

N.R.C. OPERATING DATA REPORT

DOCKET NO. 50-316
 DATE 1/4/85
 COMPLETED BY CLIMER
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name D. C. Cook Unit 2 -----
 2. Reporting Period Dec. 1984 : notes |
 3. Licensed Thermal Power (Mwt) 3411 | |
 4. Name Plate 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 no. 3 through 7) Since Last Report Give Reasons -----

9. Power Level To Which Restricted. If Any (Net MWe) -----
 10. Reasons For Restrictions. If Any: -----

	This Mo.	Yr. to Date	Cumm.
11. Hours in Reporting Period	744.0	8784.0	61368.0
12. No. of Hrs. Reactor Was Critical	335.3	5294.8	43080.0
13. Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14. Hours Generator on Line	334.7	5198.7	41978.8
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Therm. Energy Gen. (MWH)	1059199	17028939	133078061
17. Gross Elect. Energy Gen. (MWH)	353070	5558820	43785430
18. Net Elect. Energy Gen. (MWH)	340496	5364363	42217734
19. Unit Service Factor	45.0	59.2	70.8
20. Unit Availability Factor	45.0	59.2	70.8
21. Unit Capacity Factor (MDC Net)	43.2	57.6	67.7
22. Unit Capacity Factor (DER Net)	41.6	55.5	66.4
23. Unit Forced Outage Rate	0.0	3.9	12.7
24. Shutdowns Scheduled over Next Six Months (Type, Date, and Duration):			

25. If Shut Down At End of Report Period, Estimated Date of Startup: Estimated date of startup, January 11, 1985.

26. Units in Test Status (Prior to Commercial Operation):
- | | Forecast | Achieved |
|----------------------|----------|----------|
| INITIAL CRITICALITY | | |
| INITIAL ELECTRICITY | | |
| COMMERCIAL OPERATION | | |

IE24
 1/1

AVERAGE DAILY POWER LEVEL (MWe-Net)

DOCKET NO. 50-316
UNIT TWO
DATE 1/4/85
COMPLETED BY CLIMER
TELEPHONE 616-465-5901

MONTH Dec. 1984

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	1086	17	0
2	1096	18	0
3	1105	19	0
4	1084	20	0
5	1099	21	0
6	1098	22	0
7	970	23	0
8	830	24	0
9	903	25	0
10	1096	26	0
11	1076	27	0
12	1096	28	0
13	1088	29	0
14	562	30	0
15	0	31	0
16	0		

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH December, 1984

DOCKET NO. 50-316
 UNIT NAME D.C. Cook Unit 2
 DATE 1-5-85
 COMPLETED BY B.A. Svensson
 TELEPHONE 616/465-5901
 PAGE 1 of 2

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
154	841207	F	0	B	4	N.A.	HH	HTEXCH	Reactor power reduced to 58% to permit removing the east main feed pump from service to check the F-P Turbine Condenser for tube leaks. Three leaking tubes were plugged. Reactor power was returned to 100% on 841208. Reactor power reduced to 53% to permit removing the east main feed pump from service to check the F-P Turbine Condenser for tube leaks. One leaking tube was plugged. Reactor power was returned to 100% on 841209. Started a power reduction to 57% in preparation for the scheduled ice condenser surveillance outage. Reactor power was held at 57% until 2020 hours on 841214 when power reduction was resumed to remove the Unit from service.
155	841208	F	0	B	4	N.A.	HH	HTEXCH	
156	841213	S	433.3	S&F.	1	N.A.	ZZ	ZZZZZZ	

¹
 F: Forced
 S: Scheduled

²
 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)

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

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 of 50 MW as the break point. For larger power reactors, 50 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.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH December, 1984

DOCKET NO. 50-316
 UNIT NAME D.C. Cook Unit 2
 DATE 1-5-85
 COMPLETED BY B.A. Svensson
 TELEPHONE 616/465-5901
 PAGE 2 of 2

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
156 (Continued)									Unit removed from service at 2239 hours on 841214. The Reactor Coolant System was subsequently cooled down to Cold Shutdown conditions, Mode 5, and later drained to half loop to permit replacement of RTD Loop Manifold valves. The RCS remained in Mode 5 at the end of the month.

¹
 F: Forced
 S: Scheduled

²
 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)

³
 Method:
 1-Manual
 2-Manual Scram.
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(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

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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: A. S. Puplis
Telephone: (616) 465-5901
Date: January 2, 1985
Page: 1 of 2

MONTHLY OPERATING ACTIVITIES - DECEMBER, 1984

HIGHLIGHTS:

The Unit entered the reporting period in Mode 1 at 100% rated thermal power.

