PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN NUCLEAR GENERATING STATION

MONTHLY OPERATIONS REPORT

NO. 108

January, 1983

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

Following the completion of repair to a leaking steam generator tube in Loop 2 on December 22, 1982, the reactor was brought critical.

On January 1, 1983, 30% power was attained, and the turbine generator synchronized to the electrical distribution system. Seventy percent power was reached on January 4.

A helium circulator trip occurred on January 4 while a plant protective system surveillance was being performed. Power was reduced to 30% for several hours while the circulator was being recovered. Power was again increased to 70%.

A venting system which prevents "B" purification train cooler from becoming gas-bound was installed, tested, and placed in operation.

During the rise-to-power operation, primary coolant moisture monitor problems were encountered. A variance from LCO 4.4.1 was granted for a short period of time. Sample lines were purged extensively during this period, which resolved the problem. Methods to prevent recurrence are being evaluated.

Extensive cleaning to remove oil from the liquid waste system was completed. One source of oil is suspected to be the rupture of a gas waste compressor cooling system.

Modification of the helium circulator steam water drain control system was completed and put in automatic control.

A purification system cooling water pump mechanical magnetic coupling repair was done which brought the system to rated efficiency.

Irradiated reflector block shipment began.

A new burner assembly was installed in the "outside" auxiliary boiler, and the boiler control system was recalibrated.

Reactor power remained at 70% until January 28 when a helium recirculator trip caused a helium circulator trip, loop shutdown, and a scram. The helium recirculator weir level alarm and trip setpoints were changed as a preventative measure.

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 February 8, 1983
COMPLETED BY L. M. McBride
TELEPHONE (303) 785-2224

OPERATING STATUS

NOTES

1. Unit Name: Fort St. Vrain
2. Reporting Period: 830101 through 830131
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: Resrriction to 70% pending resolution of conrractual marrers

		This Month	Year to Date	Cumulative
11.	Hours in Reporting Period	744	744	31,465
12.	Number of Hours Reactor Was Critical	660.8	660.8	20,407.5
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14.	Hours Generator On-Line	646.7	646.7	13,821.2
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	357,895.2	357,895.2	7,147,500.6
17.	Gross Electrical Energy Generated (MWH)	122,062	122,062	2,448,966
18.	Net Electrical Energy Generated (MWH)	114,025	114,025	2,237,135
19.	Unit Service Factor	86.9	86.9	43.9
20.	Unit Availability Factor	86.9	86.9	43.9
21.	Unit Capacity Factor (Using MDC Net)	46.4	46.4	21.5
22.	Unit Capacity Factor (Using DER Net)	46.4	46.4	21.5
23.	Unit Forced Outage Rate	13.1	13.1	36.1

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): 830201 through 830216 (384 hrs) for plant recovery; 830323 through 830412 (504 hrs) for surveillance testing.
25. If Shut Down at End of Report Period, Estimated Date of Startup: 830216
26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY	N/A	N/A
INITIAL ELECTRICITY	N/A	N/A
COMMERCIAL OPERATION	N/A	N/A

AVERAGE DAILY UNIT POWER LEVEL

Docket No. 50-267

Unit Fort St. Vrain #1

Date February 3, 1983

Completed By L. M. McBride

Telephone (303) 785-2224

Month January, 1983

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	25.1	17	191.6
2	65.5	18	191.7
3	67.7	19	192.8
4	96.1	20	194.1
5	192.7	21	194.5
6	192.9	22	194.3
7	194.4	23	193.3
8	192.7	24	193.2
9	193.2	25	193.0
10	193.4	26	193.1
11	192.7	27	193.0
12	198.2	28	75.2
13	196.4	29	0
14	192.6	30	0
15	192.1	31	0
16	192.3		

*Generator on line but no net generation.

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-267
UNIT NAME Fort St. Vrain #1
DATE February 8, 1983
COMPLETED BY L. M. McBride
TELEPHONE (303) 785-2224

REPORT MONTH January, 1983

NO.	DATE	TYPE	DURATION	REASON	METHOD OF SHUTTING DOWN REACTOR	LER #	SYSTEM CODE	COMPONENT CODE	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE
82-014	830101	F	11.4	H	3	N/A	IBH	INSTRU	Loop 1 shutdown followed by reactor scram and turbine-generator trip on 820930. Outage continued while performing a normal plant start-up.
83-001	830128	F	85.9	H	3	N/A	IBH	INSTRU	Reactor scram and subsequent turbine generator trip due to a moisture ingress to the reactor vessel resulting from a helium circulator upset.

REFUELING INFORMATION

1. Name of Facility.	Fort St. Vrain Unit No. 1
2. Scheduled date for next refueling shutdown.	September 1, 1983
3. Scheduled date for restart following refueling.	November 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. 11 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-SC07-791D01370 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 accomodate eight fuel segments. It is estimated that the eighth fuel segment will be discharged in 1992.