

OPERATING DATA REPORT

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

OPERATING STATUS

1. Unit Name: Donald C. Cook Unit 1
2. Reporting Period: October 1984
3. Licensed Thermal Power (MWt): 3250
4. Nameplate Rating (Gross MWe): 1152
5. Design Electrical Rating (Net MWe): 1030
6. Maximum Lendable 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 Restart:

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

Forecast

Achieved

INITIAL CRITICALITY

INITIAL ELECTRICITY

COMMERCIAL OPERATION

8412120112 841031
 PDR ADOCK 05000315
 R PDR

1E24
 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	<u>1017</u>
2	<u>897</u>
3	<u>584</u>
4	<u>528</u>
5	<u>532</u>
6	<u>527</u>
7	<u>648</u>
8	<u>917</u>
9	<u>899</u>
10	<u>914</u>
11	<u>970</u>
12	<u>1022</u>
13	<u>802</u>
14	<u>770</u>
15	<u>948</u>
16	<u>1021</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	<u>1021</u>
18	<u>1022</u>
19	<u>1024</u>
20	<u>1023</u>
21	<u>1023</u>
22	<u>777</u>
23	<u>527</u>
24	<u>926</u>
25	<u>992</u>
26	<u>778</u>
27	<u>737</u>
28	<u>715</u>
29	<u>760</u>
30	<u>802</u>
31	<u>1024</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 1.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH October, 1984DOCKET NO. 50-315UNIT NAME D.C. Cook - Unit 1DATE 11-12-84COMPLETED BY B.A. SvenssonTELEPHONE 616/465-5901PAGE 1 of 4

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
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>

¹
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S: Scheduled

²
Reason:
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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)

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

(9/77)

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 completely¹. 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

¹Note 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 or 30 MW as the break point. For larger power reactors, 30 MW is too small a change to warrant explanation.

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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.
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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

REPORT MONTH October, 1984

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

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
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.

¹
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²
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 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)

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 Entry Sheets for Licensee
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 0161)

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 Exhibit I - Same Source

(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

INSTRUCTIONS

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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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UNIT SHUTDOWNS AND POWER REDUCTIONS

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 UNIT NAME D.C. Cook - Unit 1
 DATE 11-12-84
 COMPLETED BY B.A. Svensson
 TELEPHONE 616/465-5901
 PAGE 3 of 4

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

³
 Method:
 1-Manual
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 3-Automatic Scram.
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METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER. Categorize by number designation

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REPORT MONTH October, 1984

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 COMPLETED BY B.A. Svensson
 TELEPHONE 616/465-5901
 PAGE 4 of 4

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
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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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 ascension began at 1305.
- 10-11-84 100% power was achieved at 1403 after a hold at 90% because of a feedwater regulating valve problem.

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Completed By: D. A. Bruck
Telephone: (616) 465-5901
Date: November 14, 1984
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- 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 CO₂ 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>
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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
J. H. Hennigan
Z. Cordero
J. J. Markowsky
J. F. Stietzel
PNSRC File
INPO Records Center
ANI Nuclear Engineering Department

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