

OPERATING DATA REPORT

DOCKET NO. 50-316  
 DATE 10-4-82  
 COMPLETED BY A.L. Tetzlaff  
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: DONALD C COOK UNIT 2
2. Reporting Period: SEPTEMBER, 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	720	6551	41,615
12. Number Of Hours Reactor Was Critical	677.4	5599.8	29,624.8
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	667.6	5554.9	28,775.9
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,241,332	18,314,699	92,375,520
17. Gross Electrical Energy Generated (MWH)	719,040	5,980,690	29,688,490
18. Net Electrical Energy Generated (MWE)	693,705	5,770,748	28,614,889
19. Unit Service Factor	92.7	84.8	73.7
20. Unit Availability Factor	92.7	84.8	73.7
21. Unit Capacity Factor (Using MDC Net)	89.0	81.4	69.2
22. Unit Capacity Factor (Using DER Net)	87.6	80.1	68.4
23. Unit Forced Outage Rate	7.3	15.2	14.4

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):

REFUELING OUTAGE NOVEMBER 1982

25. If Shut Down At End Of Report Period, Estimated Date of Startup: \_\_\_\_\_

25. Units In Test Status (Prior to Commercial Operation):	Forecast	Achieved
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316

UNIT 2

DATE 10-1-82

COMPLETED BY Art Tetzlaff

TELEPHONE 616-365-5901

MONTH SEPTEMBER

DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)	DAY	AVERAGE DAILY POWER LEVEL (Mwe-Net)
1	<u>1052</u>	17	<u>1050</u>
2	<u>1056</u>	18	<u>716</u>
3	<u>1056</u>	19	<u>—</u>
4	<u>1057</u>	20	<u>153</u>
5	<u>1055</u>	21	<u>952</u>
6	<u>1056</u>	22	<u>1063</u>
7	<u>1058</u>	23	<u>1052</u>
8	<u>1058</u>	24	<u>1053</u>
9	<u>1056</u>	25	<u>1059</u>
10	<u>1049</u>	26	<u>1060</u>
11	<u>1046</u>	27	<u>1052</u>
12	<u>1046</u>	28	<u>1050</u>
13	<u>1047</u>	29	<u>1051</u>
14	<u>1045</u>	30	<u>736</u>
15	<u>1045</u>	31	<u>—</u>
16	<u>1050</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 September, 1982

DOCKET NO. 50-316  
 UNIT NAME D.C. Cook - Unit 2  
 DATE 10-13-82  
 COMPLETED BY B.A. Svensson  
 TELEPHONE 616-465-5901  
 PAGE 1 of 2

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 Codes <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
115	820918	F	32.9	A	3	N.A.	ZZ	ZZZZZZ	Reactor/Turbine trip. The reactor trip was due to low level coincident with steam/feedwater flow mismatch in No. 21 Steam Generator caused by No. 21 S.G. feedwater reg. valve failing closed. Rain water during roof repairs had entered solenoid valve for feedwater reg. valve causing it to short and the valve to fail closed. The Unit was paralleled at 0412 hours on 820920.
116	820920	F	14.2	H	3	N.A.	ZZ	ZZZZZZ	Turbine/Reactor trip due to high-high level in No. 24 S.G. during manual steam generator level control. Trouble shoot of the control systems did not reveal the problem. During a subsequent outage, problems were found in the feedwater regulating valve booster relay.

<sup>1</sup>  
 F. Forced  
 S. Scheduled

<sup>2</sup>  
 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)

<sup>3</sup>  
 Method:  
 1 Manual  
 2 Manual Scram.  
 3 Automatic Scram.  
 4 Other (Explain)

<sup>4</sup>  
 Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

<sup>5</sup>  
 Exhibit I - Same Source

(9/11)

## 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 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.

**UNIT SHUTDOWNS AND POWER REDUCTIONS**

REPORT MONTH September, 1982

DOCKET NO. 50-316  
 UNIT NAME D.C. Cook - Unit 2  
 DATE 10-13-82  
 COMPLETED BY B.A. Svensson  
 TELEPHONE 616-465-5901  
 PAGE 2 of 2

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
117	820930	F	5.3	A	1	Later	HH	PIPEXX	The Unit was returned to service at 1830 hours on 820920 and reached 100% reactor power on 820921. Unit removed from service to repair a weld leak at the root weld for a drain line on the feedwater to No. 21 S.G. The drain line is located between the S.G. and the isolation check valve. The Unit remained out of service at the end of the month.

