PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN NUCLEAR GENERATING STATION

MONTHLY OPERATIONS REPORT

NO. 105

October, 1982

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 October, 1982.

1.0 NARRATIVE SUMMARY OF OPERATING EXPERIENCE AND MAJOR SAFETY RELATED MAINTENANCE

1.1 Summary

The reactor has been shut down for the entire month of October as the result of a reactor scram, loop shutdown, and moisture ingress which occurred on September 30.

Necessary maintenance and surveillances have been completed which will allow operation through March 1, 1983, after the moisture has been removed. At months end, the top priority is moisture removal utilizing the purification trains.

1.2 Operations

At the beginning of the month, the plant was in a shutdown condition as a result of the reactor scram that occurred on September 30, 1982. Indications of a moisture ingress during the said transient were under investigation.

To the advantage of the shutdown condition, all departments were mobilized to make required repairs and perform all surveillance tests deemed necessary to allow for operation through March 1, 1983. All tests and repairs were completed satisfactorily by October 2, but following the performance of the semi-annual "Loss of Outside Power and Turbine Trip" surveillance test, problems in the Plant Protective System caused several "A" circulator accumulator firings and hence additional moisture ingress.

The reactor was brought critical on October 2, but when power was increased on October 3, high moisture levels caused a reactor scram, a Loop 1 shutdown, and steam/water dump. This made it apparent that both helium purification trains would be required to remove all of the moisture, and since HV-2301 had not been operating properly, a decision to depressurize the prestressed concrete reactor vessel was made so that the valve could be repaired.

HV-2301 was removed for seat repair and a temporary seal was installed to allow regeneration of the "A" train, but when this was attempted on October 13, the seal failed and leaked radioactive helium to the Reactor Building. An unusual event was declared when the stack monitor indications moved slightly upscale, and normal access to the Reactor Building was restricted for several hours.

While the reactor was at refueling condition, it was prudent to remove the reserve shutdown material from Region 27. When the new control rod drive was tested following installation in the prestressed concrete reactor vessel, it was found that the rod position transducers did not work and the rod had to be pulled again. Difficulties were experienced in withdrawing the rods completely into the auxiliary transfer cask. This was finally accomplished using the manual retract tool on October 24.

The condenser was removed from service on October 24 to replace the main steam desuperheater drain lines where they enter the condenser.

All major work was completed, and feedwater was supplied to the steam generators on October 28.

The reactor was brought to critical on October 29, but the high level of moisture prevented the addition of heat to the core. The helium transfer compressor was placed in service to maximize flow through the purification train.

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 November 8, 1982
COMPLETED BY L. M. McBride
TELEPHONE (303) 785-2224

OPERATING STATUS

NOTES

1. Unit Name: Fort St. Vrain
2. Reporting Period: 821001 through 821031
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: Restriction to 70% pending resolution of contractual matters.

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	745	7,296	29,257
12. Number of Hours Reactor Was Critical	36.8	4,206.2	18,784.6
13. Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14. Hours Generator On-Line	0.0	3,266.2	13,174.5
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	150.1	1,842,635.6	6,776,580.4
17. Gross Electrical Energy Generated (MWH)	0	635,548	2,326,904
18. Net Electrical Energy Generated (MWH)	-3,430	578,415	2,132,674
19. Unit Service Factor	0.0	44.8	45.0
20. Unit Availability Factor	0.0	44.8	45.0
21. Unit Capacity Factor (Using MDC Net)	0.0	24.0	22.1
22. Unit Capacity Factor (Using DER Net)	0.0	24.0	22.1
23. Unit Forced Outage Rate	100.0	25.8	32.2

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): Plant recovery operations-821101 thru 821115-360 hours; Surveillance Testing-830301 thru 830331-744.0 hours.
25. If Shut Down at End of Report Period, Estimated Date of Startup: **821116-0000 hours
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

**821116 date reflects information as of October 31, 1982.

AVERAGE DAILY UNIT POWER LEVEL

Docket No. 50-267

Unit Fort St. Vrain

Date November 8, 1982

Completed By L. M. McBride

Telephone (303) 785-2224

Month October, 1982

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	0.0	17	0.0
2	0.0	18	0.0
3	0.0	19	0.0
4	0.0	20	0.0
5	0.0	21	0.0
6	0.0	22	0.0
7	0.0	23	0.0
8	0.0	24	0.0
9	0.0	25	0.0
10	0.0	26	0.0
11	0.0	27	0.0
12	0.0	28	0.0
13	0.0	29	0.0
14	0.0	30	0.0
15	0.0	31	0.0
16	0.0		

*Generator on line but no net generation.

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-267
UNIT NAME Fort St. Vrain
DATE November 8, 1982
COMPLETED BY L. M. McBride
TELEPHONE (303) 785-2224

REPORT MONTH October, 1982

NO.	DATE	TYPE	DURATION	REASON	METHOD OF SHUTTING DOWN REACTOR	LER #	SYSTEM CODE	COMPONENT CODE	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE
82-014	821001	F	745.0	H	3	N/A	IBH	INSTRU	Loop 1 shutdown followed by reactor scram and turbine-generator trip (on 820930). Continued outage to perform primary and secondary maintenance.

REFUELING INFORMATION

1. Name of Facility.	Fort St. Vrain Unit No. 1
2. Scheduled date for next refueling shutdown.	July 1, 1983
3. Scheduled date for restart following refueling.	August 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. 29 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 accomodate eight fuel segments. It is estimated that the eighth fuel segment will be discharged in 1992.