

BAS

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-315

UNIT 1

DATE 8-7-79

COMPLETED BY W.T. Gillett

TELEPHONE 616-465-5901

MONTH July 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>0</u>
2	<u>0</u>
3	<u>0</u>
4	<u>0</u>
5	<u>0</u>
6	<u>0</u>
7	<u>0</u>
8	<u>0</u>
9	<u>0</u>
10	<u>0</u>
11	<u>0</u>
12	<u>0</u>
13	<u>0</u>
14	<u>0</u>
15	<u>0</u>
16	<u>0</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>0</u>
18	<u>220</u>
19	<u>348</u>
20	<u>442</u>
21	<u>443</u>
22	<u>452</u>
23	<u>590</u>
24	<u>733</u>
25	<u>819</u>
26	<u>834</u>
27	<u>955</u>
28	<u>955</u>
29	<u>963</u>
30	<u>976</u>
31	<u>977</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)

7908310338

~~7908170343~~

# OPERATING DATA REPORT

DOCKET NO. 50-315  
DATE 8-6-79  
COMPLETED BY W.T. Gillett  
TELEPHONE 616-465-5901

## OPERATING STATUS

1. Unit Name: Donald C. Cook 1
2. Reporting Period: July 1979
3. Licensed Thermal Power (MWt): 3,250
4. Nameplate Rating (Gross MWe): 1,089
5. Design Electrical Rating (Net MWe): 1,054
6. Maximum Dependable Capacity (Gross MWe): 1,080
7. Maximum Dependable Capacity (Net MWe): 1,044
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>744</u>	<u>5,087</u>	<u>40,171</u>
12. Number Of Hours Reactor Was Critical	<u>394.2</u>	<u>2,606.1</u>	<u>29,817.8</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>463</u>
14. Hours Generator On-Line	<u>329.9</u>	<u>2,535.0</u>	<u>28,948.3</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>321</u>
16. Gross Thermal Energy Generated (MWH)	<u>762,273</u>	<u>7,704,359</u>	<u>79,042,150</u>
17. Gross Electrical Energy Generated (MWH)	<u>244,680</u>	<u>2,550,790</u>	<u>25,840,450</u>
18. Net Electrical Energy Generated (MWH)	<u>232,802</u>	<u>2,457,784</u>	<u>24,794,961</u>
19. Unit Service Factor	<u>44.3</u>	<u>49.8</u>	<u>74.1</u>
20. Unit Availability Factor	<u>44.3</u>	<u>49.8</u>	<u>74.1</u>
21. Unit Capacity Factor (Using MDC Net)	<u>29.9</u>	<u>46.3</u>	<u>65.2</u>
22. Unit Capacity Factor (Using DER Net)	<u>29.7</u>	<u>45.8</u>	<u>59.8</u>
23. Unit Forced Outage Rate	<u>0</u>	<u>3.2</u>	<u>5.9</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	<u>          </u>	<u>          </u>
INITIAL ELECTRICITY	<u>          </u>	<u>          </u>
COMMERCIAL OPERATION	<u>          </u>	<u>          </u>

## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH JULY, 1979

DOCKET NO. 50-315  
UNIT NAME D.C. Cook-Unit  
DATE 8-11-79  
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
149	790406	S	412.2	B,C	3	N.A.	ZZ	ZZZZZZ	Refueling outage continued from previous month. Unit returned to service on 790718 at 0416 hours. Total outage time 2466.4 hours.
150	790718	S	1.7	B	1	N.A.	ZZ	ZZZZZZ	Turbine/Generator removed from service to perform turbine overspeed trip testing. Unit returned to service undergoing power ascension testing. Reactor power at 99% on 790801.

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 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.: 50-315  
Unit Name: D. C. Cook Unit #1  
Completed By: R. S. Lease  
Telephone: (616) 465-5901  
Date: August 8, 1979  
Page: 1 of 3

MONTHLY OPERATING EXPERIENCES -- JULY, 1979

Highlights

During the month this Unit returned to service from its third annual outage. Also, the connecting elbows from the Feedwater System to all four Steam Generators were replaced.

Total electrical generation for the month was 244,680 Mwh.

