

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

MONTHLY OPERATIONS REPORT

NO. 161

June, 1987

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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 June, 1987.

1.0 NARRATIVE SUMMARY OF OPERATING EXPERIENCE AND MAJOR SAFETY RELATED MAINTENANCE

On June 12, 1987, at 1420 hours, a Loop 1 shutdown occurred upon moving the Interlock Sequence Switch (ISS) from "Low Power" to "Power". The cause of the Loop 1 shutdown was determined to be an improper grounding configuration in a contact for the Loop 1 hot reheat steam block valve handswitch (HS-2253). This provided the Plant Protective System with indication that the valve was closed when the ISS was placed in the "Power" position. Following the Loop 1 shutdown, the turbine was manually tripped at 1425 hours. Following the turbine trip, main steam was automatically diverted to the bypass flash tank, resulting in a reduction of steam available to drive the helium circulators or the turbine driven boiler feed pumps. The reactor was manually scrammed at 1431 hours due to the interruption of forced circulation. The reactor was taken critical on June 15 at 0555 hours, and the turbine generator was returned to service on June 17 at 0222 hours. This event was investigated and reported to the Nuclear Regulatory Commission in Licensee Event Report 87-015.

On June 17, 1987, the Nuclear Regulatory Commissioners voted 4-0 to allow Fort St. Vrain to operate at power levels above 35 percent, but not to exceed 82 percent.

On June 22, 1987, at 0913 hours, all even control rod drives that were withdrawn gravity scrammed approximately 20 inches, resulting in a turbine runback and trip on low main steam temperature. This event occurred while the contacts on the main scram contactors were being cleaned by a plant electrician. The scrammed control rods were returned to their previous positions and the turbine-generator was returned to service at 1029 hours.

On June 25, 1987, at 2005 hours, a reactor scram was automatically initiated by the Plant Protective System while reactor operators were attempting to place both steam driven boiler feed pumps in "auto parallel". When the recirculation valve on "C" boiler feed pump was closed as part of this evolution, feedwater flow suddenly increased. The reactor operators inadvertently decreased the feedwater flow below the fixed feedwater flow low trip, while responding to this change in feedwater flow. This caused a steam turbine trip of all four helium circulators, and resulted in a two loop trouble scram. The reactor was taken critical on June 26 at 1213 hours, and the turbine-generator was returned to service on June 27 at 1815 hours. This event will be investigated and reported to the Nuclear Regulatory Commission in Licensee Event Report 87-016.

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 July 15, 1987

COMPLETED BY F. J. Novachek

TELEPHONE (303) 620-1007

OPERATING STATUS

NOTES

1. Unit Name: Fort St. Vrain, Unit No. 1
2. Reporting Period: 870601 through 870630
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): 115.5
10. Reasons for Restrictions, If Any: Per commitment to the Nuclear Regulatory Commission, do not operate above 35% until approved by the NRC.

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	<u>720</u>	<u>4,343</u>	<u>70,128</u>
12. Number of Hours Reactor Was Critical	<u>640.5</u>	<u>1,710.0</u>	<u>32,247.8</u>
13. Reactor Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
14. Hours Generator On-Line	<u>564.7</u>	<u>1,214.6</u>	<u>20,769.7</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>148,478.7</u>	<u>328,339.3</u>	<u>10,593,739.1</u>
17. Gross Electrical Energy Generated (MWH)	<u>47,784.0</u>	<u>98,562.0</u>	<u>3,432,558.0</u>
18. Net Electrical Energy Generated (MWH)	<u>43,270.0</u>	<u>79,124.0</u>	<u>3,027,404.0</u>
19. Unit Service Factor	<u>78.4</u>	<u>28.0</u>	<u>29.6</u>
20. Unit Availability Factor	<u>78.4</u>	<u>28.0</u>	<u>29.6</u>
21. Unit Capacity Factor (Using MDC Net)	<u>18.2</u>	<u>5.5</u>	<u>13.1</u>
22. Unit Capacity Factor (Using DER Net)	<u>18.2</u>	<u>5.5</u>	<u>13.1</u>
23. Unit Forced Outage Rate	<u>21.6</u>	<u>72.0</u>	<u>63.3</u>
24. Shutdowns Scheduled Over: Next 6 Months (Type, Date, and Duration of Each):	<u>None</u>		

25. If Shut Down at End of Report Period, Estimated Date of Startup: N/A

Units In Test Status (Prior to Commercial Operation):	Forecast	Achieved
INITIAL CRITICALITY	<u>N/A</u>	<u>N/A</u>
INITIAL ELECTRICITY	<u>N/A</u>	<u>N/A</u>
COMMERCIAL OPERATION	<u>N/A</u>	<u>N/A</u>

AVERAGE DAILY UNIT POWER LEVEL

Docket No. 50-267

Unit Fort St. Vrain Unit No. 1

Date July 15, 1987

Completed By F. J. Novachek

Telephone (303) 620-1007

Month JUNE, 1987

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	80.3
2	79.3
3	80.2
4	75.9
5	76.5
6	74.8
7	79.3
8	79.9
9	74.2
10	73.4
11	74.9
12	42.7
13	0.0
14	0.0
15	0.0
16	0.0

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	56.7
18	67.5
19	75.5
20	76.9
21	78.3
22	73.0
23	80.8
24	82.2
25	66.9
26	0.0
27	10.3
28	90.5
29	92.5
30	89.2
31	N/A

* Generator on line but no net generation.

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-267

UNIT NAME Fort St. Vrain Unit No. 1

DATE July 15, 1987

COMPLETED BY Frank J. Novachek

TELEPHONE (303) 620-1007

REPORT MONTH JUNE, 1987

NO.	DATE	TYPE	DURATION	REASON	METHOD OF SHUTTING DOWN REACTOR	LER #	SYSTEM CODE	COMPONENT CODE	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE
87-05	870612	F	107.9 hr	H	2	87-015	SB	JS	Loop 1 shutdown and manual scram due to improper grounding of HS-2253 conductors. Conductors were rewired.
87-06	870622	F	1.2 hr	H	N/A	N/A	JC	CNTR	Turbine runback and trip while cleaning scram contactors. Contactors will be required to be jumpered when cleaning.
87-07	870625	F	46.2 hr	H	3	87-016	SJ	PDC	Reactor scram while placing main feedwater pumps in automatic control. Requirements for placing main feedwater pumps in automatic were revised.

REFUELING INFORMATION

1. Name of Facility	Fort St. Vrain Unit No. 1
2. Scheduled date for next refueling shutdown.	September 14, 1988
3. Scheduled date for restart following refueling.	November 14, 1988
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?	1987
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.	a) 1482 HTGR fuel elements b) 0 spent 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 accommodate eight fuel segments. It is estimated that the eighth fuel segment will be discharged in 1992.



Public Service™

Public Service
Company of Colorado

16805 WCR 19 1/2, Platteville, Colorado 80651

July 15, 1987
Fort St. Vrain
Unit No. 1
P-87260

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Docket No. 50-267

SUBJECT: MONTHLY OPERATIONS
REPORT FOR JUNE, 1987

REFERENCE: Facility Operating
License No. DPR-34

Dear Sir:

Enclosed, please find the Monthly Operations Report for the month of June, 1987.

If you have any questions, please contact Mr. M. H. Holmes at (303) 480-6960.

Sincerely,

R.O. Williams by [Signature]
R. O. Williams, Jr.
Vice President,
Nuclear Operations

Enclosure

cc: Mr. J. E. Gagliardo
U.S. NRC, Region IV

ROW:djm

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