

# OPERATING DATA REPORT

DOCKET NO. 50-316  
 DATE 11-3-83  
 COMPLETED BY Ann Might  
 TELEPHONE (616) 465-5901

## OPERATING STATUS

1. Unit Name: Donald C. Cook 2
2. Reporting Period: October 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): 1100
7. Maximum Dependable Capacity (Net MWe): 1060
8. If Changes Occur in Capacity Ratings (Items Number 5 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	745	7296	51,120
12. Number Of Hours Reactor Was Critical	357.3	6001.0	36,814.6
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	357.3	5902.5	35,864.2
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,188,161	17,659,718	115,635,322
17. Gross Electrical Energy Generated (MWH)	388,660	6,341,160	37,298,910
18. Net Electrical Energy Generated (MWE)	375,062	6,120,270	35,960,062
19. Unit Service Factor	48.0	80.9	73.6
20. Unit Availability Factor	48.0	80.9	73.6
21. Unit Capacity Factor (Using MDC Net)	47.5	79.1	70.3
22. Unit Capacity Factor (Using DER Net)	45.8	76.3	69.1
23. Unit Forced Outage Rate	52.4	7.8	13.1

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

Refueling outage scheduled for 3-1-84

25. If Shut Down At End Of Report Period, Estimated Date of Startup: 11-7-84

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

Forecast - Achieved

INITIAL CRITICALITY  
 INITIAL ELECTRICITY  
 COMMERCIAL OPERATION

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

831215004B 831031  
 PDR ADDCK 05000316  
 PDR

(4/77)

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316

UNIT 2

DATE 11-1-83

COMPLETED BY Ann Might

TELEPHONE (616) 465-5901

MONTH October, 1983

DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)
1	<u>1036</u>
2	<u>1082</u>
3	<u>1076</u>
4	<u>1076</u>
5	<u>1082</u>
6	<u>1077</u>
7	<u>1078</u>
8	<u>1073</u>
9	<u>1087</u>
10	<u>1088</u>
11	<u>1091</u>
12	<u>1090</u>
13	<u>1073</u>
14	<u>1027</u>
15	<u>545</u>
16	<u>      </u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>      </u>
18	<u>      </u>
19	<u>      </u>
20	<u>      </u>
21	<u>      </u>
22	<u>      </u>
23	<u>      </u>
24	<u>      </u>
25	<u>      </u>
26	<u>      </u>
27	<u>      </u>
28	<u>      </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 OCTOBER, 1983

DOCKET NO. 50-316  
 UNIT NAME D.C. Cook - Unit 2  
 DATE 11-14-83  
 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
135	831015	F	387.7	A	1	N.A.	CC	HTEXCH	Started power reduction at 0849 hours due to indication of increased steam generator primary to secondary leakage. Reactor power was held at 40% for approximately 10 hours to observe the trend in the leak rate. The leakage continued to increase and the Unit was removed from service at 2050 hours on the same day. As a result of Helium leak testing and Eddy Current testing, two tubes were plugged in Steam Generators 21 and 23 and one tube in Steam Generator 22. The repair work has been completed. At the end of the month the RCS filling and venting was in progress.

<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:

- If a component failed, use the component directly involved.
- If not a component failure, use the related component; e.g., wrong valve operated through error: list valve as component.
- 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.



Docket No.: 50-316  
Unit Name: D. C. Cook Unit 2  
Completed By: G. J. Peak  
Telephone: (616) 465-5901  
Date: 11/8/83  
Page: 1 of 2

MONTHLY OPERATING ACTIVITIES - OCTOBER 1983

Highlights:

The Unit entered the reporting period at 100% rated thermal power. Power was reduced to 40% to observe an upward trend in the primary to secondary leakage which had increased during a moderator temperature coefficient test. The leakage continued to increase and the Unit was removed from service. Five leaking Steam Generator Tubes were identified and plugged (2 in #21 S/G, 1 in #22 S/G and 2 in #23 S/G). As the reporting period came to an end, the Reactor Coolant System had just been filled and vented in preparation for Reactor startup.

Summary:

- 10/1/83 Reduced power to 99% for a 3 hour period to test the Main Turbine Control Valves.
- 10/3/83 Began reducing Reactor power at 1% per hour at 1543 hours in order to comply with Tech Spec 3.0.3 due to a discrepancy in the over temperature Delta T setpoints. The setpoints were determined to be within the allowable limits and the power reduction stopped at 96% at 1712 hours. The Unit was returned to 100% power at 2006 hours.
- The Control Room Radiation Monitor (R-1) was inoperable from 1915 hours on 10/3 until 0810 hours on 10/5.
- 10/8/83 Reduced power to 98% for a 4 hour period to test the Main Turbine Control Valves.
- 10/14/83 Reduced power to 95% at 0358 hours for a moderator temperature coefficient test.
- 10/15/83 Reduced power to 40% at 1105 hours to observe an upward trend in the primary to secondary leakage. The leakage continued to increase and the Unit was removed from service. The Reactor and turbine were tripped at 2115 hours.
- 10/16/83 Mode 4 was entered at 1146 hours.
- The East Motor Driven Auxiliary Feed Pump was inoperable for an 8 hour period because the Low Suction Pressure Trip was locked in.
- 10/17/83 Mode 5 was entered at 1105 hours.
- 10/30/83 Reactor Coolant System filled and vented at 0333 hours.

