

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

MONTHLY OPERATIONS REPORT

NO. 119

December, 1983

FORM 208 22 0218

8401180194 P31231
PDR ADOCK 0000267
R PDR

IE24

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 January, 1983.

1.0 NARRATIVE SUMMARY OF OPERATING EXPERIENCE AND MAJOR SAFETY RELATED MAINTENANCE

December began with the reactor operating at approximately 70% power. Reactor power level was still being restricted due to 1C Boiler Feed Pump (BFP) problems. New fuel element handling continued with loading of the fuel storage wells for the upcoming refueling outage. The turbine generator was producing approximately 200 MWe.

At 0530 hours on December 8, 1983, while experiencing high velocity chinook winds, the deluge system on the Reserve Auxiliary Transformer (RAT) activated. This caused the loss of the RAT and an upset in the Reactor Building HVAC system, resulting in less than adequate ventilation cooling to the Prestressed Concrete Reactor Vessel bottom head region. The higher temperature, combined with previously tripped ultrasonic detectors, activated the steam pipe rupture detection circuitry and resulted in a Loop II Plant Protective System shutdown. Immediately following the loop shutdown, one of the remaining circulators in Loop I (1A circulator) tripped on program speed. This placed the reactor in a one-circulator flow condition. The Shift Supervisor elected to manually scram the reactor and trip the turbine generator.

Later in the morning of December 8, 1983, Loop I was cooled for repairs to a main steam relief valve, V-2215. At 1415 hours, Loop II recovery commenced. As recovery operations continued with Loop II, the pressure control valve, PV-22130-1, was operating erratically and it was decided to return Loop II to a shutdown condition to permit repairs.

As maintenance continued on Loop II, a reactor startup commenced on Loop I at 2112 hours on December 9, 1983. The reactor achieved criticality at 2237 hours the same day. At 0510 hours on December 10, 1983, Loop II was recovered. Warm-up of the turbine generator began at 2300 hours.

At 0308 hours on December 11, 1983, the turbine generator was again synchronized to the distribution system. Reactor power was returned to approximately 70% by 1700 hours the same day. The 1C Boiler Feed Pump problems continued to restrict reactor power.

Late in the day on December 15, 1983, the #5 hot reheat header bypass valve opened for no apparent reason. After approximately 10 minutes, the valve reclosed by itself. Results department personnel investigated and found no problems, but at 0605 hours on December 18, 1983, the same valve opened on it's own power again. At 1830 hours the same day, reactor power was reduced in preparation for repairs to the bypass valve. At 2225 hours, the turbine generator was tripped and repairs commenced. The repairs were made, and the turbine was resynchronized at 2327 hours.

At 0603 hours on December 19, 1983, with reactor power back near 70%, warming operations on 1C boiler feed pump were initiated to begin testing. Again, 1C boiler feed pump failed to perform as required.

The remainder of December saw the reactor at or near 70% power with the turbine generating near 200 MWe. The 1B boiler feed pump performance began showing indications of slow degradation. Capacity checks were being run daily to keep track of it's status.

The installation of the new 4160/480 Volt transformers took place with the delivery of much of the electrical bus change-out materials.

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 January 10, 1984

COMPLETED BY Chuck Fuller

TELEPHONE (303) 785-2224

OPERATING STATUS

1. Unit Name: Fort St. Vrain
2. Reporting Period: 831201 thru 831231
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

NOTES

9. Power Level To Which Restricted, If Any (Net MWe): 231
10. Reasons for Restrictions, If Any: Restriction to 70% pending resolution of contractual matters.

