

# OPERATING DATA REPORT

DOCKET NO. 50-316  
 DATE 3-2-83  
 COMPLETED BY A. MIGHT  
 TELEPHONE (616)465-5901

## OPERATING STATUS

1. Unit Name: DONALD C. COOK 2
2. Reporting Period: FEBRUARY 1983
3. Licensed Thermal Power (MWt): 3411
4. Nameplate Rating (Gross MWe): 1133
5. Design Electrical Rating (Net MWe): 1100
6. Maximum Dependable Capacity (Gross MWe): 1118
7. Maximum Dependable Capacity (Net MWe): 1082
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	672	1416	45,240
12. Number Of Hours Reactor Was Critical	672	938.5	31,751.9
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	672	858.8	30,820.5
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,242,228	2,583,762	98,847,993
17. Gross Electrical Energy Generated (MWH)	744,530	848,050	* 31,805,800
18. Net Electrical Energy Generated (MWH)	719,448	816,611	30,656,403
19. Unit Service Factor	100	60.6	72.6
20. Unit Availability Factor	100	60.6	72.6
21. Unit Capacity Factor (Using MDC Net)	98.9	53.3	68.1
22. Unit Capacity Factor (Using DER Net)	97.3	52.4	67.3
23. Unit Forced Outage Rate	0	2.9	13.7
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:

26. Units In Test Status (Prior to Commercial Operation):

Forecast

Achieved

INITIAL CRITICALITY  
 INITIAL ELECTRICITY  
 COMMERCIAL OPERATION

\*Includes +180 MW to correct error on November 1982 Report

(4/77)

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316

UNIT 2

DATE 3-2-83

COMPLETED BY A. Might

TELEPHONE (616)465-5901

MONTH February, 1983

DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)
1	<u>904</u>
2	<u>1029</u>
3	<u>1091</u>
4	<u>1088</u>
5	<u>1074</u>
6	<u>1096</u>
7	<u>1100</u>
8	<u>1075</u>
9	<u>1066</u>
10	<u>1099</u>
11	<u>1097</u>
12	<u>1091</u>
13	<u>1101</u>
14	<u>1091</u>
15	<u>1101</u>
16	<u>1085</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>784</u>
18	<u>1095</u>
19	<u>1098</u>
20	<u>1102</u>
21	<u>1100</u>
22	<u>1096</u>
23	<u>1056</u>
24	<u>1095</u>
25	<u>1091</u>
26	<u>1088</u>
27	<u>1094</u>
28	<u>1093</u>
29	<u>-</u>
30	<u>-</u>
31	<u>-</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 February, 1983

DOCKET NO. 50-316  
 UNIT NAME D.C. Cook - Unit 2  
 DATE 3-14-83  
 COMPLETED BY B.A. Svensson  
 TELEPHONE 616-465-5901  
 PAGE 1 of 1

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
122	830208	S	0	H	4	N.A.	HB	HTEXCH	100% reactor power was reached for the first time in Cycle IV at 1820 hours on 830202.
123	830216	F	0	A	4	N.A.	CH	ZZZZZZ	Reactor power was reduced to 80% to place the moisture separator-reheater coils in service. Reactor power was returned to 100% on 820209. Reactor power was initially reduced to 80% to remove the "A"-string of H.P. heaters from service to check for leaks. Reactor power was further reduced to 57% to remove the west main feed pump turbine from service to repair tube leaks in the F.P.T. condenser. One tube was plugged. Reactor power was returned to 100% on 820217.

<sup>1</sup>  
 F: Forced  
 S: Scheduled

<sup>2</sup>  
 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)

<sup>3</sup>  
 Method:  
 1-Manual  
 2-Manual Scram.  
 3-Automatic Scram.  
 4-Other (Explain)

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

<sup>5</sup>  
 Exhibit I - Same Source

## UNIT SHUTDOWNS AND POWER REDUCTIONS

### INSTRUCTIONS

This report should describe all plant shutdowns during the report period. In addition, it should be the source of explanation of significant dips in average power levels. Each significant reduction in power level (greater than 20% reduction in average daily power level for the preceding 24 hours) should be noted, even though the unit may not have been shut down completely<sup>1</sup>. For such reductions in power level, the duration should be listed as zero, the method of reduction should be listed as 4 (Other), and the Cause and Corrective Action to Prevent Recurrence column should explain. The Cause and Corrective Action to Prevent Recurrence column should be used to provide any needed explanation to fully describe the circumstances of the outage or power reduction.

