PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN NUCLEAR GENERATING STATION

MONTHLY OPERATIONS REPORT

NO. 65

MAY, 1979

298 207

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 May, 1979.

1.0 NARRATIVE SUMMARY OF OPERATING EXPERIENCE AND MAJOR SAFETY RELATED MAINTENANCE

The first refueling of the reactor was completed with an inspection of region 13 core support block. This inspection was performed at the request of the Nuclear Regulatory Commission. The core support block was free of any questionable markings.

RT-523A, Region Constraint Device Handling Test, was completed. Region constraint devices were installed on the core and removed without difficulty. Several diagnostic devices were installed to assist in trouble-shooting the core fluctuation problem. A relative motion detector (scratched and pad) was installed in the upper plenum to detect relative motion between region 18 and region 35. Also modified control rod drives with special instrumentation were installed in regions 5 and 35.

Core fluctuation data system using the multiplexing technique is being installed and checked out.

All three boiler feed pumps were disassembled and were in various stages of repair at the end of this reporting period.

"C" circulator change out was extended approximately two weeks when the internal piping was discovered to have a bent steam inlet baffle plate. Spare internals assembly was subsequently installed. "C" circulator changeout was completed on May 29, 1979.

The permanent two loop dump modification to the Plant Protective System was incorporated and the functional tests revealed that high moisture trips will occur on restoration of power following a loss of bus voltage. Modification of the dew point moisture monitor switching module will be required to correct the high moisture trips on restoration of power. The time delay relays which were removed from Loop 1 as a temporary fix will be reinstalled until this problem can be properly evaluated.

The reactor was taken critical at 0340 hours on May 26, 1979, with a reactivity discrepancy of +.002 $\Delta\rho$. Following criticality, the reactor was shutdown, and shutdown margin was demonstrated with the instrumented control rod drives installed and the maximum worth control rod drive withdrawn. The reactor was operated at approximately 0.1% power for 18 hours.

The Control Data computer is being upgraded to a new System 17 Control Data computer. The new computer utilizes CRT displays and soft disc packs.

Main turbine generator overhaul continues. Dye penetrant checks of the throttle valve seats revealed cracks in the #1, #2, and #3 valve seats. Considerable difficulty was encountered in removing the throttle valve seats. Commercial Machine Work from Illinois was contracted to remove them by pulling with hydraulic hand jacks.

1.0 NARRATIVE SUMMARY OF OPERATING EXPERIENCE AND MAJOR SAFETY RELATED MAINTENANCE (continued)

A total of 61 Technical Specification surveillance tests were completed; 25 were surveillance tests, 34 were preventive maintenance operations tests, and two were non-radiological tests.

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 790501
COMPLETED BY J. W. Gahm
TELEPHONE (303) 785-2253

OPERATING STATUS

NOTES

1. Unit Name: Fort St. Vrain, Unit No. 1
2. Reporting Period: 790401 to 790430
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: Nuclear Regulatory Commission restriction (70%) pending resolution of certain Final Safety Analysis Report and Technical Specification bases discrepancies. This unit is in power ascension phase of startup testing.

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	719	2,879	--------
12. Number of Hours Reactor Was Critical	0.0	789.4	14,263.1
13. Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14. Hours Generator On-Line	0.0	665.3	8,507.9
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	0	313,069	3,516,067
17. Gross Electrical Energy Generated (MWH)	0	109,852	1,058,122
18. Net Electrical Energy Generated (MWH)	0	101,177	952,628
19. Unit Service Factor	N/A	N/A	N/A
20. Unit Availability Factor	N/A	N/A	N/A
21. Unit Capacity Factor (Using MDC Net)	N/A	N/A	N/A
22. Unit Capacity Factor (Using DER Net)	N/A	N/A	N/A
23. Unit Forced Outage Rate	N/A	N/A	N/A

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
    Refueling, 2-1-79, 4 Months
25. If Shut Down at End of Report Period, Estimated Date of Startup: 6-1-79
26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY	740201	740131
INITIAL ELECTRICITY	7612	761211
COMMERCIAL OPERATION	------	------

298 210

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-267
UNIT NAME Fort St. Vrain, Unit No.
DATE 790501
CA TED BY J. W. Gahm
TELEPHONE (303) 785-2253

REPORT MONTH April

NO.	DATE	TYPE	DURATION	REASON	METHOD OF SHUTTING DOWN REACTOR	LER #	SYSTEM CODE	COMPONENT CODE	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE
79-04	790201	F	719	A	4	79-03/03-L-0	HH	PUMPXX	Excessive gland leakage on "B" boiler feed pump concurrent with inoperable "C" boiler feed pump necessitated controlled reactor shutdown on February 1, 1979, per LCO 4.3.2. Scheduled reactor shutdown for refueling was changed from March 1, 1979, to February 1, 1979. Thus shutdown number 79-04 has extended through February, March, and April, 1979.

SUMMARY: Plant shutdown for scheduled refueling and turbine generator overhaul entire month.

298 211

AVERAGE DAILY UNIT POWER LEVEL

Docket No. 50-267

Unit Fort St. Vrain, Unit No. 1

Date 790501

Completed By J. W. Gahm

Telephone (303) 785-2253

Month April

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	0	17	0
2	0	18	0
3	0	19	0
4	0	20	0
5	0	21	0
6	0	22	0
7	0	23	0
8	0	24	0
9	0	25	0
10	0	26	0
11	0	27	0
12	0	28	0
13	0	29	0
14	0	30	0
15	0	31	N/A
16	0		

*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.	February 1, 1979
3. Scheduled date for restart following refueling.	June 1, 1979
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?	To facilitate insertion of eight fuel test elements.
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)?	*NOTE: If Technical Specification change approval is not received from Nuclear Regulatory Commission in time for refueling, then the answer to #4 is NO, and the reload fuel and graphite design have been reviewed.
If no such review has taken place, when is it scheduled?	
5. Scheduled date(s) for submitting proposed licensing action and supporting information.	January 9, 1978
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.	Eight test fuel elements to allow: 1) Different fuel particle design. 2) To qualify near isotropic graphite.
7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.	a) 1482 HTGR fuel elements. b) 245 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.*

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