

OPERATING DATA REPORT

DOCKET NO. 50-316
 DATE 4-6-82
 COMPLETED BY W.T. Gillett
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook 2
2. Reporting Period: March 1982
3. Licensed Thermal Power (MWt): 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	2160	37,224
12. Number Of Hours Reactor Was Critical	268.5	1666.1	25,691.1
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	254.6	1645.3	24,866.3
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	833,555	5,325,689	79,386,510
17. Gross Electrical Energy Generated (MWH)	276,030	1,756,430	25,464,230
18. Net Electrical Energy Generated (MWH)	266,396	1,694,669	24,538,810
19. Unit Service Factor	34.2	76.2	71.6
20. Unit Availability Factor	34.2	76.2	71.6
21. Unit Capacity Factor (Using MDC Net)	33.1	72.5	67.0
22. Unit Capacity Factor (Using DER Net)	32.16	71.3	66.2
23. Unit Forced Outage Rate	65.8	23.8	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

(9/77)

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316

UNIT 2

DATE 4-2-82

COMPLETED BY W. T. Gillett

TELEPHONE 616-465-5901

MONTH March 1982

DAY AVERAGE DAILY POWER LEVEL
(MWE-Net)

1	1091
2	1092
3	1085
4	1090
5	1091
6	1091
7	1086
8	1090
9	1090
10	913
11	384
12	—
13	—
14	—
15	—
16	—

DAY AVERAGE DAILY POWER LEVEL
(MWE-Net)

17	—
18	—
19	—
20	—
21	—
22	—
23	—
24	—
25	—
26	—
27	—
28	—
29	—
30	—
31	3

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 March, 1982

DOCKET NO. 50-316
 UNIT NAME D.C. Cook - Unit 2
 DATE 4-13-82
 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
108	820311	F	489.4	B	1	N.A.	ZZ	ZZZZZZ	A power reduction was started on March 10, 1982 due to No. 23 R.C. Pump Motor temperatures being at their maximum limit. Reactor power was held at 85%. A further reduction to 75% was made later the same day. On March 11, 1982 the decision was made to remove the unit from service due to the high motor temperature problem and indications of excessive leakoff from the No. 2 seal on the No. 23 R.C. Pump. The unit was out of service at 1328 hours on March 11, 1982. A two-week ice condenser ice basket weighing surveillance outage had been scheduled for early in April. This was rescheduled to the present outage. The No. 2 and 3 seals were replaced on No. 23 RLP and the No. 23 RCP

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 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.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH March, 1982

DOCKET NO. 50-316
 UNIT NAME D.C. Cook - Unit 2
 DATE 4-13-82
 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
108	Continued								motor temperature problem was corrected by cleaning the RCP motor air coolers and the lower containment air coolers. The unit was returned to service on March 31, 1982 and reached 100% on April 2, 1982.

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 S: Scheduled

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(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

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Docket No.: 50-316
Unit Name: D. C. Cook Unit #2
Completed By: C. E. Murphy
Telephone: (616) 465-5901
Date: April 8, 1982
Page: 1 of 1

MONTHLY OPERATING ACTIVITIES - MARCH, 1982

Highlights:

The Unit entered this reporting period operating at 100% power. At 0052 hours on March 10, 1982, a power reduction of 3% per hour was begun in an attempt to reduce the temperature on the #3 reactor coolant pump motor, which was approximately 145°C. The power reduction was stopped at 84.5% at 0800 hours on March 10, 1982. During this time, intermittent alarms were being received on the #3 reactor coolant standpipe which indicated that the #2 seal on the #3 reactor coolant pump was leaking excessively.

At 1805 hours on March 10, 1982, further power reduction was started - reactor power was at 75% at 2335 hours on March 10.

At 0901 hours on March 11, 1982, it was decided to shut the Unit down and go to Mode 5 for the purpose of repairing the seals and checking the motor windings on the #23 reactor coolant pump. The Unit was removed from service at 1328 hours on March 11, was in Mode 5 at 0319 hours on March 12, and the RCS was at 1/2 Loop by 0130 hours on March 14.

Filling and venting of the reactor coolant system was commenced at 0433 hours on March 26; the reactor was made critical at 0650 hours on March 30. Trouble was then encountered with a broken guide bearing on the #23 steam generator stop valve. Therefore, at 1805 hours on March 30, the reactor was made subcritical and the Unit returned to Mode 3.

At 1917 hours on March 31, repairs were completed to the #23 stop valve, and the reactor was taken critical at 2015 hours on March 31. The Unit was paralleled with the system grid at 2255 hours on March 31.

At 1030 hours on March 29, while in Mode 4, an accidental safety injection signal was received on Train 'A' only. This was caused by the failure to block the steamline isolation S.I. signal during the performance of the start-up STP's.