**NUMBER.** This column should indicate the sequential number assigned to each shutdown or significant reduction in power for that calendar year. When a shutdown or significant power reduction begins in one report period and ends in another, an entry should be made for both report periods to be sure all shutdowns or significant power reductions are reported. Until a unit has achieved its first power generation, no number should be assigned to each entry.

**DATE.** This column should indicate the date of the start of each shutdown or significant power reduction. Report as year, month, and day. August 14, 1977 would be reported as 770814. When a shutdown or significant power reduction begins in one report period and ends in another, an entry should be made for both report periods to be sure all shutdowns or significant power reductions are reported.

**TYPE.** Use "F" or "S" to indicate either "Forced" or "Scheduled," respectively, for each shutdown or significant power reduction. Forced shutdowns include those required to be initiated by no later than the weekend following discovery of an off-normal condition. It is recognized that some judgment is required in categorizing shutdowns in this way. In general, a forced shutdown is one that would not have been completed in the absence of the condition for which corrective action was taken.

**DURATION.** Self-explanatory. When a shutdown extends beyond the end of a report period, count only the time to the end of the report period and pick up the ensuing down time in the following report periods. Report duration of outages rounded to the nearest tenth of an hour to facilitate summation. The sum of the total outage hours plus the hours the generator was on line should equal the gross hours in the reporting period.

**REASON.** Categorize by letter designation in accordance with the table appearing on the report form. If category H must be used, supply brief comments.

**METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER.** Categorize by number designation

<sup>1</sup>Note that this differs from the Edison Electric Institute (EEI) definitions of "Forced Partial Outage" and "Scheduled Partial Outage." For these terms, EEI uses a change of 30 MW as the break point. For larger power reactors, 30 MW is too small a change to warrant explanation.

in accordance with the table appearing on the report form. If category 4 must be used, supply brief comments.

**LICENSEE EVENT REPORT =.** Reference the applicable reportable occurrence pertaining to the outage or power reduction. Enter the first four parts (event year, sequential report number, occurrence code and report type) of the five part designation as described in Item 17 of Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161). This information may not be immediately evident for all such shutdowns, of course, since further investigation may be required to ascertain whether or not a reportable occurrence was involved.) If the outage or power reduction will not result in a reportable occurrence, the positive indication of this lack of correlation should be noted as not applicable (N/A).

**SYSTEM CODE.** The system in which the outage or power reduction originated should be noted by the two digit code of Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161).

Systems that do not fit any existing code should be designated XX. The code ZZ should be used for those events where a system is not applicable.

**COMPONENT CODE.** Select the most appropriate component from Exhibit I - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161), using the following criteria:

- A. If a component failed, use the component directly involved.
- B. If not a component failure, use the related component: e.g., wrong valve operated through error; list valve as component.
- C. If a chain of failures occurs, the first component to malfunction should be listed. The sequence of events, including the other components which fail, should be described under the Cause and Corrective Action to Prevent Recurrence column.

Components that do not fit any existing code should be designated XXXXXX. The code ZZZZZZ should be used for events where a component designation is not applicable.

**CAUSE & CORRECTIVE ACTION TO PREVENT RECURRENCE.** Use the column in a narrative fashion to amplify or explain the circumstances of the shutdown or power reduction. The column should include the specific cause for each shutdown or significant power reduction and the immediate and contemplated long term corrective action taken, if appropriate. This column should also be used for a description of the major safety-related corrective maintenance performed during the outage or power reduction including an identification of the critical path activity and a report of any single release of radioactivity or single radiation exposure specifically associated with the outage which accounts for more than 10 percent of the allowable annual values.

For long textual reports continue narrative on separate paper and reference the shutdown or power reduction for this narrative.

MONTHLY OPERATING ACTIVITIES - FEBRUARY 1983

Highlights:

The Unit entered the reporting period operating at 80% power in the power escalation program following the third refueling of the Reactor Core. The Unit was further loaded to 100% power and power was reduced seven times, below the 100% value, during the reporting period. Details of these power fluctuations follow in the Summary.

The Unit remained in service the entire reporting period. Total electrical generation was 744,530 MWH.

Summary:

2/1/83 Unit power was increased to 90% over a 4 hour ramp starting at 1219 hours.

