

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

MONTHLY OPERATIONS REPORT

NO. 103

July, 1982

FORM 548 22 0210

8208130199 820810
PDR ADDCK 05000267
R PDR

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 July, 1982.

1.0 NARRATIVE SUMMARY OF OPERATING EXPERIENCE AND MAJOR SAFETY RELATED MAINTENANCE

1.1 Summary

The plant operated at 70% power for almost all of the month. Exceptions to this were caused by two spurious trips of 1B circulator from programmed low speed, one of which resulted in a hot reheat temperature scram. Recovery was comparatively quick in both cases.

Problems that persist are the introduction of water into the turbine lube oil system and a slight leak of primary coolant into the Reactor Building, which we have not been able to find.

Shipping of spent fuel, which began in June, continued for the entire month of July.

1.2 Operations

At the beginning of the month of July, the reactor was operating at about 70% capacity. Generator output was 215 MWe.

Much time and effort was spent during the month of July on the emergency feedwater supplies to the circulator pelton wheels and to backup bearing water. Pressure controllers were tuned, pressure control and safety relief valves were rebuilt.

A July 9 inspection of our #2 auxiliary boiler revealed that a general overhaul is overdue. The boiler will remain shut down until the work can be completed, which is estimated to be the last of August.

Reactor power continued at the 70% level until 1734 hours on July 13. At that time, 1B circulator tripped spuriously from programmed low speed. Extensive investigation revealed no cause, so power was reduced to 30%, the circulator was put back in service, and generator output was increased back up to 215 MWe by 0700 hours on July 14.

On July 15, 1B bearing water supply pump tripped on overload. Since the backup bearing water was in service, the circulators continued to operate. 1C bearing water pump automatically started, and plant load remained constant.

On July 16 at 2235 hours, 1B circulator again tripped spuriously from programmed low speed. This time, the hot reheat temperature increased enough to cause a reactor scram. Investigation revealed a faulty chip in a relay driver which was replaced.

The reactor was brought critical, and the turbine generator was subsequently synchronized at 1421 hours on July 17. Power generation was limited for the balance of the weekend primarily due to high boiler feedwater conductivity. Reactor power was increased to 70% on Monday, July 19.

For the balance of July, generation remained constant at about 215 MW, except when reduction was requested by the System Load Dispatcher.

On July 27, it was found that the 1A helium purification train could not be isolated. Further investigation indicates that HV-2301 is experiencing some leakage past the seat. An investigation of this matter is continuing.

On July 31, recorders were placed in service for meteorological data fed from the new 60 meter tower.

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 August 9, 1982

COMPLETED BY L. M. McBride

TELEPHONE (303) 785-2224

OPERATING STATUS

NOTES

1. Unit Name: Fort St. Vrain
2. Reporting Period: 820701 through 820731
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 of 70% pending resolution of temperature fluctuations.

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	<u>744</u>	<u>5,087</u>	<u>27,048</u>
12. Number of Hours Reactor Was Critical	<u>737.0</u>	<u>2,723.5</u>	<u>17,301.9</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
14. Hours Generator On-Line	<u>716.3</u>	<u>1,824.9</u>	<u>11,733.2</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>402,306.4</u>	<u>1,006,816.6</u>	<u>5,940,761.4</u>
17. Gross Electrical Energy Generated (MWH)	<u>145,313</u>	<u>331,460</u>	<u>2,022,816</u>
18. Net Electrical Energy Generated (MWH)	<u>136,256</u>	<u>295,518</u>	<u>1,849,777</u>
19. Unit Service Factor	<u>96.3</u>	<u>35.9</u>	<u>43.4</u>
20. Unit Availability Factor	<u>96.3</u>	<u>35.9</u>	<u>43.4</u>
21. Unit Capacity Factor (Using MDC Net)	<u>55.5</u>	<u>17.6</u>	<u>20.7</u>
22. Unit Capacity Factor (Using DER Net)	<u>55.5</u>	<u>17.6</u>	<u>20.7</u>
23. Unit Forced Outage Rate	<u>3.7</u>	<u>16.9</u>	<u>31.8</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): <u>821201 through 821214 - surveillance testing - 336.0 hours</u>			

25. If Shut Down at End of Report Period, Estimated Date of Startup: N/A

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

INITIAL CRITICALITY

INITIAL ELECTRICITY

COMMERCIAL OPERATION

Forecast

N/A

N/A

N/A

Achieved

N/A

N/A

N/A

AVERAGE DAILY UNIT POWER LEVEL

TSP-3
Attachment-3A
Issue 2
Page 1 of 1

Docket No. 50-267

Unit Fort St. Vrain

Date August 9, 1982

Completed By L. M. McBride

Telephone (303) 785-2224

Month July, 1982

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	<u>200.3</u>
2	<u>200.9</u>
3	<u>199.7</u>
4	<u>200.6</u>
5	<u>200.7</u>
6	<u>200.6</u>
7	<u>200.7</u>
8	<u>200.5</u>
9	<u>200.4</u>
10	<u>200.4</u>
11	<u>200.3</u>
12	<u>199.5</u>
13	<u>171.7</u>
14	<u>186.4</u>
15	<u>200.0</u>
16	<u>82.6</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	<u>18.5</u>
18	<u>68.7</u>
19	<u>154.8</u>
20	<u>204.4</u>
21	<u>201.4</u>
22	<u>199.1</u>
23	<u>199.5</u>
24	<u>201.8</u>
25	<u>201.3</u>
26	<u>201.3</u>
27	<u>202.1</u>
28	<u>198.8</u>
29	<u>198.2</u>
30	<u>190.9</u>
31	<u>191.5</u>

*Generator on line but no net generation.

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-267
UNIT NAME Fort St. Vrain
DATE August 9, 1982
COMPLETED BY L. M. McBride
TELEPHONE (303) 785-2224

REPORT MONTH July, 1982

NO.	DATE	TYPE	DURATION	REASON	METHOD OF SHUTTING DOWN REACTOR	LER #	SYSTEM CODE	COMPONENT CODE	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE
82-012820716		F	27.7	H	3	N/A	IBH	INSTRU	Reactor scram from plant protective system (hot reheat steam temperature) and plant recovery.

REFUELING INFORMATION

1. Name of Facility.	Fort St. Vrain Unit No. 1
2. Scheduled date for next refueling shutdown.	October 1, 1983
3. Scheduled date for restart following refueling.	December 1, 1983
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?	Yes
If answer is yes, what, in general, will these be?	Use of type H-451 graphite.
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)?	-----
If no such review has taken place, when is it scheduled?	-----
5. Scheduled date(s) for submitting proposed licensing action and supporting information.	Not scheduled at this time; to be determined.
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.	1482 HTGR fuel elements 185 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.

1992 under Agreements AT(04-3)-633 and DE-SC07-79ID01370 between Public Service Company of Colorado, General Atomic Company, and DOE.*

* The 1992 estimated date is based on the understanding that spent fuel discharged during the term of the Agreements will be stored by DOE at the Idaho Chemical Processing Plant. The storage capacity has evidently been sized to accommodate eight fuel segments. It is estimated that the eighth fuel segment will be discharged in 1992.