Major power reduction occurred to remove the "E" Main Feed Pump Turbine Condenser from service for tube inspection.

The Unit was shutdown on December 14, 1984 for a scheduled surveillance outage. The reactor coolant system was subsequently drained to half loop to permit replacement of RTD manifold isolation valves.

The Unit remained in Cold Shutdown, Mode 5, for the remainder of the reporting period.

Total electrical generation for the month was 353,070 MWH.

SUMMARY:

- 12-7-84 At 1600 Reactor power was decreased to 58% to remove the "E" Main Feed Pump Turbine Condenser from service for tube leak inspection.
- 12-8-84 At 0500 Reactor power being increased to 100% which was reached at 1240 on 12-8-84.
- 12-8-84 At 1948 Reactor power was decreased to 53% to remove the "E" Main Feed Pump from service.
- 12-9-84 At 0308 Reactor power being increased to 100% which was reached at 1242 on 12-9-84.
- 12-13-84 At 2205 Reactor power was decreased to 57% in preparation for the scheduled surveillance outage. AT 0210 on 12-14-84, the Unit reached 57% and 650 megawatts.
- 12-14-84 At 2020 controlled shutdown was commenced to bring the Unit to cold shutdown, Mode 5.
 - 2239: Unit removed from service
 - 2309: Reactor in Mode 2
 - 2318: Reactor in Mode 3
- 12-15-84 0245: Degasing of reactor coolant system started.
 - 0330: Plant cooldown initiated
 - 0848: Mode 4 entered
 - 2146: Mode 5 entered

Docket No.: 50-316
Unit Name: D.C. Cook Unit 2
Completed By: A. S. Puplis
Telephone: (616) 465-5901
Date: January 2, 1985
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- 12-23-84 At 0203 Train B Containment Purge isolated automatically due to Radiation Monitor ERS 2401 spiking. NRC notified of automatic Engineered Safety Features Actuation at 0258.
- 12-23-84 At 0949 Train A Containment Purge isolated automatically due to high alarm on Radiation Monitor ERS 2301. NRC notified of automatic Engineered Safety Features Actuation at 1230.
- 12-23-84 At 1632 the reactor coolant system was returned to Hot Shutdown conditions, Mode 4, with Reactor Coolant System heat up in progress.
- 12-24-84 At 0415, the reactor coolant system entered Hot Standby conditions, Mode 3.
- 12-24-84 At 1905, the reactor coolant system was being cooled down and entered Mode 4 due to a leak on reactor coolant loop 4, RTD manifold return isolation valve RC 107-4 which was identified on the containment closeout inspection.
- 12-25-84 At 0310 the reactor coolant system entered Mode 5 and remained in Mode 5 at the close of the reporting period.

The Control Room Cable Vault Halon System remains inoperable as of 1707 hours on 4-14-83. The backup CO₂ system remains operable.

DOCKET NO.	<u>50 - 316</u>
UNIT NAME	<u>D. C. Cook - Unit No. 2</u>
DATE	<u>1-4-85</u>
COMPLETED BY	<u>B. A. Svensson</u>
TELEPHONE	<u>(616) 465-5901</u>
PAGE	<u>1 of 1</u>

MAJOR SAFETY-RELATED MAINTENANCE

DECEMBER, 1984

- M-1 Safety Valve SV-14 on the West Containment Spray Heat Exchanger was removed for repair due to leak-by. The seat and disc were lapped and the valve reassembled and returned to service. Correct set point of the repaired valve was verified.
- M-2 Pressurizer Power Operated Relief Valve NRV-153 was rebuilt to eliminate seat leakage. Post-repair retesting verified valve operability.
- M-3 Installed new starting air cylinder operator on 2-CD Diesel starting air valve XRV-227. Post-repair functional testing verified new installation operability.
- M-4 RC-107-L4, R. C. Loop 4 RTD loop return isolation valve was isolated by freeze sealing to facilitate repairs of a body/bonnet leak. RC-107-L4 was disassembled, cleaned, internals inspected, and reassembled utilizing a new bonnet gasket. Severe corrosion of the carbon steel studs was found.
- C&I-1 ERS-2300 pump could not be turned off. Improper operation of the solid state relay that controls the pump relay caused the pump relay's contacts to weld together. Contacts were separated and burnished and the solid state relay was replaced.
- C&I-2 The loop 3 cold leg wide range RTD failed high. A new RTD was installed, and the loop recalibrated.



INDIANA & MICHIGAN ELECTRIC COMPANY

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

January 4, 1985

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 December, 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
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