

SUMMARY OF OPERATING EXPERIENCE

DOCKET NO: 50-344
DATE: 04-05-85
COMPLETED BY: L. A. Wildfong
TELEPHONE: 503-556-3713
EXT. 397

OPERATION:

The plant entered March at 100% power and set a new generation record for days on-line, surpassing the old record of 133 days on March 3. The new record of 139 days was established at 2150 on March 9 when the main turbine tripped on high bearing vibration signal causing an automatic reactor trip. The pressure surge caused by main feedwater isolation ruptured a 14-inch diameter pipe on the discharge of the 'N' heater drain pump (HDP). One operator received first and second degree burns and was hospitalized.

The water/steam release in the turbine building caused extensive damage to lighting, cable trays, parts of the electric AFW pump, condenser, and several deluge and sprinkler systems. An ultrasonic test of the ruptured pipe showed a wall thickness of 90 mils vs. the required 280 mils. The cause of the wall thinning is erosion/corrosion downstream of a throttle valve. No cause has been determined for the turbine high vibration signal.

The plant was cooled down to Mode 4 at 1020 on March 10 and maintained on RHR. Due to the large loss of water inventory, demineralized water was trucked in from a PGE gas turbine plant. At 1344 on March 13 a spurious safety injection occurred. Both SI pumps were inoperable per S.T.S. 3.5.3.2 (Mode 4); all other ESF equipment started as required. Cause of the SI was traced to a faulty bistable that in the tripped position, unblocks the permissive that allows SI to be blocked below 1915 psig. Since I&C had another bistable already tripped for a test, the 2/3 logic unblocked the low pressure SI signal; with RCS pressure at 350 psig, the SI occurred. The bistable was replaced.

With repairs completed, except to the 'N' NDP motor which was sent offsite to be rewound, the plant began heating up on March 13 and entered Mode 3 at 2235. At 0254 on the 14th a body-to-bonnet leak was discovered on letdown isolation valve LCV-460. The plant returned to Mode 4 at 1409 to effect repair.

The plant entered Mode 3 again at 0540 on March 15, when pressure was held at 1050 psig to investigate excessive No. 1 seal leakoff flow on 'D' RCP. At 1348 the pump was restarted with a normal leakoff flow and heatup continued. RCS pressure was approximately 1600 psig when the pump seal reseated itself. The reactor was critical at 1958.

The main generator was synchronized to the grid at 1323 on March 16. Power reached 90% on the 17th at 0021 and was maintained at steady-state with only the south heater drain pump in service.

A power reduction to 20% was initiated at 1102 on March 22 to replace the stator cooling water filter. Power reached 21% at 1256. The filter changeout was completed and power was increased at 1323, reaching 90% at 1915. Power remained steady-state until the rewound 'N' HDP motor was installed at 1505 on March 23. Power reached 100% at 1645 and remained at steady-state for the remainder of the month.

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MAJOR SAFETY-RELATED MAINTENANCE:

1. Preventive maintenance on H₂ vent system MOVs.
2. Preventive maintenance on polar cooler breakers.
3. Intake structure silt survey-bays 'B' and 'C' showed minimal (<1") silt buildup.
4. Annual preventive maintenance on breakers for 'A' train ESF pumps: CCP, SWP, CCWP, CSP, SIP, RHRP.
5. 'A' EDG-modified jacket water heaters and installed splash guards.
6. Conducted time response testing of SSPS relays.

MISCELLANEOUS MAINTENANCE:

1. Continued SFP rerack work.
2. Electric AFP discharge valve repaired.
3. SFP exhaust filters replaced.
4. Rewound 'N' HDP motor.
6. Repaired water plant piping, cables and lighting.
7. Changed stator cooling water filter.

LICENSE CHANGES:

Amendment No. 103 to Standard Technical Specifications allows plant operation with the boron injection tank bypassed or eliminated or the boron concentration therein reduced to as low as 0 ppm.

MISCELLANEOUS:

At 0925 on March 11 a moderate loss of security effectiveness occurred.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH March 1985

DOCKET NO. 50-344
 UNIT NAME Trojan
 DATE _____
 COMPLETED BY L. A. Wilafong
 TELEPHONE 503-556-3713
 Ext. 397

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
85-02	850309	F	159.5	A	3	85-02	HA	INSTRU	A turbine trip on spurious high vibration caused an auto reactor trip which resulted in a ruptured heater drain pump discharge pipe. The turbine was tested on subsequent startup and no cause for the high vibration trip was found. Damage due to the pipe rupture was repaired and other piping inspected.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance of Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Examination
 F-Administrative
 G-Operational Error (Explain)
 H-Other (Explain)

