

OPERATING DATA REPORT

DOCKET NO. 50-315
 DATE 3-1-84
 COMPLETED BY W. T. Gille
 TELEPHONE 616-465-590

OPERATING STATUS

1. Unit Name: Donald C. Cook 1
2. Reporting Period: February 1984
3. Licensed Thermal Power (MWt): 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

Notes

8. If Changes Occur in Capacity Ratings (Items Number 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 Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	696	1,440	80,328
12. Number Of Hours Reactor Was Critical	696	1,253.1	58,881.1
13. Reactor Reserve Shutdown Hours	0	0	463
14. Hours Generator On-Line	689.0	1,248.9	57,463.3
15. Unit Reserve Shutdown Hours	0	0	321
16. Gross Thermal Energy Generated (MWH)	1,940,152	3,683,168	168,027,218
17. Gross Electrical Energy Generated (MWH)	637,460	1,212,690	55,138,980
18. Net Electrical Energy Generated (MWH)	612,157	1,166,630	53,046,970
19. Unit Service Factor	99.0	86.7	73.6
20. Unit Availability Factor	99.0	86.7	73.6
21. Unit Capacity Factor (Using MDC Net)	86.2	79.4	66.5
22. Unit Capacity Factor (Using DER Net)	85.4	78.6	63.6
23. Unit Forced Outage Rate	1.0	13.3	7.9

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

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

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

Forecast

Achieved

INITIAL CRITICALITY

INITIAL ELECTRICITY

COMMERCIAL OPERATION

8403300157 840229
 PDR ADOCK 05000315
 R PDR

(4/77)

IE24

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-315

UNIT 1

DATE 3-6-84

COMPLETED BY W. T. Gillett

TELEPHONE 616-465-5901

MONTH February 1984

DAY AVERAGE DAILY POWER LEVEL
(MWE-Net)

1	<u>702</u>
2	<u>593</u>
3	<u>605</u>
4	<u>603</u>
5	<u>603</u>
6	<u>402</u>
7	<u>464</u>
8	<u>602</u>
9	<u>700</u>
10	<u>984</u>
11	<u>990</u>
12	<u>1004</u>
13	<u>1007</u>
14	<u>1015</u>
15	<u>1017</u>
16	<u>1017</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	<u>1015</u>
18	<u>1013</u>
19	<u>1013</u>
20	<u>1012</u>
21	<u>1013</u>
22	<u>1014</u>
23	<u>1012</u>
24	<u>1012</u>
25	<u>1013</u>
26	<u>1013</u>
27	<u>1017</u>
28	<u>1026</u>
29	<u>1027</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 FEBRUARY, 1984

DOCKET NO. 50-315
 UNIT NAME D.C. Cook - Unit 1
 DATE 3-8-84
 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
212	840201	F	0	A	4	N.A.	CH	PUMPXX	A power increase from 79% to 99% was in progress when at 93% the West main feed pump, MFP, developed a vibration problem. A power reduction to 59% was started immediately to remove the West MFP from service.
213	840206	F	7.0	A	1	N.A.	CH	HTEXCH	While the West MFP was still out of service, the East MFP turbine condenser developed a condenser tube leak. To effect repairs, the Unit had to be removed from service. The reactor was maintained critical at 6% power. One leaking tube was identified and plugged. The East MFP was returned to service the same day and the Unit paralleled to the System on 840207. Reactor power was increased to 61% where it was held pending completion of the W MFP repairs.

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 FEBRUARY, 1984

DOCKET NO. 50-315
 UNIT NAME D.C. Cook - Unit 1
 DATE 3-8-84
 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
213 (Continued)									Inspection of the W MFP revealed indications of rubbing between the outer impeller hub and the diaphragm wear ring. The pump was returned to service on 840209. Reactor power was increased to 95% the same day. Reactor power was increased to 98% on 840213 and 99% on 840227.

