

OPERATING DATA REPORT

DOCKET NO. 50-315  
 DATE 11/3/84  
 COMPLETED BY Climer  
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook Unit 1
2. Reporting Period: October 1984
3. Licensed Thermal Power (MWe): 3250
4. Nameplate Rating (Gross MWe): 1152
5. Design Electrical Rating (Net MWe): 1030
6. Maximum Dependable Capacity (Gross MWe): 1056
7. Maximum Dependable Capacity (Net MWe): 1020
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	745	7,320	86,208
12. Number Of Hours Reactor Was Critical	745	6,611.8	64,229.8
13. Reactor Reserve Shutdown Hours	0	0	463
14. Hours Generator On-Line	745	6,553.8	62,897.5
15. Unit Reserve Shutdown Hours	0	0	321
16. Gross Thermal Energy Generated (MWH)	2,030,349	19,784,946	185,478,659
17. Gross Electrical Energy Generated (MWH)	655,230	6,447,480	60,373,770
18. Net Electrical Energy Generated (MWH)	628,281	6,205,942	58,086,318
19. Unit Service Factor	100	89.3	74.8
20. Unit Availability Factor	100	89.3	74.8
21. Unit Capacity Factor (Using MDC Net)	82.68	83.1	67.7
22. Unit Capacity Factor (Using DER Net)	81.88	82.3	65.1
23. Unit Forced Outage Rate	0	6.0	7.5

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):  
Refueling and 10 year outage tentatively scheduled for March 9, 1985; 120 days.

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

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

	Forecast	Achieved
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____

11/24  
 11/11

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-315

UNIT 1

DATE 11/3/84

COMPLETED BY Climer

TELEPHONE 616-465-5901

MONTH October 1984

DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)
1	1017
2	897
3	584
4	528
5	532
6	527
7	648
8	917
9	899
10	914
11	970
12	1022
13	802
14	770
15	948
16	1021

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	1021
18	1022
19	1024
20	1023
21	1023
22	777
23	527
24	926
25	992
26	778
27	737
28	715
29	760
30	802
31	1024

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 100.

**UNIT SHUTDOWNS AND POWER REDUCTIONS**

DOCKET NO. 50-315  
 UNIT NAME D.C. Cook - Unit 1  
 DATE 11-12-84  
 COMPLETED BY B.A. Svensson  
 TELEPHONE 616/465-5901  
 PAGE 1 of 4

REPORT MONTH October, 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
230	841002	F	0	B	4	N.A.	ZZ	ZZZZZZ	<p>Reactor power was reduced to 56% to permit removing a Main Feedwater Pump, MFP, from service. The East MFP was removed to check the F.P. Turbine Condenser for tube leaks. One leaking tube was plugged. The East MFP was returned to service and the West MFP was removed from service to investigate reason for high pump bearing temperatures.</p> <p>On 841003 the West MFP was returned to service and a power increase was commenced. The high bearing temperature problem again developed, the reactor power was returned to 56% and the West MFP removed from service. No bearing problems were found, but the bearing liner was replaced as a precautionary measure.</p>

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 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.

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**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.

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**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

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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:

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- 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.



**UNIT SHUTDOWNS AND POWER REDUCTIONS**

DOCKET NO. 50-315  
 UNIT NAME D.C. Cook - Unit 1  
 DATE 11-12-84  
 COMPLETED BY B.A. Svensson  
 TELEPHONE 616/465-5901  
 PAGE 2 of 4

REPORT MONTH October, 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
230 (Cont'd)									On 841006 the West MFP was returned to service and the East MFP was removed from service for F.P. Turbine Condenser leak checks. One tube was plugged. The East MFP was returned to service on 841007 and a reactor power increase was started. Reactor power was held at 90% to evaluate the West MFP performance. While at this power level a control problem with No. 4 Steam Generator feedwater regulating valve developed. The problem was corrected and power was increased to 100% on 841011.
231	841013	F	0	B	4	N.A.	HF	HTEXCH	Reactor power was reduced to 80% for main condenser tube leak checks. Two tubes were plugged in each of the A-North, A-South and B-North condenser halves. Reactor power was returned to 100% on 841015.

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 C Refueling  
 D Regulatory Restriction  
 E Operator Training & License Examination  
 F Administrative  
 G Operational Error (Explain)  
 H Other (Explain)

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 Method:  
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**UNIT SHUTDOWNS AND POWER REDUCTIONS**

**DOCKET NO.** 50-315  
**UNIT NAME** D.C. Cook - Unit 1  
**DATE** 11-12-84  
**COMPLETED BY** B.A. Svensson  
**TELEPHONE** 616/465-5901  
**PAGE** 3 of 4

**REPORT MONTH** October, 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
232	841022	F	0	B	4	N.A.	ZZ	ZZZZZZ	Reactor power was reduced to 55% to perform leak checks on the East and West F.P. Turbine Condensers and to change out orifices in the West MFP pump bearing housings to reduce the high bearing temperatures. One tube was plugged in the East F.P. Condenser and two tubes were plugged in the West F.P. Condenser. The West MFP was returned to service on 841023 and 100% reactor power was reached on 841024.
233	841025	F	0	F	4	84-025-0	ZZ	ZZZZZZ	Reactor power was reduced to 80% as a precautionary measure due to a 17% deficiency in available auxiliary feedwater flow under certain accident conditions involving a feedwater line break. A further reduction to 75% for additional conservatism occurred

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 B-Maintenance or Test  
 C-Refueling  
 D-Regulatory Restriction  
 E-Operator Training & License Examination  
 F-Administrative  
 G-Operational Error (Explain)  
 H-Other (Explain)

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

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**UNIT SHUTDOWNS AND POWER REDUCTIONS**

REPORT MONTH October, 1984

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233 (Cont'd)									on 841026. On 841029 the Unit was released to increase reactor power to 80% based on analysis performed by Westinghouse. Following the NRC's review of the analysis, the NRC authorized the Unit to be returned to 100% power. The reactor power was restored to 100% on 841031.