Summary

07/01/79 -- #3 Steam Generator was successfully hydrostatically tested after repair of its feedwater piping.

07/05/79 -- Heatup of the Reactor Plant was initiated with passing into Mode 4 at 0402 hours.

07/06/79 -- The Reactor Plant entered Mode 3 at 0603 hours.

Full temperature 547<sup>0</sup> and pressure 2235 psig were reached at 1957 hours.

07/08/79 -- Control Rods were withdrawn and dilution for criticality was started at 0836 hours.

Criticality was obtained at 2001 hours.

07/10/79 -- Low power physics testing was completed at 1700 hours.

During the low power physics testing, the West Feed Pump Turbine was overspeed tested. The Emergency Governor overspeed trip point was an average of 5702 rpm. The backup overspeed trip point was 5520 rpm.

During heatup and pressurization of the Reactor Coolant System, the #1 seal leakoff flows of Reactor Coolant Pumps 3 and 4 were excessive. At full pressure the leakoff flow was estimated to be 15-16 gpm per pump. With the consultation of



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Page: 2 of 3

07/10/79 -- Westinghouse, all reasonable maneuvers were made to  
(Cont.) attempt to get these seals to reseal. These seals  
had been replaced during the outage. Cooldown for  
seal repair was initiated at 2014 hours with entry  
into Mode 4 at 2248 hours.

07/12/79 -- After degassing of the Reactor Coolant System the  
Reactor Plant was cooled down to Mode 5 at 0405  
hours.

07/15/79 -- After replacement of the #1 seals of Reactor Coolant  
Pumps 3 and 4, filling and venting of the Reactor  
Coolant System was started at 0315 hours.

07/16/79 -- Filling and venting of the Reactor Coolant System  
was accomplished by 0512 hours. Heatup of the  
Reactor Coolant System was initiated with entry  
into Mode 4 at 1343 hours and into Mode 3 at 2150  
hours.

07/17/79 -- The Reactor Coolant System was at full pressure and  
temperature at 0845 hours. The Reactor was critical  
at 1358 hours.

07/18/79 -- The Turbine was rolled at 0318 hours. The Generator  
was in parallel with the system at 0416 hours.

Unit power was raised to 30% by 0530 hours. Power  
was held at this point for prewarming of the Turbine  
prior to required overspeed testing.

The Generator was removed from parallel at 1813 hours.  
Overspeed tests were run with the Emergency Overspeed  
Trip operating at an average of 1965 rpm. The back-  
up overspeed trip operated at an average of 1978 rpm.  
The Unit was again paralleled with the system at 1955  
hours. Unit loading was increased to 35% by 2100  
hours.

07/19/79 -- The power escalation program for the new core was  
started.

07/23/79 -- Power had been increased to 62% by 0945 hours. This  
power level was maintained awaiting the completion  
of overspeed testing of the East Main Feed Pump  
Turbine.





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Page: 3 of 3

- 07/24/79 -- Overspeed testing of the East Main Feed Pump Turbine was completed at 0625 hours. The Emergency Governor overspeed trip point was an average of 5615 rpm. The backup overspeed trip point was 5423 rpm.
- 07/25/79 -- Reactor Power was raised to 83.8%.
- 07/26/79 -- Reactor Power was reduced to 58% for a Moderator Temperature Coefficient Test. Power was increased to 93% by 2245 hours.
- 07/30/79 -- Power was increased to 96% at 1345 hours.
- 07/31/79 -- Power was decreased to 93% at 1740 hours due to indication of a narrow margin  $F_z$ .



