

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316

UNIT 2

DATE 4-5-79

COMPLETED BY W.T. Gillett

TELEPHONE

MONTH March 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>1065</u>
2	<u>1062</u>
3	<u>1027</u>
4	<u>1072</u>
5	<u>1073</u>
6	<u>1070</u>
7	<u>1073</u>
8	<u>1077</u>
9	<u>1072</u>
10	<u>845</u>
11	<u>947</u>
12	<u>1080</u>
13	<u>1078</u>
14	<u>1083</u>
15	<u>1085</u>
16	<u>1077</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>1005</u>
18	<u>1013</u>
19	<u>1048</u>
20	<u>1078</u>
21	<u>1075</u>
22	<u>1073</u>
23	<u>1070</u>
24	<u>1029</u>
25	<u>1080</u>
26	<u>1080</u>
27	<u>1078</u>
28	<u>1074</u>
29	<u>1067</u>
30	<u>1078</u>
31	<u>1075</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.

(9/77)

7904180247

OPERATING DATA REPORT

DOCKET NO. 50-316
DATE 4-4-79
COMPLETED BY W.T. Gillett
TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook 2
2. Reporting Period: March 1979
3. Licensed Thermal Power (MWt): 3,391
4. Nameplate Rating (Gross MWe): 1,133
5. Design Electrical Rating (Net MWe): 1,100
6. Maximum Dependable Capacity (Gross MWe): 1,118
7. Maximum Dependable Capacity (Net MWe): 1,082
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	2,160	10,920
12. Number Of Hours Reactor Was Critical	744	2,126.5	7,357.2
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	744	2,106.6	6,834.2
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,483,455	6,944,731	20,049,838
17. Gross Electrical Energy Generated (MWH)	812,720	2,256,830	6,242,360
18. Net Electrical Energy Generated (MWH)	785,053	2,178,092	5,992,091
19. Unit Service Factor	100	97.5	83.9
20. Unit Availability Factor	100	97.5	83.9
21. Unit Capacity Factor (Using MDC Net)	97.5	93.2	74.5
22. Unit Capacity Factor (Using DER Net)	95.9	91.7	73.3
23. Unit Forced Outage Rate	0	2.5	5.3
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

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH March, 1979

DOCKET NO. 50-316
 UNIT NAME D.C. Cook-Unit 2
 DATE 4-13-79
 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
52	790310	S	0	B	4	N.A.	ZZ	ZZZZZZ	Reduced reactor to 80% to perform initial performance testing at this power level. Reactor power returned to 100% 790311.
53	790331	S	0	B	4	N.A.	ZZ	ZZZZZZ	Reactor power reduced to 55% to permit removal of test flow nozzles in the main feed pump turbine condensate drain lines.

1
 F: Forced
 S: Scheduled

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 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:

- 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.: 50-316
Unit Name: D. C. Cook Unit #2
Completed By: R. S. Lease
Telephone: (616) 465-5901
Date: April 12, 1979

MONTHLY OPERATING EXPERIENCES -- MARCH, 1979

Highlights

This Unit operated at full Reactor power the entire period except as noted in the summary.

Total electrical generation for the month was 812,720 MWH.

Summary

- 03/02/79 -- Power was reduced to 90% for testing of Turbine valves. Total time below 100% power was 9.25 hours.
- 03/03/79 -- The West ESW Pump seized and failed at 0525 hours. The pump was renewed and returned to service at 2045 hours on 3/5/79.
- 03/07/79 -- The first Initial Performance Test was conducted on this date at 100% power. The testing involves about 140 pressure measurements, 160 temperature measurements, power measurements and radioactive sodium tracer for moisture determinations. Test duration was 3 hours.
- 03/09/79 -- Loading was reduced to 91% for testing of Turbine valves. Loading was further reduced to 80% by 0100 3/10/79 and held at this point for Initial Performance Testing.
- 03/10/79 -- Initial Performance Testing performed at 80% power.
- 03/11/79 -- Initial Performance Testing performed at 80% power. Power was returned to 100% between the hours of 1210 and 1545.
- 03/12/79 -- Initial Performance Testing performed at 100% power.
- 03/13/79 -- Initial Performance Testing performed at 100% power with 2.5 inches Hg Turbine backpressure.
- 03/16/79 -- Power was reduced to 92% for testing of Turbine valves. Total time below 100% power was 3.5 hours. The "A" set of low pressure heaters was removed from service at 2204 hours to remove a condensate flow nozzle that had been used for the Initial Performance Testing.