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(9/77)

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Docket No.: 50-315
Unit Name: D. C. Cook Unit 1
Completed By: G. J. Peak
Telephone: (616) 465-5901
Date: 3/8/84
Page: 1 of 2

MONTHLY OPERATING ACTIVITIES - FEBRUARY 1984

Highlights:

The Unit entered the reporting period in Mode 1 holding at 79% of rated thermal power due to secondary side chemistry requirements. During the subsequent power increase problems developed with both Main Feedpumps and they had to be removed from service. The Unit was divorced from the Grid and the reactor was held at low power while the feed pumps were repaired. The Unit was then loaded to 99% of rated thermal power and held there due to the allowable power limit restriction for the balance of the reporting period.

Total electrical generation for the month was 637,460 MWH.

Summary:

- 2/1/84 Power was increased to 93% at 1140.
- Power was reduced to 59% at 1258 to remove the West Main Feedpump from service due to high vibration.
- 2/2/84 AB Diesel Generator was inoperable from 1638 on 2/2/84 to 2322 on 2/4/84 due to low lube oil viscosity.
- 2/6/84 Reactor power was reduced to 6% and the Unit was divorced from the Grid at 1737 hours.
- The East Main Feedpump was removed from service at 1831 to repair a condenser tube leak.
- 2/7/84 The Unit was paralleled to the Grid at 0038 hours.
- A power increase was started after the East Main Feedpump was returned to service. Power reached 61% at 1115 and was held there pending repairs to the West Main Feedpump.
- 2/9/84 West Main Feedpump returned to service and a power increase started at 1345 hours.
- 2/11/84 Power reached 97% at 1710 hours and was held there due to the Allowable Power Limit Restriction.
- 2/13/84 The Allowable Power Limit was raised and power was increased to 98% at 1955 hours.
- 2/17/84 Reduced power to 97% for turbine valve testing and then increased back to 98%.
- 2/27/84 The Allowable Power Limit was raised and power was increased to 99% at 1724 hours.

Docket No.: 50-315
Unit Name: D. C. Cook Unit 1
Completed By: G. J. Peak
Telephone: (616) 465-5901
Date: 3/8/84
Page: 2 of 2

Train A of the Containment Hydrogen Monitoring System remains inoperable as of 1130 hours on 2/22/84. Train B of the Containment Hydrogen Monitoring System remains operable.

The Control Room Cable Vault Halon System remains inoperable as of 1400 hours on 4/5/83. 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>3-8-84</u>
COMPLETED BY	<u>B. A. Svensson</u>
TELEPHONE	<u>(616) 465-5901</u>
PAGE	<u>1 of 1</u>

MAJOR SAFETY-RELATED MAINTENANCE

FEBRUARY, 1984

- M-1 The lube oil viscosity of the AB Emergency Diesel was low. Replaced four fuel pumps and one fuel injector. Replaced all of the lube oil and had the engine tested.
- M-2 Unit 1, AB Diesel Starting Air Compressor #AB2 was leaking oil. A rebuilt compressor was installed. Testing was performed and the compressor was returned to service.
- C&I-1 Reactor Coolant System loop 2 flow channels 1-NFP-221 and 1-NFP-222 had a 3% deviation between them. Foxboro transmitters NFP-211 and NFP-222 were calibrated, eliminating the 3% deviation.
- C&I-2 Steam Generator #2 power operated relief valve, MRV-223, opened spuriously when in the "automatic" mode. The valve positioner was exercised and the limit switches were adjusted. The positioner relay appeared to have been plugged with dirt. After the dirt was blown out, the valve was successfully cycled.
- C&I-3 Delta T/auctioneered ΔT deviation low alarms annunciator alarmed periodically for no apparent reason with no change in other ΔT instruments. "High ΔT " select module TY-411H was found to be at fault. The module was replaced and was calibrated.



INDIANA & MICHIGAN ELECTRIC COMPANY

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

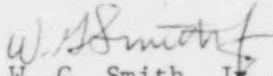
March 8, 1984

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 February, 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
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