

# OPERATING DATA REPORT

DOCKET NO. 50-315  
 DATE 11-4-80  
 COMPLETED BY W.T. Gillett  
 TELEPHONE 616-465-5901

## OPERATING STATUS

1. Unit Name: Donald C. Cook 1
2. Reporting Period: October 1980
3. Licensed Thermal Power (MWe): 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	745	7,320	51,144.0
12. Number Of Hours Reactor Was Critical	724	5,272.3	38,234.0
13. Reactor Reserve Shutdown Hours	0	0	463.0
14. Hours Generator On-Line	721	5,187.0	37,270.2
15. Unit Reserve Shutdown Hours	0	0	321.0
16. Gross Thermal Energy Generated (MWH)	2,312,061	16,033,104	105,099,410
17. Gross Electrical Energy Generated (MWH)	771,050	5,316,090	34,473,430
18. Net Electrical Energy Generated (MWH)	774,589	5,126,251	33,123,565
19. Unit Service Factor	96.8	70.9	76.1
20. Unit Availability Factor	96.8	70.9	76.1
21. Unit Capacity Factor (Using MDC Net)	95.7	67.1	67.0
22. Unit Capacity Factor (Using DER Net)	94.8	66.4	62.7
23. Unit Forced Outage Rate	3.2	8.9	7.1
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

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-315

UNIT 1

DATE 11-4-80

COMPLETED BY W. T. Gillett

TELEPHONE 616-465-5901

MONTH OCTOBER 1980

DAY AVERAGE DAILY POWER LEVEL  
(MWE-Net)

1	<u>1038</u>
2	<u>1040</u>
3	<u>1029</u>
4	<u>1034</u>
5	<u>1048</u>
6	<u>1043</u>
7	<u>1045</u>
8	<u>1043</u>
9	<u>1048</u>
10	<u>1049</u>
11	<u>44</u>
12	<u>669</u>
13	<u>1047</u>
14	<u>1049</u>
15	<u>1048</u>
16	<u>1047</u>

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

17	<u>1044</u>
18	<u>1040</u>
19	<u>1044</u>
20	<u>1046</u>
21	<u>1047</u>
22	<u>1049</u>
23	<u>1049</u>
24	<u>1038</u>
25	<u>1048</u>
26	<u>1050</u>
27	<u>1048</u>
28	<u>1049</u>
29	<u>1051</u>
30	<u>1051</u>
31	<u>1051</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 October, 1980

DOCKET NO. 50 - 315  
 UNIT NAME D.C. Cook - Unit 1  
 DATE 11-12-80  
 COMPLETED BY B.A. Svensson  
 TELEPHONE (616) 465-5901

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
168	801011	F	24	B	3	N.A.	ZZ	ZZZZZZ	While attempting to perform turbine control valve testing at 100% power, control valve oscillations became excessive. The oscillations created steam generator pressure fluctuations which resulted in "high differential pressure between steam leads," causing safety injection actuation to occur. The safety injection signal caused the reactor/turbine trip. The safety injection was reset and the pumps shut down after 12 minutes of operation. The reactor was brought critical the same day and the Unit returned to service on 801012. 100% reactor power was reached on 801013.

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

## 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 completely<sup>1</sup>. 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

<sup>1</sup>Note 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 50 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 #1  
Completed By: C. E. Murphy  
Telephone: (616) 465-5901  
Date: November 10, 1980  
Page: 1 of 2

**MONTHLY OPERATING ACTIVITIES -- OCTOBER, 1980**

Highlights:

The Unit entered this reporting period operating at 99% power. This being the last step in power escalation following the Unit refueling.

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

Total electrical generation for the month was 771,050 mwh.

Summary:

- 10/01/80 - The Unit was loaded to 100% power at 1905. This was the first operation at 100% for this Core.
- 10/02/80 - The South half of "C" Condenser was out of service for a 6.25 hour period for checking of tube leaks.
- 10/03/80 - The South half of "A" Condenser was out of service for a 6.5 hour period for checking of tube leaks.
- Power was reduced to 90% for testing of Turbine Valves. Total time below 100% was 10.5 hours.
- 10/04/80 - The 50' Wind Direction Recorder was out of service for a 5.5 hour period for repairs.
- 10/06/80 - The North half of "A" Condenser was out of service for a 9 hour period for checking of tube leaks.
- 10/07/80 - The South half of "B" Condenser was out of service for a 8.5 hour period for checking of tube leaks.
- 10/08/80 - Condensers removed from service for leak testing and repairs were as follows:
- "B" North Condenser for 9.25 hours.  
"C" South Condenser for 5 hours.
- 10/09/80 - The North half of "C" Condenser was out of service for a 7.75 hour period for checking of tube leaks.



