

OPERATING DATA REPORT

DOCKET NO. 50-315
 DATE 12-3-81
 COMPLETED BY A. MIGHT
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook Plant 1
2. Reporting Period: November 1981
3. Licensed Thermal Power (MWt): 3250
4. Nameplate Rating (Gross MWe): 1089
5. Design Electrical Rating (Net MWe): 1054
6. Maximum Dependable Capacity (Gross MWe): 1080
7. Maximum Dependable Capacity (Net MWe): 1044
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report. Give Reasons:

Notes

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

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	720	8,016	60,624
12. Number Of Hours Reactor Was Critical	414.1	6,057.2	45,578
13. Reactor Reserve Shutdown Hours	0	0	463
14. Hours Generator On-Line	409.8	5,970.5	44,527.6
15. Unit Reserve Shutdown Hours	0	0	321
16. Gross Thermal Energy Generated (MWH)	1,279,657	20,167,431	128,114,779
17. Gross Electrical Energy Generated (MWH)	425,290	6,274,360	42,130,020
18. Net Electrical Energy Generated (MWE)	410,238	6,055,173	40,514,314
19. Unit Service Factor	56.9	74.5	76.2
20. Unit Availability Factor	56.9	74.5	76.2
21. Unit Capacity Factor (Using MDC Net)	54.6	72.4	68.3
22. Unit Capacity Factor (Using DER Net)	54.1	71.7	64.7
23. Unit Forced Outage Rate	43.1	2.8	6.7
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

25. If Shut Down At End Of Report Period, Estimated Date of Startup: _____

25. Units In Test Status (Prior to Commercial Operation):	Forecast	Achieved
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-315
 UNIT Unit #1
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MONTH NOVEMBER 1981

DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)
1	<u>1049</u>	17	<u>563</u>
2	<u>1045</u>	18	<u>163</u>
3	<u>503</u>	19	<u>898</u>
4	<u>---</u>	20	<u>1045</u>
5	<u>---</u>	21	<u>1036</u>
6	<u>---</u>	22	<u>1046</u>
7	<u>---</u>	23	<u>1048</u>
8	<u>---</u>	24	<u>1047</u>
9	<u>---</u>	25	<u>1049</u>
10	<u>---</u>	26	<u>1054</u>
11	<u>---</u>	27	<u>1039</u>
12	<u>---</u>	28	<u>1037</u>
13	<u>---</u>	29	<u>1050</u>
14	<u>---</u>	30	<u>1050</u>
15	<u>332</u>	31	<u>----</u>
16	<u>1040</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.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH November, 1981

DOCKET NO. 50-315
 UNIT NAME D.C. Cook-Unit 1
 DATE 12-11-81
 COMPLETED BY B. A. Svensson
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No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	License Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
175	811103	F	286.1	A&B	3	N.A.	ZZ	ZZZZZZ	Reactor/Turbine trip. The West main feedpump turbine tripped on low lube-oil pressure when attempting to switch lube oil filter. The reactor trip/turbine trip was caused by Low Steam Generator level coincidental with Steam Flow - Feedwater Flow mismatch on No. 4 and No. 1 Steam Generators due to the West feed pump trip. Inspection of the lube-oil filter revealed that the transfer valve had failed due to a broken key which permitted both oil outlet ports to be shut off. The outage was extended to permit repairs of a body to bonnet leak on pressurizer spray valve NRV-16B and to work on NUREG-0737 required design changes. The unit was returned to service on 811115 with 100% reactor power reached on 811116.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance or 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

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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
176	811117	F	24.1	A	3	81-054/03L-0	IA	INSTRU	Reactor/Turbine trip. Reactor trip was due to instrument failures. RCS Loop 4 Overpower and Overtemp Delta-Tee pegged low simultaneously with erratic readings on Loop 3 Overtemp. Delta-Tee. The unit was returned to service 811118 and reached 100% power 811119.

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MONTHLY OPERATING ACTIVITIES - NOVEMBER, 1981

Highlights:

The Unit entered this reporting period operating at 100% Reactor power.

On November 3, the Unit tripped, and was out of service for twelve days. After repairs and some RFC work, the Unit was restarted and reached 100% power, November 16, 1981.

On November 17, the Reactor tripped. The Unit was out of service for 24 hours.

The Unit has operated for the remainder of the reporting period at 100% power, except for a five hour period when the power was reduced to 90% to check the Main Turbine valves.

Total electrical generation for this month was 425,290 mwh.

Summary:

10-01-81 - The NRC was notified that we were experiencing high readings on R-22, (Off gas from Dirty and Clean Waste Water Holdup Tanks) and R-26 (Plant Vent) indicating an unplanned gaseous release. The readings returned to normal after closing CS-374 (VCT Sample Isolation Valve). The leak was later found to be NS-186 (Sample Line Drain). The NRC was notified the same day, November 1, 1981, that the leak had been found and isolated.

10-03-81 - The West Main Feed Pump Turbine tripped while we were switching the lube oil filter. This resulted in a Unit trip from low steam generator level coincidental with low feedwater flow.

The Unit was brought to Mode 3 with no problems.

Later investigation showed, that the feedpump turbine oil filter switching mechanism had failed due to a key on the shaft being sheared.

10-04-81 - During the inspection tour of the Containment following the shutdown, the pressurizer power operated relief valve, NRV-163, was found to have a body to bonnet leak. The Unit was brought to cold shutdown, Mode 5, in order to make repairs to NRV-163.

With the Unit in cold shutdown it was decided to complete RFC work, which was originally scheduled for a December, 1981 outage.

