PUBLIC SERVICE COMPANY OF COLORADO

FORT ST. VRAIN NUCLEAR GENERATING STATION

MONTHLY OPERATIONS REPORT

NO. 107

December, 1982

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PDR ADOCK 05000267
R PDR

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 December, 1982.

## 1.0 NARRATIVE SUMMARY OF OPERATING EXPERIENCE AND MAJOR SAFETY RELATED MAINTENANCE

The steam generator leak was determined to be in Loop 2 steam generator module B-2-3 subheader "m". The elevation of the leak was determined to be in the superheater 2 bundle. The steam generator repair was completed on December 22, 1982.

The reactor was brought critical on December 23rd and increased to less than 2% power. The storm prevented delivery of enough fuel oil to meet our minimum storage requirement of 20,000 gallons to exceed 2% power. We received emergency assistance from Johnson's Corner and Bukrus Oil. Reactor power was increased to 8% on December 28, but the reactor scrammed due to a spurious moisture monitor trip. The reactor scrammed again on December 29 from another moisture monitor trip but was critical again on December 30th.

Several problems were experienced during the month with both the inside and outside auxiliary boilers. The outside boiler has experienced problems with the burner assembly and the positioner for the fan dampers. The inside boiler has had some problems with the fire eye.

The leak in "B" purification cooler results in the system sometimes becoming gas bound. Methods of dealing with the ingressive gas have been evaluated by Engineering, and it is anticipated the modification work will start shortly.

There were some problems in the gas waste system during the month which resulted in damage to "B" gas waste compressor. The gas waste compressor is being disassembled and evaluated. The reason for the water in the gas waste vacuum tank is being investigated, and several potential sources are being considered.

## 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

FORM 288 22 0218

4.0 MONTHLY OPERATING DATA REPORT

Attached

FORM 289 77 0278

OPERATING DATA REPORT

DOCKET NO. 50-267
DATE January 10, 1983
COMPLETED BY L. M. McBride
TELEPHONE (303) 785-2224

OPERATING STATUS

NOTES

1. Unit Name: Fort St. Vrain
2. Reporting Period: 821201 through 821231
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 | 744 | 8760 | 30721 |
| 12. Number of Hours Reactor Was Critical | 423.3 | 5168.3 | 19746.7 |
| 13. Reactor Reserve Shutdown Hours | 0.0 | 0.0 | 0.0 |
| 14. Hours Generator On-Line | 0.0 | 3266.2 | 13174.5 |
| 15. Unit Reserve Shutdown Hours | 0.0 | 0.0 | 0.0 |
| 16. Gross Thermal Energy Generated (MWH) | 6,303.1 | 1,855,480.6 | 6,789,425.4 |
| 17. Gross Electrical Energy Generated (MWH) | 0 | 635,548 | 2,326,904 |
| 18. Net Electrical Energy Generated (MWH) | -4,234 | 568,851 | 2,123,110 |
| 19. Unit Service Factor | 0.0 | 37.3 | 42.9 |
| 20. Unit Availability Factor | 0.0 | 37.3 | 42.9 |
| 21. Unit Capacity Factor (Using MDC Net) | 0.0 | 19.7 | 20.9 |
| 22. Unit Capacity Factor (Using DER Net) | 0.0 | 19.7 | 20.9 |
| 23. Unit Forced Outage Rate | 100.0 | 44.3 | 36.9 |

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): Plant recovery 830101 - 11.4 hours. Surveillance testing 830323 through 830412 - 504.0 hours.
25. If Shut Down at End of Report Period, Estimated Date of Startup: Reactor is critical at low power.

| 26. Units In Test Status (Prior to Commercial Operation): | Forecast | Achieved |
|---|---|---|
| INITIAL CRITICALITY | N/A | N/A |
| INITIAL ELECTRICITY | N/A | N/A |
| [illegible] | N/A | N/A |

# AVERAGE DAILY UNIT POWER LEVEL

Docket No. 50-267

Unit Fort St. Vrain

Date January 10, 1983

Completed By L. M. McBride

Telephone (303) 785-2224

Month December, 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 January 10, 1983
COMPLETED BY L. M. McBride
TELEPHONE (303) 785-2224

REPORT MONTH December, 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 | 821201 | F | 744.0 | H | 3 | N/A | IBH | INSTRU | Loop 1 shutdown followed by reactor scram and turbine-generator trip on 820930. Outage continued due to primary coolant chemistry impurities and repair of steam generator. |

# 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.<br>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-SC07-79ID01370 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.