PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN NUCLEAR GENERATING STATION

MONTHLY OPERATIONS REPORT

NO. 124

May, 1984

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 May, 1984.

1.0 NARRATIVE SUMMARY OF OPERATING EXPERIENCE AND MAJOR SAFETY RELATED MAINTENANCE

The reactor remained shutdown for the majority of the month of May for final maintenance item completion and primary coolant chemistry cleanup.

On May 1, 1984, the reactor was depressurized to atmospheric to allow purge line check valve work in penetrations 13 and 21. After completion, the reactor was repressurized on May 3.

On May 4, while approaching initial Cycle 4 criticality, high primary coolant moisture caused a reactor scram and Loop I shutdown. To facilitate moisture removal, condensate was taken off the steam generator EES sections, and steam placed on both reheat sections and Loop I, System 46, was removed from service.

After successful completion of the overspeed test on the 1C Boiler Feedpump, it was shutdown and placed on the turning gear. The pump later seized, apparently due to foreign material entering the seal areas. The pump internals were removed, repaired, and reinstalled. At present, the 1C Boiler Feedpump is operating satisfactorily (low vibration). In addition, new seals were installed in the 1A Boiler Feedpump and the overspeed test performed.

The Loop II helium dryer was removed from service to repair a malfunctioning check valve. During this time, the Loop I dryer supplied buffer helium to all four circulators.

Repair/refurbishment of the main cooling tower was completed and the tower returned to service on May 8, 1984.

The instrument air headers, 1A and 1B, were isolated, one at a time, to allow replacement of several leaking isolation valves. Also, the 1B receiver was internally inspected for scale buildup.

The 2% thermal power limit, placed on Fort St. Vrain in April, was removed by the Nuclear Regulatory Commission on May 16, 1984, after their evaluation of the existing tendon wire degradation. Further testing and a expanded surveillance program is planned with followup reports to be submitted to the Nuclear Regulatory Commission.

On May 16, 1984, at approximately 1450 hours, initial Cycle 4 criticality was achieved. Primary coolant moisture removal continued via the helium purification trains and reactor power was increased to above 2% on May 24.

Reactor power was slowly increased to approximately 6.5% on May 29, when malfunction of a Loop II helium dryer valve required power reduction to less than 2%. The valve, HV-21564, was repaired and returned to service.

With reactor power less than 2%, one steam generator loop at a time was shutdown to facilitate repair of leaking sulzer valves.

On May 29, 1984, actuation of the rapid rise relay on the 4160/480 volt transformer (N-9274) resulted in a trip of the transformer and the 480V A.C. Essential Bus 1A. This led to actuation of the PPS circuitry for a Loop I shutdown due to the trip of both helium circulators in that loop. The transformer was thoroughly checked and tested prior to returning to service on May 30.

High pressure feedwater heaters, 5 and 6, were chemically treated, flushed, and operated on preboiler recirculation flow in an attempt to reduce the high iron levels which resulted from the repair/replacement of the heaters.

At present, with reactor power near 8%, primary and secondary coolant impurities appear to be the major problem in increasing reactor power.

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 EXAMINATION

None

4.0 MONTHLY OPERATING DATA REPORT

Attached

OPERATING DATA REPORT

DOCKET NO. 50-276
DATE June 4, 1984
COMPLETED BY Chuck Fuller
TELEPHONE (303) 785-2224

OPERATING STATUS

NOTES

1. Unit Name: Fort St. Vrain
2. Reporting Period: 840501 through 840531
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): 280
10. Reasons for Restrictions, If Any: Per commitment to the NRC, long term operation above 85% power is pending completion of the B-0 Startup Testing.

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	744	3647	43,128
12. Number of Hours Reactor Was Critical	327.6	795.6	26,622.9
13. Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14. Hours Generator On-Line	0.0	446.6	18,249.8
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	7,584.2	248,403.2	9,769,720.6
17. Gross Electrical Energy Generated (MWH)	0.0	77,412	3,230,862
18. Net Electrical Energy Generated (MWH)	-3,660	61,264	2,932,794
19. Unit Service Factor	0.0	12.2	42.3
20. Unit Availability Factor	0.0	12.2	42.3
21. Unit Capacity Factor (Using MDC Net)	0.0	5.1	20.6
22. Unit Capacity Factor (Using DER Net)	0.0	5.1	20.6
23. Unit Forced Outage Rate	0.0	0.0	0.0

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): 6-1-84 through 6-13-84, primary coolant cleanup following shutdown, 288 hours, 10-19-84 through 11-10-84, surveillance testing, 552 hours.
25. If Shut Down at End of Report Period, Estimated Date of Startup: N/A

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

Date June 4, 1984

Completed By Chuck Fuller

Telephone (303) 785-2224

Month May, 1984

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	0
16	0		

*Generator on line but no net generation.

50-267

UNIT NAME Fort St. Vrain

DATE June 4, 1984

COMPLETED BY Chuck Fuller

REPORT MONTH May, 1984

TELEPHONE (303) 785-2224

NO.	DATE	TYPE	DURATION	REASON	METHOD OF SHUTTING DOWN REACTOR	LER #	SYSTEM CODE	COMPONENT CODE	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE
84-002	840604	S	744.0	H	2	N/A	ZZZ	ZZZZZZ	Primary and secondary coolant cleanup following shutdown.

REFUELING INFORMATION

1. Name of Facility	Fort St. Vrain Unit No. 1
2. Scheduled date for next refueling shutdown.	4th Refueling: February 1, 1986
3. Scheduled date for restart following refueling.	May 1, 1986
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?	No
If answer is yes, what, in general, will these be?	----------
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)?	No
If no such review has taken place, when is it scheduled?	1985
5. Scheduled date(s) for submitting proposed licensing action and supporting information.	----------
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 251 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 Road 19 1/2, Platteville, Colorado 80651-9298

June 15, 1984
Fort St. Vrain
Unit No. 1
P-84172

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 May, 1984.

Very truly yours,

Don Warembourg
Manager, Nuclear Production

DW/djm

Enclosure

cc: Mr. John T. Collins

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ORIG: TO REGION III