

OPERATING DATA REPORT

DOCKET NO. 50-316
 DATE 5-2-80
 COMPLETED BY W. T. Gillett
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook 2
2. Reporting Period: April 1980
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	719	2,903	20,423
12. Number Of Hours Reactor Was Critical	707.7	2,437.4	13,517.4
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	705.2	2,352.3	12,854.2
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,354,329	*7,523,166	*39,747,546
17. Gross Electrical Energy Generated (MWH)	778,750	2,477,230	12,631,640
18. Net Electrical Energy Generated (MWE)	752,408	2,389,325	12,156,737
19. Unit Service Factor	98.1	81.0	71.7
20. Unit Availability Factor	98.1	81.0	71.7
21. Unit Capacity Factor (Using MDC Net)	96.7	76.1	65.9
22. Unit Capacity Factor (Using DER Net)	95.1	74.8	64.8
23. Unit Forced Outage Rate	1.9	2.4	11.8
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	_____	_____

* Includes correction of February 1980 report - 43,769 MWHT.

(1/77)

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316

UNIT 2

DATE 5-1-80

COMPLETED BY W. T. Gillett

TELEPHONE 616-465-5901

MONTH April

DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>1085</u>	17	<u>1083</u>
2	<u>1092</u>	18	<u>1084</u>
3	<u>1085</u>	19	<u>235</u>
4	<u>1090</u>	20	<u>1079</u>
5	<u>1090</u>	21	<u>1079</u>
6	<u>1091</u>	22	<u>1079</u>
7	<u>1089</u>	23	<u>1082</u>
8	<u>1086</u>	24	<u>1083</u>
9	<u>1087</u>	25	<u>1071</u>
10	<u>1083</u>	26	<u>1084</u>
11	<u>756</u>	27	<u>1085</u>
12	<u>1079</u>	28	<u>1084</u>
13	<u>1084</u>	29	<u>1082</u>
14	<u>1088</u>	30	<u>1081</u>
15	<u>1090</u>	31	<u> </u>
16	<u>1085</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.

OPERATING DATA REPORT

DOCKET NO. 50-316
 DATE 3-5-80
 COMPLETED BY W. T. Gillett
 TELEPHONE 616-465-5901

OPERATING STATUS

- 1. Unit Name: Donald C. Cook 2
- 2. Reporting Period: February 1980
- 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	<u>696</u>	<u>1440</u>	<u>18,960</u>
12. Number Of Hours Reactor Was Critical	<u>680.6</u>	<u>1001.4</u>	<u>12,081.3</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
14. Hours Generator On-Line	<u>670.3</u>	<u>921.0</u>	<u>11,422.9</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>*2,165,634</u>	<u>*2,750,038</u>	<u>*34,974,418</u>
17. Gross Electrical Energy Generated (MWH)	<u>714,670</u>	<u>897,420</u>	<u>11,051,830</u>
18. Net Electrical Energy Generated (MWH)	<u>689,185</u>	<u>863,137</u>	<u>10,630,549</u>
19. Unit Service Factor	<u>96.3</u>	<u>64.0</u>	<u>69.1</u>
20. Unit Availability Factor	<u>96.3</u>	<u>64.0</u>	<u>69.1</u>
21. Unit Capacity Factor (Using MDC Net)	<u>91.7</u>	<u>55.5</u>	<u>62.9</u>
22. Unit Capacity Factor (Using DER Net)	<u>90.0</u>	<u>54.5</u>	<u>61.8</u>
23. Unit Forced Outage Rate	<u>3.7</u>	<u>2.7</u>	<u>13.0</u>
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 _____