³
 Method:
 1-Manual
 2-Manual Scram.
 3-Automatic Scram.
 4-Other (Explain)

⁴
 Exhibit G - Instructions
 for Preparation of Data
 Entry Sheets for Licensee
 Event Report (LER) File (NUREG-
 0161)

⁵
 Exhibit I - Same Source

OPERATING DATA REPORT

DOCKET NO. 50-344
DATE 4- -85
COMPLETED BY L.A. Wildfong
TELEPHONE 503-556-3713
Ext. 397

OPERATING STATUS

1. Unit Name: TROJAN NUCLEAR PLANT
2. Reporting Period: March 1985
3. Licensed Thermal Power (MWt): 3411
4. Nameplate Rating (Gross MWe): 1216
5. Design Electrical Rating (Net MWe): 1130
6. Maximum Dependable Capacity (Gross MWe): 1122
7. Maximum Dependable Capacity (Net MWe): 1080
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:
N/A

Notes The following correction should be made for cumulative totals for No. 17 (gross electrical) and No. 23 (forced outage rate)

January 17	44,357,493 MWH
23	17.0
February 17	45,092,809 MWH
23	16.7

9. Power Level To Which Restricted, If Any (Net MWe): N/A
10. Reasons For Restrictions, If Any: N/A

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	<u>744</u>	<u>2,160</u>	<u>75,216</u>
12. Number Of Hours Reactor Was Critical	<u>601.9</u>	<u>2,017.9</u>	<u>44,763.6</u>
13. Reactor Reserve Shutdown Hours	<u>0.0</u>	<u>0.9</u>	<u>3,887.4</u>
14. Hours Generator On-Line	<u>584.5</u>	<u>2,000.5</u>	<u>44,336.0</u>
15. Unit Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>3,249.0</u>
16. Gross Thermal Energy Generated (MWH)	<u>1,908,485</u>	<u>6,677,111</u>	<u>140,663,273</u>
17. Gross Electrical Energy Generated (MWH)	<u>606,599</u>	<u>2,143,628</u>	<u>45,699,408</u>
18. Net Electrical Energy Generated (MWH)	<u>575,594</u>	<u>2,044,548</u>	<u>43,195,078</u>
19. Unit Service Factor	<u>78.6</u>	<u>92.6</u>	<u>58.9</u>
20. Unit Availability Factor	<u>78.6</u>	<u>92.6</u>	<u>63.3</u>
21. Unit Capacity Factor (Using MDC Net)	<u>71.6</u>	<u>87.6</u>	<u>53.2</u>
22. Unit Capacity Factor (Using DER Net)	<u>68.5</u>	<u>83.8</u>	<u>50.8</u>
23. Unit Forced Outage Rate	<u>23.2</u>	<u>8.1</u>	<u>16.8</u>

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):

Cycle 7/8 refueling outage scheduled for shutdown on May 2, 1985 and power escalation on July 8, 1985.

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 | <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: 50-344

UNIT: Trojan

DATE: _____

COMPLETED BY: L. A. Wildfong

TELEPHONE: 503-556-3713

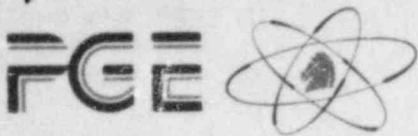
Ext. 397

MONTH March 1985

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>1045</u>	17	<u>907</u>
2	<u>1057</u>	18	<u>910</u>
3	<u>1060</u>	19	<u>901</u>
4	<u>1057</u>	20	<u>915</u>
5	<u>1054</u>	21	<u>916</u>
6	<u>1053</u>	22	<u>745</u>
7	<u>1051</u>	23	<u>958</u>
8	<u>1049</u>	24	<u>1040</u>
9	<u>951</u>	25	<u>1039</u>
10	<u>-13</u>	26	<u>1038</u>
11	<u>-10</u>	27	<u>1038</u>
12	<u>-15</u>	28	<u>1033</u>
13	<u>-22</u>	29	<u>1030</u>
14	<u>-29</u>	30	<u>1032</u>
15	<u>-38</u>	31	<u>1030</u>
16	<u>200</u>		

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.



Portland General Electric Company
Trojan Nuclear Plant
P.O. Box 439
Rainier, Oregon 97048
(503) 556-3713

April 5, 1985
WSO-246-85

Office of Resource Management
US Nuclear Regulatory Commission
Washington, DC 20555

Gentlemen:

In accordance with the Trojan Nuclear Plant Technical Specifications reporting requirements, the monthly report is submitted for March, 1985.

Sincerely,

W. S. Orser
General Manager

WSO/GGB/LAW:pat

Attachments

c: MOR Distribution
File 93.2b(Q)

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