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- 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.: 50-315  
Unit Name: D.C. Cook Unit 1  
Completed By: D. A. Bruck  
Telephone: (616) 465-5901  
Date: November 14, 1984  
Page: 1 of 2

MONTHLY OPERATING ACTIVITIES - OCTOBER, 1984

HIGHLIGHTS:

The Unit entered the reporting period in Mode 1 with the reactor at 100% of rated thermal power. Major power reductions occurred for the following reasons:

- 1) To remove the West Main Feed Pump from service for a condenser tube leak check and bearing investigation.
- 2) To remove the East Main Feed Pump from service for a condenser tube leak check.
- 3) To remove portions of the Main Condenser from service for tube leak checks.
- 4) Because of a discrepancy in the Auxiliary Feedwater flow calculations resulting in a deficiency of approximately 17% in auxiliary feedwater flow under certain accident conditions.

The Unit ended the reporting period at 100% rated thermal power.

Total electrical generation for the month was 628,281 MWH.

SUMMARY.

- 10-02-84 At 1955, power was reduced to 56% to remove the East Main Feed Pump from service to check the feed pump turbine condenser for tube leaks.
- 10-02-84 At 2355, East Main Feed Pump returned to service and West Main Feed Pump removed from service to investigate the reason for high pump bearing temperatures.
- 10-06-84 At 2058, the West Main Feed Pump was returned to service and the East Main Feed Pump was again removed from service for condenser tube leak checks.
- 10-07-84 At 1217, the East Main Feed Pump was returned to service and power assention began at 1305.
- 10-11-84 100% power was achieved at 1403 after a hold at 90% because of a feedwater regulating valve problem.

Docket No.: 50-315  
Unit Name: D.C. Cook Unit 1  
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Page: 2 of 2

- 10-13-84 At 0415, power was reduced to 80% for Main Condenser tube leak checks.
- 10-15-84 At 1205, power returned to 100%.
- 10-22-84 At 0915, power was reduced to 55% to perform condenser tube leak checks on the East and West Main Feed Pump turbine condensers and to change out orifices in the West Main Feed Pump, pump bearing housings to reduce the high bearing temperatures.
- 10-24-84 At 1300, power was returned to 100%.
- 10-25-84 At 2035, power was reduced to 80% as a precautionary measure due to a 17% discrepancy in available auxiliary feedwater flow under certain accident conditions involving a feedwater line break.
- 10-26-84 A further reduction to 75% occurred at 1815, on for the same reasons.
- 10-29-84 At 1627, the Unit was released to increase power to 80%.
- 10-30-84 At 1800, the NRC authorized the Unit to return to 100% power. Power increase started at 2105.
- 10-31-84 At 0105, power was returned to 100%.

The Control Room Cable Vault Halon System remains inoperable as of 1400 hours on 4-05-83. The backup CO<sub>2</sub> System for the Control Room Cable Vault remains operable.



DOCKET NO.	<u>50 - 315</u>
UNIT NAME	<u>D. C. Cook - Unit No. 1</u>
DATE	<u>11-13-84</u>
COMPLETED BY	<u>B. A. Svensson</u>
TELEPHONE	<u>(616) 465-5901</u>
PAGE	<u>1 of 1</u>

MAJOR SAFETY-RELATED MAINTENANCE

OCTOBER, 1984

- M-1 Replaced all valve internals on Trip Valve MRV-231, associated with #3 S/G Stop Valve to eliminate leak-by. Post repair functional testing verified proper valve operation.
- M-2 Replaced all valve internals on Trip Valve MRV-221, associated with #2 S/G Stop Valve. Post repair functional testing verified that leak-by has been corrected.
- M-3 Replaced mechanical shaft seal on #1 B. A. Transfer Pump to eliminate leakage.
- M-4 LCD Diesel-Generator, LCD2 Air Compressor discharge check valve, DG-101C, was disassembled, cleaned and valve internals lapped. Seat was blue checked and valve reassembled. Post repair testing confirmed back flow had been eliminated.
- M-5 Replaced valve operator diaphragm on containment isolation valve VCR-11. A retest was performed to verify proper operation.
- M-6 Rebuilt 1E Essential Service Water Pump. Installed new bowl assembly and new bearings. Reassembled pump and performed post repair functional testing to assure pump meets design head and flow.



**INDIANA & MICHIGAN ELECTRIC COMPANY**

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

November 13, 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 1  
Technical Specification 6.9.1.6, the attached Monthly Operating  
Report for the Month of October, 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  
B. L. Jorgensen  
R. O. Bruggee (NSAC)  
R. C. Callen  
S. J. Mierzwa  
R. F. Kroeger  
B. H. Bennett  
P. D. Rennix  
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PNSRC File  
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11