* Correction MWHT - 43,769

OPERATING DATA REPORT

DOCKET NO. 50-316
 DATE 4-2-80
 COMPLETED BY W. T. Gillett
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook 2
2. Reporting Period: March 1980
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	2,184	19,704
12. Number Of Hours Reactor Was Critical	728.4	1,729.8	12,809.7
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	726.1	1,647.1	12,149
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,418,799	*5,168.837	*37,393,217
17. Gross Electrical Energy Generated (MWH)	801,060	1,698,480	11,852,890
18. Net Electrical Energy Generated (MWE)	773,780	1,636,917	11,404,329
19. Unit Service Factor	97.6	75.4	70.5
20. Unit Availability Factor	97.6	75.4	70.5
21. Unit Capacity Factor (Using MDC Net)	96.1	69.3	64.5
22. Unit Capacity Factor (Using DER Net)	94.5	68.1	63.4
23. Unit Forced Outage Rate	2.4	2.6	12.3
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 _____

* Includes correction of February 1980 report - 43,769 MWHT

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-316
 UNIT NAME D.C. Cook-Unit 2
 DATE 5-13-80
 COMPLETED BY B.A. Svensson
 TELEPHONE (616) 465-5901

REPORT MONTH April, 1980

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
75	800411	F	0	A	4	N.A.	CH	MECFUN	Reactor power reduced to 58% to remove the west main feed pump from service due to faulty pump-turbine coupling. Repair completed and reactor power returned to 100% 800412. Reactor/Turbine trip due to steam flow/feedwater flow mismatch coincident with low level in No. 4 steam generator. Low feedwater flow and steam generator level was due to problems with No. 4 steam generator feedwater regulating valve, when attempting to recover from an automatic isolation of moisture separator-reheater coil bundles. The Unit was returned to service the same day. 100% reactor power reached 800420.
76	800419	F	13.6	A	3	N.A.	CA	VALVOP	

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.

MONTHLY OPERATING EXPERIENCES -- APRIL, 1980

Highlights :

The Unit operated at 100% power the entire reporting period except as detailed in the Summary.

There was one outage of the Reactor and Turbine Generator Unit during the reporting period. This is also detailed in the Summary.

Total electrical generation for the month was, 801,060 Mwh.

Summary :

4/1/80 -- The West Centrifugal Charging Pump was inoperable for a 10 hour period to renew the gasket on the Suction Strainer Connection.

The Diesel Fire Pump was removed from service at 1102 to replace a radiator hose. This was returned to service at 0920 on 4/3/80.

The North half of "A" Condenser was out of service for a 7.25 hour period for checking of tube leaks.

4/3/80 -- Radiation Monitor R-11 and R-12 were inoperable for a 6 hour period for replacement of the sample pump.

4/6/80 -- A High Winding Temperature Alarm was received on Ø 3 of the Main Transformer at 1200 hours. This temperature was carefully monitored with the highest indication being 109°C. This has been checked out and is believed to be a faulty instrument. The Alarm is cleared at this time.

4/8/80 -- The North half of "B" Condenser was out of service for a 6 hour period, for checking of tube leaks.

4/10/80 -- The South half of "A" Condenser was out of service for a 10 hour period for tube leak check.

Reserve Power Source Breaker 12-AB was opened at 1819 hours. This was to make repairs to the terminations of one of the underground cables. This power source was returned to normal at 0123 hours on 4/11/80.

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4/11/80 -- At 0215, a power reduction was initiated when excessive wear was detected on the West Main Feed Pump Coupling. Power was leveled off at 58% by 0303 and the West Main Feed Pump removed from service. During the power reduction the Axial Flux was out of the target band for a period of 18 minutes. The Unit power level was returned to 65% by 0445. The West Main Feed Pump was returned to service at 1822 and the Unit loaded to 100% power at 0112 on 4/12/80.

ARV-11, Main steam to the East Feed Pump Turbine Reducing Valve, failed open at 0955 hours. Local Manual Control was required while repairs were made. ARV-11 was returned to service at 1050.

4/15/80 -- The West Centrifugal Charging Pump was out of service for a 5.75 hour period, while repairs were made to a Component Cooling Water line.

The Blowdown Radiation Monitor R-19 was inoperable for a 9.5 hour period for repairs to a Safety Valve.