At 0450 hours on March 31, 1982, an 'Unusual Event' was declared due to detection of Hydrazine levels of greater than 2 ppm in the Auxiliary Building. The Auxiliary Building was evacuated by a P.A. announcement and the requisite parties were informed of the Unusual Event. The event was terminated at 1025 hours on March 31, 1982.

Total electrical generation for this month was 276,030 mwh.

Summary:

- 03-02-82 - The Auxiliary Cable Vault CO₂ Fire Suppression system was inoperable for a 0.75 hour period for repairs.
- 03-09-82 - The West Centrifugal Charging Pump was inoperable for a 3 hour period to change oil.

DOCKET NO.	50 - 316
UNIT NAME	D. C. Cook - Unit No. 2
DATE	4-13-82
COMPLETED BY	B. A. Svensson
TELEPHONE	(616) 465-5901
PAGE	1 of 2

MAJOR SAFETY-RELATED MAINTENANCE

MARCH, 1982

- M-1 Alternate charging line check valves, CS-328L1 and CS-329L1, had body-to-bonnet leaks. Replaced the bonnet gaskets in both valves.
- M-2 Boron injection tank bypass valve, SI-125 had seat leakage. Repaired valve seat and replaced valve bonnet assembly.
- M-3 The ESW flange and pipe at the outlet of the west CCW heat exchanger had indications of wall thinning as determined by NDE. Replaced the flange and pipe. Had necessary NDE performed and completed a hydrostatic test.
- M-4 The No. 2 seal on the No. 23 reactor coolant pump had greater than normal leakoff. Replaced the No. 2 seal ring and runner, the No. 3 seal ring and runner, and the No. 1 seal insert. Reassembled using new o-rings and gaskets. Also, realigned the pump to the motor.
- M-5 The east containment spray pump drain valve, CTS-101E was leaking by. Replaced the valve bonnet assembly.
- M-6 One fan belt on the north control room air handler, HV-ACRA-1 was broken. Removed the unit from service and replaced the belts. Had the unit tested.
- M-7 Safety injection check valve, SI-142L3 had a body-to-bonnet leak. Disassembled, cleaned, lubricated and reassembled valve.
- M-8 No. 4 steam generator blowdown regulating valve, DRV-341 had a body-to-bonnet leak. Replaced the gaskets and had the valve reassembled.
- M-9 Auxiliary feedwater check valve, FW-183-3 had a body-to-bonnet leak. Replaced the bonnet gasket.
- M-10 Pressurizer spray control valve, NRV-164 was leaking by. Replaced the valve trim assembly and gaskets. Had the valve tested.
- M-11 RHR check valve, SI-170L3 had a body-to-bonnet leak. Replaced the bonnet gasket.
- M-12 RHR motor operated containment isolation valve, ICM-111 had a body-to-bonnet leak. Replaced the bonnet gasket and had the valve tested.

DOCKET NO.	50 - 316
UNIT NAME	D. C. Cook - Unit No. 2
DATE	4-13-82
COMPLETED BY	B. A. Svensson
TELEPHONE	(616) 465-5901
PAGE	2 of 2

MAJOR SAFETY-RELATED MAINTENANCE

MARCH, 1982

- M-13 No. 4 steam generator power operated relief valve, MRV-243 had a body-to-bonnet leak. Replaced bonnet gasket and had valve tested.
- M-14 CVCS letdown orifice valve, QRV-160 air operator was leaking. Replaced the air operator diaphragm and had the valve tested.
- M-15 The linear ball bearing had become displaced on MRV-230, No. 3 steam generator stop valve. New bearing retainers were fabricated and installed and the valve was tested.
- C&I-1 The No. 3 steam generator lo-lo level alarm was in with normal levels in the steam generator. The bistables were recalibrated to within specifications and returned to service.
- C&I-2 Annunciator 5 Drop 22 RWST level at 35,000 gallon alarm was in with 97% level indicated. Investigation revealed that the current repeater and bistable unit had both drifted out of specification; both were recalibrated and the loop was returned to operation.
- C&I-3 Discrepancy exists between the two lower containment sump level indications (NLI-311 and NLI-310). Both transmitters had lost part of the fill. The lower sensors and capillary tubing were replaced on both. After filling the systems, both transmitters were calibrated and returned to service.
- C&I-4 Containment Hydrogen Monitoring System regulator valve, ERV-41 would not regulate pressure below 25 psi. The valve's plug and seat were lapped-in and new gaskets were fabricated to restore pressure regulation.
- C&I-5 Safety valve, SV-38 in the Nuclear Sampling Room sampling cabinet was leaking-by. The valve was found to lift at 77 psi. SV-38 was then replaced with a newly-recalibrated safety valve to restore the correct lift pressure.
- C&I-6 New mounting brackets have been installed on the main turbine stop valve static limit switches. These new brackets should greatly reduce the failure rate due to vibration.
- C&I-7 Detector 'A' in the incore flux mapping system had a defective drive position encoder readout. The drive unit's power supply was changed out to correct the counter readout.