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Docket No.: 50-316
Unit Name: D. C. Cook Unit #2
Completed By: R. S. Lease
Telephone: (616) 465-5901
Date: April 12, 1979
Page: Two (2)

- 03/16/79 -- During the heater outage the 4-A heater was found to have numerous tube leaks. Tube leaks were repaired and the set of heaters was returned to service at 0600 hours 3/18/79.
(Cont.)
- 03/18/79 -- The discharge valve of #23 CWP failed and slammed shut at 0330 hours. This is a butterfly-type valve and the drive tube between the valve operator and the valve failed. Repairs were made and the valve and pump were returned to service at 2240 hours 3/23/79.
- 03/19/79 -- The Southwest set of reheater coils were removed from service at 1708 hours due to excessive tube leakage. The unit is now operating with only the 2 "N" sets of reheater coils in service.
- 03/23/79 -- Power was reduced to 93% for testing of Turbine valves. Total time below 100% power was 4.5 hours.
- 03/24/79 -- The "B" set of low pressure heaters was out of service for a 20 hour period to remove a condensate flow nozzle that had been used in the Initial Performance Testing.
- 03/31/79 -- Power was reduced to 94% power starting at 2210 hours for testing of Turbine valves. Power was further reduced to 55% power to remove the East Main Feed Pump from service. The feed pump was removed from service to remove a drain flow nozzle that had been used in the Initial Performance Testing.

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DOCKET NO.	50 - 316
UNIT NAME	<u>D. C. Cook - Unit No. 2</u>
DATE	<u>4-13-79</u>
COMPLETED BY	<u>B. A. Svensson</u>
TELEPHONE	<u>(616) 465-5901</u>

MAJOR SAFETY-RELATED MAINTENANCE

MARCH, 1979

- M-1 Auxiliary feedwater valve to #1 steam generator FM0-212, would not close. Tightened a loose connection on terminal in the hot shutdown panel and had valve tested.
- M-2 While attempting to start the west ESW pump, the breaker tripped and pump was found to be bound. Rebuilt pump using new bowl assembly, bearings, packing and grease seal. Had pump retested.
- M-3 Breaker for reciprocating charging pump tripped when starting pump. Replaced solid state trip device and inspected breaker. Tested satisfactorily.
- C&I-1 One channel on the containment dew point recorder failed low. The operational amplifier had failed and was replaced. The recorder was calibrated and returned to service.
- C&I-2 Stop valve C of the Main turbine was in the open position with the valve position status light and annunciator indicating the valve was in the closed position. The Train B limit switch was replaced at 0915 on 3-3-79. The cable cannot be connected until the stop valve can be retested.
- C&I-3 The rod position indication system for rod D-4, indicated 212 steps with the demand counter indicating 201 steps. The primary and secondary LVDT voltages were measured and verified correct. The signal level output of the signal conditioning module was also measured and verified to be correct. The panel indication meter was adjusted for correct indication.
- C&I-4 A pyroalarm detector in the reactor cable tunnel quadrant 4, alarmed and could not be reset. The detector was removed, cleaned and the sensitivity adjusted.
- C&I-5 Radiation monitoring system channel R-25 filter paper drive failed. The paper drive motor was removed and a spare motor installed. The paper takeup tension was adjusted for the correct loading.
- C&I-6 An alarm on circuit 27 of the Containment Fire Detection system was received. A loose connection was found on a terminal strip for the alarm card. The connection was tightened and the alarm cleared.