4/16/80 -- The West Centrifugal Charging Pump was out of service for a 1.5 hour period for breaker maintenance.

4/19/80 -- At 0110 the Unit tripped from a steam flow/feed flow mismatch coincident with a low Steam Generator level on No. 4 Steam Generator. This was the result of a transient initiated by the isolation of the North Reheater Coils from a high level in the North Coil Drain Tank. The North Heater Drain Pump then tripped and would not restart. The No. 4 Steam Generator level control was placed in manual due to it's sticking action. The Valve traveled too far in the closed direction and could not be reopened in time to prevent the trip.

The Reactor was critical at 1246, and the Generator paralleled at 1458. The Unit was loaded to 100% by 0146 on 4/20/80.

4/21/80 -- Containment Radiation Monitors R-11 and R-12 were inoperable for 1.25 hours to repair the paper drive.

"A" North Condenser half was removed from service for 7.5 hours to check for leakage.

4/24/80 -- The No. 3 Boric Acid Transfer Pump was removed from service at 1120 hours, for maintenance to repair a bearing. This pump was returned to service at 0940 on 4/26/80.

Docket #: 50-316
Unit Name: D. C. Cook Unit #2
Completed By: R. S. Lease
Telephone: (616) 465-5901
Date: May 6, 1980
Page: 3 of 3

4/25/80 -- Condensers removed from service for leak testing and repairs were as follows:

"B" North for 2 hours
"B" South for 1.5 hours
"A" South for 2.25 hours
"A" North for 1 hour
"C" North for 3.5 hours
"C" South for 6.5 hours

The Power operated Relief Valve for #3 Steam Generator was out of service for a period of 3.5 hours to repair steam leak.

4/30/80 -- R-25 The Air Particulate Detector for the stack Monitor was inoperable for a period of 8.5 hours.

DOCKET NO.	50 - 316
UNIT NAME	<u>D. C. Cook - Unit No. 2</u>
DATE	<u>5-13-80</u>
COMPLETED BY	<u>B. A. Svensson</u>
TELEPHONE	<u>(616) 465-5901</u>
PAGE	<u>1 of 1</u>

MAJOR SAFETY-RELATED MAINTENANCE

APRIL, 1980

- M-1 Sample pump for R-11 and R-12 would not maintain correct flow rate. Replaced sample pump and unit functioned properly.
- M-2 Sample pump for R-11 and R-12 would not provide adequate flow. Replaced pump with a rebuilt pump.
- M-3 No. 3 steam generator power operated relief valve, MRV-233, had a packing leak. Repacked valve and verified proper operation.
- M-4 During performance of surveillance testing for NUREG 0578, mechanical seal leakage was noted from the west centrifugal charging pump. Replaced the pump outboard mechanical seal. Also replaced one set of thrust shoes and changed oil. Verified proper pump operation.
- M-5 The No. 3 boric acid transfer pump was making noise. Replaced the bearings, mechanical seal and gaskets. Verified proper pump operation.
- C&I-1 The "Loop 1 RTD Bypass Manifold Flow Low" alarm was received in the control room. The circuit to the instrument in containment indicated a ground condition. Water was found dripping on the cables. Actual flow was verified to be greater than the alarm set point.
- C&I-2 Radiation Monitoring System Channel R-19, steam generator blowdown monitor, was producing sporadic indications and tripping the blowdown system. Connectors were replaced on the power cable to the terminal board. The channel was energized and normal operation was verified.
- C&I-3 The hand-auto station for FRV-240, feedwater regulating valve to steam generator No. 4, operated in fast response mode (manual) with the manual control in the slow response position. The contacts on the manual control switch required cleaning. An operational test of the manual control feature was performed.
- C&I-4 Steam Generator No. 1, protection channel steam line pressure PT-514 (MPP-210), indicated a higher pressure than adjacent channels. A calibration was performed on PT-514. The as-found data indicated a maximum error of 2.25%. The transmitter was recalibrated to a maximum error of 0.125% and returned to service.