<sup>1</sup>  
 F - Forced  
 S - Scheduled

<sup>2</sup>  
 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)

<sup>3</sup>  
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 1 - Manual  
 2 - Manual Scram  
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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: 10/11/82  
Page: 1 of 2

MONTHLY OPERATING ACTIVITIES - SEPTEMBER 1982

Highlights:

The Unit entered this reporting period at 100% power. At 1918 hours on September 18, the Unit tripped from Low Feedwater flow on #21 Steam Generator. The cause of the Low Feedwater Flow was found to be water contamination to the Level Control Circuitry, causing the Feedwater Regulating Valve to #21 Steam Generator to react as if the valve had received a Feedwater Conservation Signal.

On September 20, two Unit start-ups were commenced but were terminated due to high water level trips on #24 Steam Generator. The Unit was finally paralleled to the grid at 1830 hours. 100% power was achieved at 1036 hours on September 21.

At 1406 hours on September 30, a cracked weld was discovered on a one (1) inch drain valve located between the Main Check Valve and the containment on the Main Feedwater line to #21 Steam Generator. The Unit was removed from service at 1843 hours and a Unit cooldown was commenced at 2116 hours in preparation for repairs.

Total electrical generation for the month was 719,040 MWH.

Summary:

- 09/09/82 The West CCW Train was inoperable for a 66.25 hour period while Maintenance made repairs to CMO-420.
- 09/11/82 The Diesel Fire Pump start logic was inoperable for a 49.5 hour period for C&I repairs.
- 09/18/82 1918 hours, Unit tripped from Low Feedwater flow on #21 Steam Generator.
- 09/19/82 2253 hours, commenced Reactor start-up. 2313 hours, Reactor critical.
- 09/20/82 0105 hours, Mode 1.  
0412 hours, Paralleled Unit to the grid.  
0417 hours, Unit tripped from extreme high water level on #24 Steam Generator.  
0853 hours, commenced Reactor start-up.  
0916 hours, Reactor critical.  
1002 hours, Mode 1.  
1054 hours, Unit tripped from extreme high water level on #24 Steam Generator.  
1509 hours, commenced Reactor start-up.  
1530 hours, Reactor critical.  
1623 hours, Mode 1.  
1830 hours, Paralleled Unit to the grid.

Docket No.: 50-316  
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Page: 2 of 2

09/21/82 1036 hours, 100% Reactor power.

09/30/82 1615 hours, started removing Unit from service to repair  
Feedwater leak.

1843 hours, Unit manually tripped.

2116 hours, Unit cooldown started.



DOCKET NO.	50 - 316
UNIT NAME	D. C. Cook - Unit No. 2
DATE	10-13-82
COMPLETED BY	B. A. Svensson
TELEPHONE	(616) 465-5901
PAGE	1 of 1

MAJOR SAFETY-RELATED MAINTENANCE

SEPTEMBER, 1982

- M-1 The equalizing valve for the upper containment personnel airlock inner door was stuck open. Adjusted the valve linkage and had the airlock tested.
- M-2 Steam generator #21 had indications of tube leaks. Plugged two tubes; row 1, columns 71 and 72.
- M-3 The West CCW heat exchanger outlet valve, CMO-420, would not close. Replaced burned-out motor and had the valve retested.
- M-4 A containment inspection during a forced outage revealed a body-to-bonnet leak on #4 steam generator shell drain valve, BD-101-4, in the blowdown system. The leak was sealed by Furmanite injection.
- M-5 A leak occurred in the main feed line to #1 steam generator. The leak was from a socket weld on a one-inch drain line that could not be isolated from the steam generator. The Unit was shut down and the weld was ground out. A new drain line and valve were installed. The necessary NDE was performed.
- C&I-1 Feedwater regulating valve FRV-210, steam generator No. 1, had an intermittent short-to-ground on "AB" battery. Water was found to have entered "B" train conduit and also a solenoid coil, which had then burned out, causing the valve to close. The water was removed and the coil was replaced. Conduits and coils for FRV's 220, 230, and 240 were likewise checked and repaired and dried as necessary. The flex conduit was wrapped with waterproof tape to prevent recurrence of the problem. The water entered the building during roof repairs.
- C&I-2 Residual heat removal header "E" flow indicator IFI-330, read 800 gpm with no actual flow. The entire instrument loop consisting of flow transmitter, square root extractor and control room indicator was recalibrated.