Summary:  
Cont.

- 10/10/80 - Power was reduced to 97% for testing of Turbine Valves. Total time below 100% was 2 hours.
- 10/11/80 - An attempt to check Turbine Valves at 100% was performed which resulted in some extreme oscillations of the Turbine Control Valves. The oscillations created a High Steam Line differential pressure which resulted in a Safety Injection with reactor and turbine trip at 0202. The Safety Injection was reset and the pumps stopped after a 12 minute interval.

An inspection of the Containment was performed and a leak was located on the Loop 4 Cold Leg RTD orifice flange. The leak was repaired and the Reactor returned to critical at 2304.

- 10/12/80 - The Unit was paralleled with the system at 0159 and loaded to 99% power by 1955. Insufficient F(Z) margin prevented going to 100% power at this time.
- 10/13/80 - The Unit was loaded to 100% power over a 1.5 hour ramp starting at 0805.
- 10/14/80 - The 50' Wind Direction Instrument was inoperable for a 1.5 hour period while repairs were made.
- 10/17/80 - Power was reduced to 90% for testing of Turbine Valves. Total time below 100% was 3.5 hours.

An inadvertant Radioactive Gas release occurred at 1410 when the Reactor Coolant filter was valved in. It was determined that the filter drain valve had failed open. The filter was valved out at 1425, repairs were made, and the filter returned to service at 1813.

- 10/18/80 - The North half of "B" Condenser was out of service for a 5.75 hour period for checking of tube leaks.
- 10/24/80 - Power was reduced to 90% for testing of Turbine Valves. Total time below 100% was 3.5 hours.
- 10/29/80 - At 0106, the #13 Circulating Water pump tripped on Overload. Investigation at the pump and the breaker found nothing abnormal. The pump was restored to service with no further trouble.

100-100000

100-100000

100-100000

100-100000

100-100000

DOCKET NO.	50 - 315
UNIT NAME	<u>D. C. Cook - Unit No. 1</u>
DATE	<u>11-12-80</u>
COMPLETED BY	<u>B. A. Svensson</u>
TELEPHONE	<u>(616) 465-5901</u>
PAGE	<u>1 of 1</u>

MAJOR SAFETY-RELATED MAINTENANCE

OCTOBER, 1980

- M-1 The sample pump for radiation monitor R-25 and R-26 would not provide sufficient flow. Replaced the pump with a rebuilt pump. The sample flow was adjusted and proper operation verified.
- M-2 1AB emergency diesel engine jacket water system was leaking. Replaced gaskets on No. 1 and No. 2 rear bank cylinder.
- M-3 A flange on reactor coolant system loop-4, RTD bypass loop was leaking. The leak was repaired by replacing the flexitallic gasket.
- C&I-1 The 50 ft. wind speed indication failed to function. The secondary 50 ft. wind speed system was placed into operation. A wire was found broken in the PBX room on a terminal board. The repairs were completed and the primary wind speed system was returned to service.
- C&I-2 Annunciator No. 7, drop 46, reactor coolant pump No. 2 thermal barrier cooling water temperature high alarm was received and would not clear. Transmission alarm instrument, CTA-452 failed. A failed capacitor was replaced and CTA-452 calibration was performed. The actual measure temperature was 93°F.
- C&I-3 QPI-416, boric acid transfer pump discharge pressure indication indicated a high pressure. The calibration of QPI-416 was tested and found to be out of specification. QPI-416 and QPI-417 were recalibrated and returned to service.
- C&I-4 The turbine trip permissive P-7 was illuminated when the turbine was not tripped. A memory board in the control board demultiplexer had failed. The board was replaced with a spare.
- C&I-5 IFI-265, safety injection pump recirculation flow to the RWST did not indicate flow. The indicating ring had slipped from the magnetic field. The ring was repositioned and correct flow indication was verified.

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