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	<u>744</u>	<u>8,760</u>	<u>39,481</u>
12. Number of Hours Reactor Was Critical	<u>703.6</u>	<u>6,080.6</u>	<u>25,827.3</u>
13. Reactor Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
14. Hours Generator On-Line	<u>671.6</u>	<u>4,628.7</u>	<u>17,803.2</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>396,898.1</u>	<u>2,580,332.2</u>	<u>9,521,317.6</u>
17. Gross Electrical Energy Generated (MWH)	<u>130,463</u>	<u>826,546</u>	<u>3,153,450</u>
18. Net Electrical Energy Generated (MWH)	<u>122,223</u>	<u>748,420</u>	<u>2,871,530</u>
19. Unit Service Factor	<u>90.3</u>	<u>52.8</u>	<u>45.1</u>
20. Unit Availability Factor	<u>90.3</u>	<u>52.8</u>	<u>45.1</u>
21. Unit Capacity Factor (Using MDC Net)	<u>49.8</u>	<u>25.9</u>	<u>22.0</u>
22. Unit Capacity Factor (Using DER Net)	<u>49.8</u>	<u>25.9</u>	<u>22.0</u>
23. Unit Forced Outage Rate	<u>9.7</u>	<u>47.2</u>	<u>39.9</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):	<u>Refueling 1-20-84 through 4-18-84, 2,160 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

Achieved

N/A

N/A

N/A

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 January 10, 1984

Completed By Chuck Fuller

Telephone (303) 785-2224

Month December 1983

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	<u>188.4</u>
2	<u>188.0</u>
3	<u>188.4</u>
4	<u>188.8</u>
5	<u>188.5</u>
6	<u>188.7</u>
7	<u>188.9</u>
8	<u>40.0</u>
9	<u>0.0</u>
10	<u>0.0</u>
11	<u>108.6</u>
12	<u>184.2</u>
13	<u>187.0</u>
14	<u>187.0</u>
15	<u>187.5</u>
16	<u>186.5</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	<u>186.0</u>
18	<u>140.0</u>
19	<u>168.8</u>
20	<u>187.3</u>
21	<u>187.9</u>
22	<u>187.2</u>
23	<u>181.9</u>
24	<u>189.1</u>
25	<u>184.7</u>
26	<u>184.8</u>
27	<u>184.7</u>
28	<u>183.3</u>
29	<u>180.8</u>
30	<u>181.0</u>
31	<u>180.3</u>

*Generator on line but no net generation.

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-267
UNIT NAME Fort St. Vrain
DATE January 10, 1984
COMPLETED BY Chuck Fuller
TELEPHONE (303) 785-2224

REPORT MONTH December 1983

NO.	DATE	TYPE	DURATION	REASON	METHOD OF SHUTTING DOWN REACTOR	LER #	SYSTEM CODE	COMPONENT CODE	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE
83- 024	831208	F	69.1	H	1	N/A	ABC	ZZZZZZ	Manual scram following activation of firewater deluge for the Reserve Auxiliary Transformer.
83- 025	831218	F	3.3	B	4	N/A	HBE	VALVEX	Repaired #5 hot reheat header bypass valve, the reactor remained critical.

REFUELING INFORMATION

1. Name of Facility	Fort St. Vrain Unit No. 1
2. Scheduled date for next refueling shutdown.	January 20, 1984
3. Scheduled date for restart following refueling.	April 19, 1984
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 10 CFR 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. 11 Spent HTGR 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.	1992 under Agreements AT(04-3)-633 and DE-SC07-79ID01370 between Public Service Company of Colorado, and 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 accomodate eight fuel segments. It is estimated that the eighth fuel segment will be discharged in 1992.



Public Service Company of Colorado

16805 WCR 19 1/2, Platteville, Colorado 80651

January 13, 1984
Fort St. Vrain
Unit #1
P-84019

Office of Inspection and Enforcement
ATTN: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Reference: Facility Operating License
No. DPR-34

Docket No. 50-267

Dear Sir:

Enclosed please find our Monthly Operations Report for the month of December, 1983.

Very truly yours,

Don Warembourg

Don Warembourg
Manager, Nuclear Production

Enclosure

cc: Mr. John T. Collins

DWW/djm

IE24
1/1
Original
Document
to Region 4