Summary (cont.):

- 10-12-81 - The Unit was heated up to full pressure and temperature. Inspection was made inside the Containment, and leaks were discovered on NMO-151 and NMO-152, pressurizer PORV Isolation Valves. NMO-151 had a body to bonnet leak and NMO-152 a packing leak.
- 10-15-81 - With the completion of repairs on NMO-151 and NMO-152, the Reactor was taken critical at 0721 hours.
- 10-16-81 - Unit at 100% Reactor power at 0140 hours.
- 10-17-81 - At 1300 hours, the Reactor tripped from over-temperature ΔT . Loop 3 started receiving spurious ΔT alarms and trip inputs. During investigation of this problem the set point generator for Loop 4, over power and over temperature ΔT failed low. A simultaneous spike from Loop 3 over temperature ΔT gave the second ΔT trip input which initiated the Reactor trip.
- 10-18-81 - Repairs were completed and the Reactor was taken critical at 1106 hours, and the Unit paralleled to the system at 1304 hours.
- 10-19-81 - The Reactor reached 100% power at 1235 hours.

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MAJOR SAFETY-RELATED MAINTENANCE

NOVEMBER, 1981

- M-1 The resistance orifice flange in RCS loop 3 RTP loop was leaking. The flex gasket was replaced.
- M-2 RCS loop 4 RTD loop valve, RC-108L4, had a packing leak. Repacked valve using a bonnet chamber repack cartridge.
- M-3 The RHR check valve in the loop 3 cooldown line, RH-134 had a body-to-bonnet leak. Replaced the flex gasket, bolts and nuts.
- M-4 Pressurizer Power Operated Relief valve, NRV-153 was leaking by. Replaced seat ring, plug, stem and stem pin. Reassembled and repacked valve. The valve was stroked and tested.
- M-5 Pressurizer backup heater current was low. Investigation revealed loose connections. Replaced 3 molded case circuit breakers and one cable in circuit breaker cubicle.
- M-6 The Safety Injection Pump discharge crosstie valve, IMO-270, would not open from the Control Room. Replaced the motor for the operator and the valve tested satisfactorily.
- M-7 Pressurizer Power Operated Relief Valve block valve, NMO-153, control cable was damaged. Replaced cable and tested valve.
- M-8 The Boric Acid Filter outlet valve, CS-421N, was leaking. Replaced valve diaphragm.
- M-9 Pressurizer Spray Control Valve, NkV-163, had a body-to-bonnet leak. Replaced valve gaskets and one bonnet stud that was steam cut. The valve was stroked and tested.
- M-10 Pressurizer power operated relief valve, NMO-153, was leaking. Replaced the valve disc and gasket. Had valve tested.
- M-11 Charging header isolation valve, QMO-200, had a grounded motor. Replaced motor and rebuilt Limitorque actuator. Had the valve tested.
- M-12 No. 1 S/G blowdown regulating valve, DRV-311, had a broken valve stem. Replaced the valve stem, pin and plug. Reassembled with new gaskets and repacked the valve. Had the valve tested.

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MAJOR SAFETY-RELATED MAINTENANCE

NOVEMBER, 1981

- M-13 Loop 1 cold leg safety injection check valve, SI-142L, was leaking by. Replaced the check valve and had applicable NDE performed. Performed system leak test.
- M-14 Pressurizer power operated relief valve block valve, NMO-151, had a body-to-bonnet leak. Sealed leak under pressure by Furmanite injection.
- M-15 No. 1 S/G blowdown isolation valve, DCR-130, would not open. Replaced diaphragm and cover gasket in the valve actuator. The valve was stroked and tested.
- M-16 Safety Injection check valves, SI-158L1, 2, 3 and 4, had body-to-bonnet leaks. Bonnet gaskets were replaced on all 4 valves and one bonnet stud was replaced on SI-158L4.
- M-17 Alternate charging line check valves, CS-328L1 and CLS-329L1, had body-to-bonnet leaks. Replaced bonnet gaskets and studs on both valves.
- C&I-1 Reactor Coolant Loop No. 4 hot leg wide range temperature indication, NTR-140, displayed a temperature 18°F below the other three loops. The calibration of the resistance to current module was tested, and found to be out of specification. The module was recalibrated and returned to normal service.
- C&I-2 R-22 Radiation Monitoring System waste off-gas monitor, failed. The low voltage power supply was replaced with a spare and the power supply voltages were adjusted to the correct values.
- C&I-3 NLI-151 Pressurizer Level cold calibration, indicated 54% level when the reactor coolant system was at half loop. A loose wire was found on the terminal board in the transmitter. The transmitter was recalibrated and the reference leg was filled. The control room indication returned to zero.
- C&I-4 QRV-112 Reactor Coolant letdown to the regenerative heat exchanger, had failed open and air was found discharging from the control solenoid. The failed solenoid was removed and a spare solenoid was installed.

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MAJOR SAFETY-RELATED MAINTENANCE

NOVEMBER, 1981

- C&I-5 MRV-233 Steam Generator No. 3 power operated relief valve, would not open. The booster was found leaking air. The valve's booster and positioner were replaced with spares. The valve was stroked and returned to service.
- C&I-6 NLP-151 Pressurizer Level Protection Channel 1 indicated a deviation from protection Channel II and III. The reference leg in all three channels were filled. The three channels displayed the correct level following the refilling.
- C&I-7 Feedwater to steam generators 1 and 4 motor operated isolation valves, FMO-201 and FMO-204 could not be opened. An auxiliary relay K636 was found not operating properly. The spare relay was installed and the system was returned to normal.