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UNIT NAME	D. C. Cook - Unit No. 1
DATE	8-13-79
COMPLETED BY	B. A. Svensson
TELEPHONE	(616) 465-5901

MAJOR SAFETY-RELATED MAINTENANCE

JULY, 1979

- M-1 No. 1-BD-126, inlet valve to startup blowdown flash tank leaked by. Valve was replaced. Hydrostatic retest was satisfactory.
- M-2 SI-158-L4, low head safety injection check valve to loop 4 had a bonnet leak. The bonnet gasket was replaced.
- M-3 Reciprocating charging pump had excessive leakage at stuffing box. Replaced 9 pump valves, cleaned and replaced other parts. Retest was satisfactory.
- M-4 SV-142, turbine driven aux. feed emergency leak-off safety valve leaked by. Seat and disc were lapped. Set point checked at 1,500 psi.
- M-5 Low flow indication on Loop 4RTD loop in the reactor coolant system was caused by the disc of isolation valve RC-108L4 becoming separated from the stem. Replaced the valve and hydrostatic tested upon completion.
- M-6 Pressurizer power-operated relief valve, NRV-152 was leaking by the seat. Replaced bonnet and seat gaskets and had valve tested.
- M-7 Leak-off flow indicated that the #1 seal on #3 RCP was not seated. Disassembled and inspected #1, 2 and 3 seals. All were in good condition. Replaced the #1 seal and reassembled.
- M-8 Leak-off flow indicated that the #1 seal on #4 RCP was not seated. Disassembled and inspected #1, 2, and 3 seals. All were in good condition. Replaced the #1 seal and reassembled.
- M-9 The east centrifugal charging pump head gasket and mechanical seal were leaking. Replaced gasket and seal. Pump operability test was satisfactory.
- M-10 The north waste gas compressor suction valve, RRV-378, was not functioning properly. Replaced valve diaphragm and had valve retested.
- M-11 No. 4 steam generator blowdown valve, DRV-342 had bonnet leak. Replaced gaskets and cleaned valve. Had valve tested.
- C&I-1 The rod position indication system for control bank C rods; C3, C13, N13, N3 and H6 provided incorrect indication. The secondary coil voltages of the LVDT were measured. The associated signal conditioning modules were calibrated and the panel indication for each returned to the correct value.



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PAGE	- 2 -

MAJOR SAFETY-RELATED MAINTENANCE

JULY, 1979

- C&I-2 Radiation monitoring system channel R-5, spent fuel area monitor would not respond to the check source. The detector was replaced and a channel calibration was performed.
- C&I-3 BLP-141, steam generator level protection set 2 loop 4, indicated 7% greater than the adjacent channels. The transmitter calibration was performed and BLP-141 was returned to normal service.
- C&I-4 Pressurizer pressure protection channels I and II indicated an error of 20 psi. The sensing lines of NPP-151 and NPP-153 were filled and verified.
- C&I-5 WCR-957, non-essential service water system containment isolation valve failed to the closed position 30 seconds after being opened. The upper limit switch required replacement. Correct valve operation was verified and the closure time measured.
- C&I-6 The rod position indication system for rod N-13 was producing false indications. The signal conditioning module calibration was performed and correct panel indication was verified.
- C&I-7 Annunciator No. 10, Drop 23, rod position indication system direct current power supply failure alarm was received. The positive power supply and the positive backup power supply were replaced.
- C&I-8 The control room panel alarms derived from the solid state protection system were not operating correctly. An isolation card supplying address pulses from the counter in the solid state protection system logic to the annunciator demultiplexer required replacement.
- C&I-9 The east feedpump turbine high-pressure stop valve position indicator in the control room displayed 50% stroke when the valve was completely closed. The valve's position indication system was adjusted for correct operation.
- C&I-10 Refueling water storage tank level indicator ILS-951 indicated 90% while the level recorder channel ILS-950 displayed 96% level. Transmitters ILS-950 and ILS-951 were filled and vented. Correct indication was obtained on both channels.



100-100000

100-100000

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PAGE	- 3 -

MAJOR SAFETY-RELATED MAINTENANCE

JULY, 1979

- C&I-11 VCR-010 glycol supply valve failed to the closed position. The diaphragm of the valve's actuator was replaced. Following the stroking of the valve, the valve's closure time was measured and recorded.
- C&I-12 RFI-285, liquid release flow indication indicated 20 gpm below actual flow. The panel indicators calibration was verified. The target type flow transmitter required recalibration.
- C&I-13 NIS, N-44 was calibrated to permit use of gain pot on front of drawer. The gain pot was at the high stop allowing no further adjustment. The internal coarse gain pot was readjusted such that the cal pot on the front of the drawer could be readjusted to the middle of its span.