2/2/83 Unit power was increased to 96% over a 2½ hour ramp starting at 1026 hours.

Unit power was increased to 100% over a 3½ hour ramp starting at 1502 hours. This was the initial loading to this power level for the new Reactor Core.

The East Containment Spray System was inoperable for a 10-3/4 hour period while repairs were made to valve 2-CTS-128E.

2/4/83 The Reactor Coolant Subcooling Meter was declared inoperable at 0523 hours when it started indicating falsely low. Repairs were made and this meter returned to service at 1525 hours Feb. 17. During this time period the subcooling margin was available from the unit computer.

The East Residual Heat Removal System was inoperable for a 3¼ hour period while the system was vented.

Unit power was reduced to 98% over a ½ hour ramp starting at 1224 due to a high indication of Delta temperature of Reactor Coolant loops 3 and 4.

2/5/83 Unit power was reduced to 95% over a 2½ hour ramp starting at 0407 hours for calibration of Reactor Coolant loops 3 and 4 Overpower and Overtemperature Delta Temperature Protection Instrumentation.

Unit power was returned to 100% over a 2½ hour ramp starting at 1345 hours.



- 2/8/83 Unit power was reduced to 80% over a 1½ hour ramp starting at 2104 hours to place the heating coils of the reheaters in service.
- 2/9/83 Unit power was returned to 100% over a 5½ hour ramp starting at 0237 hours.
- The South Safety Injection System was inoperable for a 5½ hour period while repairs were made to valve 2-ICM-265.
- 2/11/83 Valve 2-MRV-231 (Emergency Closure For Steam Generator Stop Valve #3) was inoperable for a 3½ hour period for repairs.
- 2/12/83 Unit power was reduced to 95% for testing of turbine valves. Total time below 100% was 3½ hours.
- 2/14/83 The Reheater Heating Coils were removed from service at 1415 hours due to excessive steam consumption by the right Southwest coil.
- 2/16/83 Unit power was reduced to 80% over a 2 hour ramp starting at 2128 hours to remove the "A" set of high pressure heaters from service to check for a leak in the No. 5 heater. No leak was identified and the set of heaters were returned to service.
- 2/17/83 Unit power was further reduced to 57% over a 1½ hour ramp starting at 0525 hours to remove the West Main Feedwater Pump from service so it's condenser could be checked for inleakage of circulating water. One leak was repaired and the pump was returned to service.
- Unit power was returned to 100% over a 7½ hour period starting at 1240 hours. During this time there was a 2 hour hold at 90% power while turbine valves were tested.
- 2/23/83 Unit power was reduced to 85% over a 1 hour ramp to place the Reheater Heating Coils in service. Six of the eight heating coils were placed in service. The coil that was indicating high steam consumption 2-14-83 and it's companion coil were left out of service.
- Unit power was returned to 100% over a 4½ hour ramp starting at 1635 hours.
- 2/25/83 Unit power was reduced to 95% for testing of turbine valves. Total time below 100% was 5 hours.
- Main condenser halves were out of service, one half at a time, for a total of 29½ hours during the reporting period for identification and repair of circulating water leaks.

UNIT NAME	D. C. Cook - Unit No. 2
DATE	3-14-83
COMPLETED BY	B. A. Svensson
TELEPHONE	(616) 465-5901
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MAJOR SAFETY-RELATED MAINTENANCE

FEBRUARY, 1983

- M-1 No. 3 steam generator stop valve dump valve, MRV-231, was leaking by. Replaced the valve stem, cage, seat and plug. Reassembled and had the valve tested.
- M-2 The miscellaneous CCW header isolation valve, CMO-416, would not close during a test. Adjusted torque switch and had valve retested.
- C&I-1 Pressurizer pressure indicators were in disagreement by greater than 20 psi. Pressure transmitter NPP-151 was recalibrated to bring the indication channels into coincidence.
- C&I-2 Containment isolation valve, WCR-915, (non-essential service water) could not be closed from the control room. Actuating solenoid valve XS0-915 was replaced to restore operation to the WCR.
- C&I-3 A spurious overpower  $\Delta T$  automatic rod block C-4 was received from reactor coolant loop No. 3 instrumentation. Cold leg RTD resistance-to-voltage converter module 2TY-413B was found to have drifted low in output, causing  $\Delta T$  signal to be high and the T average signal to be low. The module was recalibrated and the alarm cleared.