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INDIANA & MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT
P.O. Box 458, Bridgman, Michigan 49106

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SERVICES UNIT

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April 13, 1978

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 March, 1978 is submitted.

Sincerely,

D. V. Shaller
Plant Manager

DVS:ab

Attachment

- cc: R. W. Jurgensen
- NRC Region III
- K. R. Baker
- R. C. Callen
- R. Walsh
- S. J. Mierzwa
- J. E. Dolan
- R. J. Vollen
- G. E. Lien
- K. W. Brown
- J. M. Hennigan
- P. W. Steketee
- A. F. Kozlowski
- J. F. Stietzel
- PNSRC File

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AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-315

UNIT 1

DATE 4/4/78

COMPLETED BY W. T. Gillett

TELEPHONE 616-465-5901

MONTH March 1978

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	1043
2	1044
3	1043
4	1041
5	1038
6	1039
7	534
8	430
9	897
10	1043
11	1042
12	1043
13	1042
14	1042
15	1042
16	1043

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	1045
18	1045
19	1043
20	1046
21	1043
22	1043
23	1045
24	1045
25	1044
26	1047
27	1042
28	1043
29	1044
30	1045
31	1045

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.

OPERATING DATA REPORT

DOCKET NO. 50-315
 DATE 4/4/78
 COMPLETED BY W. T. Gillett
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook 1
2. Reporting Period: March 1978
3. Licensed Thermal Power (MWt): 3250
4. Nameplate Rating (Gross MWe): 1089
5. Design Electrical Rating (Net MWe): 1054
6. Maximum Dependable Capacity (Gross MWe): 1080
7. Maximum Dependable Capacity (Net MWe): 1044
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	<u>744</u>	<u>2,160</u>	<u>28,464.0</u>
12. Number Of Hours Reactor Was Critical	<u>741</u>	<u>2,037.4</u>	<u>22,660.1</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>463.0</u>
14. Hours Generator On-Line	<u>739.8</u>	<u>2,024.9</u>	<u>21,994.7</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>321.0</u>
16. Gross Thermal Energy Generated (MWH)	<u>2,328,300</u>	<u>6,204,985</u>	<u>57,761,178</u>
17. Gross Electrical Energy Generated (MWH)	<u>772,910</u>	<u>2,050,120</u>	<u>18,815,210</u>
18. Net Electrical Energy Generated (MWH)	<u>745,705</u>	<u>1,975,984</u>	<u>18,026,198</u>
19. Unit Service Factor	<u>99.4</u>	<u>93.7</u>	<u>81.5</u>
20. Unit Availability Factor	<u>99.4</u>	<u>93.7</u>	<u>81.5</u>
21. Unit Capacity Factor (Using MDC Net)	<u>96.0</u>	<u>87.6</u>	<u>70.2</u>
22. Unit Capacity Factor (Using DER Net)	<u>95.1</u>	<u>86.8</u>	<u>65.1</u>
23. Unit Forced Outage Rate	<u>.6</u>	<u>6.3</u>	<u>6.0</u>

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
Refueling 4/5/78 51 Days

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	_____	_____

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH MARCH, 1978

DOCKET NO. 50 - 315
 UNIT NAME D.C. Cook-Unit 1
 DATE 4-13-78
 COMPLETED BY B. A. Svensson
 TELEPHONE (616) 465-5901

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
126	780307	F	4.2	G	3	N/A	ZZ	ZZZZZZ	Reactor/Turbine trip due to: loss of power to No. 4 control group. Power was lost due to inadvertant interruption of power by technician working on control system. Returned to service 780307. 100% power reached 780309 and maintained at this level for the rest of the month.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance of 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 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 - 315
UNIT NAME D. C. Cook - Unit No. 1
DATE 4-13-78
COMPLETED BY B. A. Svensson
TELEPHONE (616) 465-5901

MAJOR SAFETY-RELATED MAINTENANCE

MARCH, 1978

- M-1 The east containment spray discharge valve, IMO-210 wouldn't function properly. Found a broken contactor in limiter torque operator and replaced the contactor.
- M-2 No. 1 boric acid transfer pump was noisy. Replaced pump shaft and bearings.
- M-3 Leaking top flange on "N" seal water injection filter. Installed new o-rings.
- M-4 "N" waste gas compressor failure. Replaced "N" waste gas compressor with a new compressor.
- C&I-1 Urgent alarm on rod control system. Replaced two phase fuses in shutdown bank "8BD".
- C&I-2 Radiation monitoring system channel R-2, containment area monitor, failed low. The connector to the detector was replaced and the channel returned to service.
- C&I-3 Radiation monitoring system channels R-25 and R-26 pump failed. The detector pump was replaced and the channel returned to service.

Docket: 50-315
Unit Name: D. C. Cook Unit 1
Date: April 10, 1978
Completed By: R. S. Keith
Telephone: (616) 465-5901

OPERATING EXPERIENCE - MARCH, 1978

Highlights

Unit 1 operated at 100% power for the entire month except for one trip when the unit was off line for four hours and thirteen minutes.

Summary

- 3/1/78 - At beginning of the month Unit 1 was at 100%.
- 3/7/78 - The Reactor tripped at 1003 hours due to loss of power to control group 4. The Reactor was critical again at 1304 hours and the Generator was paralleled at 1416 hours. Power restricted to less than 50% until Axial flux returned to the target band.
- 3/9/78 Reactor was returned to 100% power and remained there for the rest of the month.

