

OPERATING DATA REPORT

DOCKET NO. 50-316
 DATE 2-12-81
 COMPLETED BY A.L. Tetzlaff
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: D. C. Cook 2
2. Reporting Period: January 1981
3. Licensed Thermal Power (MWe): 3391
4. Nameplate Rating (Gross MWe): 1133
5. Design Electrical Rating (Net MWe): 1100
6. Maximum Dependable Capacity (Gross MWe): 1118
7. Maximum Dependable Capacity (Net MWe): 1082
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	744	744	27,048
12. Number Of Hours Reactor Was Critical	744	744	18,486.1
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	744	744	17,783.6
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,505,373	2,505,373	56,125,007
17. Gross Electrical Energy Generated (MWH)	814,240	814,240	17,906,070
18. Net Electrical Energy Generated (MWH)	786,796	786,796	17,245,961
19. Unit Service Factor	100	100	72.5
20. Unit Availability Factor	100	100	72.5
21. Unit Capacity Factor (Using MDC Net)	97.7	97.7	67.4
22. Unit Capacity Factor (Using DER Net)	96.1	96.1	66.7
23. Unit Forced Outage Rate	0	0	14.9

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

(4/77)

8102180535

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316

UNIT 2

DATE 2-5-81

COMPLETED BY A. L. Tetzlaff

TELEPHONE (616)465-5901

MONTH January 1981

DAY . AVERAGE DAILY POWER LEVEL
(MWE-Net)

1	<u>1068</u>
2	<u>1063</u>
3	<u>881</u>
4	<u>1047</u>
5	<u>1050</u>
6	<u>1057</u>
7	<u>1063</u>
8	<u>1065</u>
9	<u>1062</u>
10	<u>1063</u>
11	<u>1064</u>
12	<u>1065</u>
13	<u>1059</u>
14	<u>1065</u>
15	<u>1065</u>
16	<u>1061</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	<u>1065</u>
18	<u>1068</u>
19	<u>1060</u>
20	<u>1068</u>
21	<u>1066</u>
22	<u>1060</u>
23	<u>1061</u>
24	<u>1063</u>
25	<u>1069</u>
26	<u>1070</u>
27	<u>1069</u>
28	<u>1068</u>
29	<u>1062</u>
30	<u>1065</u>
31	<u>1069</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 January, 1981

DOCKET NO. 50 - 316
 UNIT NAME D.C. Cook - Unit 2
 DATE 1-10-81
 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
92	810103	F	0	B	4	N.A.	ZZ	ZZZZZZ	Reactor power reduced to 56% to remove the east main feedpump turbine from service to check feedpump turbine condenser for tube leaks. No leaky tubes were found. Reactor power returned to 100% the same day.

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

(9/77)

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:

- 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.
- 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: 50-316
Unit Name: D. C. Cook Unit #2
Completed by: C. E. Murphy
Telephone: (616) 465-5901
Date: February 9, 1981
Page: 1 of 2

MONTHLY OPERATING EXPERIENCES - JANUARY, 1981

Highlights:

The Unit Operated at 100% power the entire reporting period except as detailed in the summary.

Total electrical generation for the month was 814,240 mwh.

Summary:

1/1/81 Radiation monitors R-25 and R-26 were inoperable for a 10 minute period for the Techs. to check the paper drive.

1/2/81 The Pressurizer Protection Set - Channel 1 Bi-Stables were placed in the Trip position for a two hour period for the Techs. to calibrate. The Pressurizer Protection Set - Channel 3 Bi-Stables were placed in the Trip position for a 1.25 hour period for the Techs. to calibrate.

1/3/81 Unit loading was reduced to 56% power starting at 1115 hours to remove the East Main Feed Pump from service because of a suspected tube leak in its condenser. No leaks were found and the Unit was returned to 100% power at 2330 hours.

The East Motor Driven Auxiliary Feed Pump was inoperable for a 3.5 hour period to adjust a Relief Valve setpoint.

The West Motor Driven Auxiliary Feed Pump was inoperable for a 10.75 hour period to adjust a Relief Valve setpoint.

The West RHR Pump was inoperable for a 1.75 period due to a problem in the Control Circuit.