Docket No.: 50-316  
Unit Name: D. C. Cook Unit 2  
Completed By: G. J. Peak  
Telephone: (616) 465-5901  
Date: 11/8/83  
Page: 2 of 2

The Control Room Cable Vault Halon System remained inoperable the entire reporting period. The backup CO<sub>2</sub> System remains operable.

The Control Room Fire Detection System remained inoperable the entire reporting period. Hourly fire patrols are being made behind the Control Panels.

DOCKET NO.	50 - 316
UNIT NAME	D. C. Cook - Unit No. 2
DATE	11-14-83
COMPLETED BY	B. A. Svensson
TELEPHONE	(616) 465-5901
PAGE	1 of 2

MAJOR SAFETY-RELATED MAINTENANCE

OCTOBER, 1983

- M-1      The pressure instrument root valve for #4 steam generator, MPP-241V1, had been injected with Furmanite to seal a body-to-bonnet leak. Replaced the valve and had necessary NDE performed.
  
- M-2      Pressurizer power-operated relief valves, NRV-151 and 152, were leaking by. Replaced the stem, plug, seat, gaskets and packing of NRV-151. Lapped the plug to the seat and replaced the gaskets and packing for NRV-152. Had both valves tested.
  
- M-3      Auxiliary feedwater isolation valve, FMO-222, was leaking by. Remachined the plug, lapped the seat and repacked the valve. Had the valve tested.
  
- M-4      Testing of the steam generators revealed leaking tubes. Plugged two tubes in #21, one tube in #22 and two tubes in #23 steam generators, utilizing Westinghouse mechanical plugs.
  
- C&I-1    Pressurizer pressure instruments NPP-152, 153 and NPS-153 were checked and found to be out of specification. After recalibration, pressures agreed within 20 psig on all instruments.
  
- C&I-2    Critical control room power inverter failed when a filter capacitor short-circuited in service. Replacement of the capacitor and a fuse restored the inverter to operability.
  
- C&I-3    The gauge protector was not working properly on the low suction pressure trip device for the east motor-driven auxiliary feed pump. The gauge protector was repaired and calibration of the pressure switches was performed. The gauge protector worked for a day until it stopped passing pressure again. The gauge saver was then replaced and recalibrated.
  
- C&I-4    Reactor coolant system loop 3 cold leg narrow range spare resistance-temperature detector (RTD) failed. The RTD was replaced in accordance with 12 THP 6030 IMP.047.
  
- C&I-5    Unit vent iodine radiation monitor, ERS-2503, stuck in its "check-source" mode of operation. After rebuilding the check source mechanism, channel ERS-2503 was demonstrated to be operable.

DOCKET NO.	<u>50 - 316</u>
UNIT NAME	<u>D. C. Cook - Unit No. 2</u>
DATE	<u>11-14-83</u>
COMPLETED BY	<u>B. A. Svensson</u>
TELEPHONE	<u>(616) 465-5901</u>
PAGE	<u>2 of 2</u>

MAJOR SAFETY-RELATED MAINTENANCE

OCTOBER, 1983

- C&I-6      Steam generator #2 stop valve air operator for valve, MRV-222, developed an air leak at its diaphragm. The quick-release valve diaphragm and gasket were both replaced to correct the leak.
- C&I-7      Control rod drive motor generator "2N" circuit breaker relay timer, 62-OV-G2, was found to be improperly timing. The relay was replaced and was set to time out at 5 seconds per Westinghouse Tech. Manual Specifications.
- C&I-8      Reactor coolant pump #3 lower radial bearing RTD (resistance-temperature detector) was replaced with a new unit. The cable which feeds the P-250 computer had been switched over to the spare RTD when the normal RTD failed. This cable was reconnected to the normal RTD after replacement.





**INDIANA & MICHIGAN ELECTRIC COMPANY**

DONALD C. COOK NUCLEAR PLANT  
P.O. Box 458, Bridgman, Michigan 49106  
(616) 465-5901

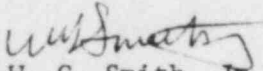
November 14, 1983

Director, Office Of Management Information  
and Program Control  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Gentlemen:

Pursuant to the requirements of Donald C. Cook Nuclear Plant Unit 2  
Technical Specification 6.9.1.6, the attached Monthly Operating  
Report for the Month of October, 1983 is submitted.

Sincerely,

  
W. G. Smith, Jr.  
Plant Manager

WGS:al

Attachments

cc: J. E. Dolan  
M. P. Alexich  
R. W. Jurgensen  
NRC Region III  
E. R. Swanson  
R. O. Bruggee (NSAC)  
R. C. Callen  
S. J. Mierzwa  
R. F. Kroeger  
B. H. Bennett  
J. D. Huebner  
J. H. Hennigan  
A. F. Kozlowski  
R. F. Hering  
J. F. Stietzel  
PNSRC File  
INPO Records Center

IE24  
111