u>	<u>1,168,606</u>
19. Unit Service Factor	<u>0.0</u>	<u>49.1%</u>	<u>44.6%</u>
20. Unit Availability Factor	<u>0.0</u>	<u>49.1%</u>	<u>44.6%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>0.0</u>	<u>25.8%</u>	<u>20.2%</u>
22. Unit Capacity Factor (Using DER Net)	<u>0.0</u>	<u>25.8%</u>	<u>20.2%</u>
23. Unit Forced Outage Rate	<u>0.0</u>	<u>35.8%</u>	<u>36.9%</u>

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): Maintenance/
modification shutdown September 1, 1981 lasting 4 months.

25. If Shut Down at End of Report Period, Estimated Date of Startup: July 20, 1981

26. 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>

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-267
 UNIT NAME Fort St. Vrain
 DATE 810701
 COMPLETED BY L. M. McBride
 TELEPHONE (303) 785-2224

REPORT MONTH June, 1981

NO.	DATE	TYPE	DURATION	REASON	METHOD OF SHUTTING DOWN REACTOR	LER #	SYSTEM CODE	COMPONENT CODE	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE
81-17	810520	S	720	C	N/A	N/A	N/A	N/A	Continued refueling outage begun May 20, 1981.

Summary: Upon completion of refueling, and post refueling testing plan to continue Fort St. Vrain's power ascension program.

AVERAGE DAILY UNIT POWER LEVEL

Docket No. 50-267

Unit Fort St. Vrain

Date 810701

Completed By L. M. McBride

Telephone (303) 785-2224

Month June

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	<u>0.0</u>
2	<u>0.0</u>
3	<u>0.0</u>
4	<u>0.0</u>
5	<u>0.0</u>
6	<u>0.0</u>
7	<u>0.0</u>
8	<u>0.0</u>
9	<u>0.0</u>
10	<u>0.0</u>
11	<u>0.0</u>
12	<u>0.0</u>
13	<u>0.0</u>
14	<u>0.0</u>
15	<u>0.0</u>
16	<u>0.0</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	<u>0.0</u>
18	<u>0.0</u>
19	<u>0.0</u>
20	<u>0.0</u>
21	<u>0.0</u>
22	<u>0.0</u>
23	<u>0.0</u>
24	<u>0.0</u>
25	<u>0.0</u>
26	<u>0.0</u>
27	<u>0.0</u>
28	<u>0.0</u>
29	<u>0.0</u>
30	<u>0.0</u>
31	<u>N/A</u>

*Generator on line but no net generation.

REFUELING INFORMATION

1. Name of Facility.	Fort St. Vrain Unit No. 1
2. Scheduled date for next refueling shutdown.	May 20, 1981 (In progress)
3. Scheduled date for restart following refueling.	July 20, 1981
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)?	Yes
If no such review has taken place, when is it scheduled?	-----
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.	Peripheral fuel elements changed from thin thorium buffer to thick thorium buffer.
7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.	a) 1482 HTGR fuel elements. b) 178 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.

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 date 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 accommodate fuel which is expected to be discharged during the eight year period covered by the Three Party Agreement.