1/4/81 The East RHR Pump was inoperable for a 1.5 hour period while the pump was lined up to re-circ. to the Refueling Water Storage Tank to remove air from the system.

The East Motor Driven Auxiliary Feed Pump was inoperable for a 48.25 hour period for repairs to the suction strainer.

1/13/81 The ESF Fan 2-HV-AES-1 was inoperable for a two hour period to change a rollamtic filter.

Docket No: 50-316
Unit Name: D. C. Cook Unit #2
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Summary (continued)

- 1/16/81 Unit loading was reduced to 98% power starting at 2236 to perform Turbine Valve testing. The Unit was returned to 100% power at 0025 hours on 1/17/81.
- 1/26/81 The West Containment Spray Heat Exchanger was inoperable for a 31 hour period to repair a leak on the Essential Service Water Safety Valve.
- 1/27/81 The West Motor Driven Auxiliary Feed Pump was inoperable for a 5.75 hour period to repair the Check Valve on the Emergency leak-off line.

DOCKET NO.	50 - 316
UNIT NAME	D. C. Cook - Unit No. 2
DATE	2-10-81
COMPLETED BY	B. A. Svensson
TELEPHONE	(616) 465-5901
PAGE	1 of 2

MAJOR SAFETY-RELATED MAINTENANCE

JANUARY, 1981

- M-1 East motor driven auxiliary feedpump emergency leak-off check valve, FW-153, would not seat. Ground off bonnet-seal weld and disassembled. Replaced the disc and lapped the seat. Reassembled and seal welded the bonnet.
- M-2 The suction flange and mechanical seal of the No. 4 boric acid transfer pump were leaking. Rebuilt the pump using new mechanical seal, oil seals, bearings and gaskets. Had the pump tested.
- M-3 The west containment spray heat exchanger essential service water safety valve, SV-14, was leaking. Cleaned the valve internals, lapped seat, had the setpoint checked and reinstalled. No leakage detected during operational test.
- C&I-1 The setpoint of 2 PB-457D, pressurizer pressure Protection Set III safety injection bistable, was retested based on recent surveillance test data. The bistable was removed from service and a spare bistable (SN-244309) was installed and calibrated.
- C&I-2 The setpoints of 2PB-455C and 2PB-455D, pressurizer pressure Protection Set I, low pressure reactor trip and safety injection bistables respectively, were checked based on the recent surveillance test data. 2PB-455C bistable was removed from service and replaced with a spare instrument (SN 3806906). The installed spare bistable calibration and the calibration of 2 PB-455D were performed.
- C&I-3 Incore flux mapping system detector B was replaced. The old detector cable was found damaged and would not permit the cable and detector to be completely inserted.
- C&I-4 Voltage, current and frequency spikes were observed on the critical control room power inverter. Adjustment of synchronizing control R-5 on the synch circuit board brought the inverter into step with the 60 Hz reference source. Proper operation of the inverter was verified.
- C&I-5 Accumulator No. 4, high/low pressure alarm, would not clear. The trip and reset of bistable PB 967A1B, low alarm, was found to be out of specification and actuating above the required pressure. The bistable was recalibrated and the alarm was functionally tested.

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DOCKET NO.	50 - 316
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PAGE	2 of 2

MAJOR SAFETY-RELATED MAINTENANCE

JANUARY, 1981

- C&I-6 Main turbine stop valves B and C did not produce closed indication in the control room during the valve testing. The limit switches were disassembled and cleaned. The limit switches were reassembled and mounted. The switches were adjusted for correct operation during stop valve testing on January 30, 1981.
- C&I-7 WCR-903, non-essential service water valve, would not produce closed indication. The limit switches required adjustment for correct operation. The valve's closing time was measured and recorded.

1. The first part of the document is a list of names and addresses of the members of the committee. The names are written in a cursive hand, and the addresses are written in a printed hand. The list is organized in two columns, with names on the left and addresses on the right. The names are: John A. Smith, James B. Jones, William C. Brown, and Thomas D. White. The addresses are: 123 Main Street, New York, N.Y.; 456 Elm Street, Boston, Mass.; 789 Oak Street, Philadelphia, Pa.; and 101 Pine Street, San Francisco, Calif.