

OPERATING DATA REPORT

DOCKET NO. 50-316  
 DATE 10/2/84  
 COMPLETED BY Climer  
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook 2
2. Reporting Period: September 1984
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 3 Through 7) Since Last Report, Give Reason:

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	6,575	59,159
12. Number Of Hours Reactor Was Critical	700.8	3,582.4	41,367.6
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	691.1	3,496.8	40,296.9
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,325,725	11,489,712	129,962,680
17. Gross Electrical Energy Generated (MWH)	745,310	3,733,550	41,960,160
18. Net Electrical Energy Generated (MWE)	719,121	3,603,327	40,456,698
19. Unit Service Factor	96.0	53.2	70.9
20. Unit Availability Factor	96.0	53.2	70.9
21. Unit Capacity Factor (Using MEC Net)	94.2	51.7	67.7
22. Unit Capacity Factor (Using DER Net)	90.8	49.8	66.4
23. Unit Forced Outage Rate	4.0	3.1	13.0

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

Surveillance & Maintenance Outage scheduled to start 12/22/84. Estimated duration--two weeks.

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

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

INITIAL CRITICALITY  
 INITIAL ELECTRICITY  
 COMMERCIAL OPERATION

Forecast

Achieved

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

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

8411130675 840930  
 PDR ADOCK 05000316  
 R PDR

*TEPA*  
 (10/2/84)

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316

UNIT 2

DATE 10/2/84

COMPLETED BY D. Climer

TELEPHONE (616) 465-5901

MONTH September 1984

DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>1038</u>	17	<u>1030</u>
2	<u>1037</u>	18	<u>1050</u>
3	<u>1047</u>	19	<u>1065</u>
4	<u>1049</u>	20	<u>1061</u>
5	<u>1049</u>	21	<u>1060</u>
6	<u>1050</u>	22	<u>1054</u>
7	<u>1051</u>	23	<u>1052</u>
8	<u>1053</u>	24	<u>1059</u>
9	<u>1055</u>	25	<u>1061</u>
10	<u>1052</u>	26	<u>1064</u>
11	<u>609</u>	27	<u>1065</u>
12	<u>14</u>	28	<u>1060</u>
13	<u>867</u>	29	<u>1057</u>
14	<u>1056</u>	30	<u>1065</u>
15	<u>1058</u>	31	<u>-</u>
16	<u>1036</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**

DOCKET NO. 50-316  
 UNIT NAME D.C. Cook - Unit 2  
 DATE October 4, 1984  
 COMPLETED BY B.A. Svensson  
 TELEPHONE 616/465-5901

REPORT MONTH September, 1984

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
149	840911	F	16.1	A	3	84-024-00	EF	INSTRU	A reactor/turbine trip occurred from 100% power due to a failure of vital A.C. instrument bus, CRID III, inverter. The inverter failure was due to a failed capacitor, C-2. The inverter was repaired and the Unit returned to service at 0722 hours on 840912.
150	840912	F	12.8	G&H	3	84-025-00	ZZ	ZZZZZZ	At 0733 hours, 11 minutes after the Unit was paralleled, a turbine/reactor trip occurred due to High-High water level in No. 2 steam generator. The high steam generator water level occurred due to overfeeding the steam generator. This was caused by a combination of operator error and level control problems while with feedwater control in manual. The Unit was returned to service the same day and 100% reactor power was reached on 840913.

<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.

Docket No.: 50-316  
Unit Name: D.C. Cook Unit 2  
Completed By: G. J. Peak  
Telephone: (616) 465-5901  
Date: 10/04/84  
Page: 1 of 1

MONTHLY OPERATING ACTIVITIES - SEPTEMBER, 1984

HIGHLIGHTS:

The unit entered the reporting period in Mode 1 with the reactor at 100% of rated thermal power. The unit tripped on 9-17-84 due to the failure of the Crid III inverter. The inverter was repaired and the unit was returned to service. The unit tripped again during the power accension following the previous trip. The cause of this second trip was Hi-Hi steam generator level. The unit was returned to service again and subsequently loaded to 100% power where it was operating as the reporting period came to an end. No other major power reductions occurred during the reporting period.

Total electrical generation for the month was 745,310 MWH.

SUMMARY:

- 9-04-84 The East Containment Spray Pump was inoperable for a 10 hour period due to the pump Delta P being in the the high action range of the ISI pump review program.
- 9-11-84 The unit tripped at 1517 hours due to the failure of the Crid III inverter.
- 9-12-84 The reactor was made critical at 0350 hours and Mode 1 was entered at 0508 hours. The main turbine was rolled at 0612 hours and the main generator was paralleled at 0722 hours. The unit tripped at 0733 hours due to Hi-Hi steam generator level. The reactor was taken critical again at 1415 hours and Mode 1 was entered at 1628 hours. The main turbine was rolled at 1841 hours and the main generator was paralleled at 2029 hours.
- 9-13-84 Power reached 100% at 1230 hours.
- 9-15-84 Power was reduced to 97% at 1012 hours for turbine valve testing.
- 9-18-84 Power was returned to 100% at 1138 hours.

The Control Room Cable Vault Halon System remains inoperable as of 1707 hours on 4-14-83. The backup CO<sub>2</sub> system remains operable.

DOCKET NO.	<u>50 - 316</u>
UNIT NAME	<u>D. C. Cook - Unit No. 2</u>
DATE	<u>10-5-84</u>
COMPLETED BY	<u>B. A. Svensson</u>
TELEPHONE	<u>(616) 465-5901</u>
PAGE	<u>1 of 1</u>

MAJOR SAFETY-RELATED MAINTENANCE

SEPTEMBER, 1984

- M-1 Replaced three (3) studs and two (2) standoffs on Unit 2 AB Diesel Generator Exciter diode ring. Torqued all nuts and tack welded. Cleaned exciter and generator windings. Re-connected all wiring and returned unit to service.
- C&I-1 2CD-2 Battery Charger lost output voltage while the charger was in service. The C-1 capacitor on the gate filter was replaced on boards 2, 3, 4 and 6. A defective firing board #F4 was also replaced. The float and equalizing voltage were adjusted to 260.5 vdc and 277 vdc respectively. The current limit was adjusted to 110 amps. Declared 2CD-2 Battery Charger operable at 1057, August 29, 1984.
- C&I-2 Containment Atmosphere Radiation Monitor, ERS-2400, failed to shift from AC power to battery backup when the normal AC supply, CRID III, failed. The battery backup circuit had failed and was replaced.



**INDIANA & MICHIGAN ELECTRIC COMPANY**

Donald C. Cook Nuclear Plant  
P.O. Box 458, Bridgman, Michigan 49106

October 5, 1984

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 September, 1984 is submitted.

Sincerely,

  
W. G. Smith, Jr.  
Plant Manager

WGS:ab

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  
Z. Cordero  
R. F. Hering  
J. F. Stietzel  
PNSRC File  
INPO Records Center  
ANI Nuclear Engineering Department

IE24  
1/1