

OPERATING DATA REPORT

DOCKET NO. 50-315
 DATE 11-2-82
 COMPLETED BY W. T. Gillett
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook 1
2. Reporting Period: October 1982
3. Licensed Thermal Power (MWt): 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	7,296	68,664
12. Number Of Hours Reactor Was Critical	716.2	4,144.4	50,417.6
13. Reactor Reserve Shutdown Hours	-	-	463
14. Hours Generator On-Line	711.4	4,026.7	49,248.9
15. Unit Reserve Shutdown Hours	-	-	321
16. Gross Thermal Energy Generated (MWH)	1,965,827	12,483,644	142,846,833
17. Gross Electrical Energy Generated (MWH)	637,410	4,093,980	46,975,760
18. Net Electrical Energy Generated (MWE)	611,608	3,946,712	45,187,390
19. Unit Service Factor	95.5	55.2	73.9
20. Unit Availability Factor	95.5	55.2	73.9
21. Unit Capacity Factor (Using MDC Net)	78.6	51.8	66.7
22. Unit Capacity Factor (Using DER Net)	77.9	51.3	63.5
23. Unit Forced Outage Rate	4.5	25.3	8.8
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

8212290424 821112
 PDR ADOCK 05000315
 R PDR

(4/77)

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-315

UNIT 1

DATE 11-2-82

COMPLETED BY W. T. Gillett

TELEPHONE 616-465-5901

MONTH October 1982

DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)
1	<u>0</u>
2	<u>182</u>
3	<u>404</u>
4	<u>409</u>
5	<u>509</u>
6	<u>658</u>
7	<u>725</u>
8	<u>869</u>
9	<u>961</u>
10	<u>1003</u>
11	<u>1015</u>
12	<u>1031</u>
13	<u>1030</u>
14	<u>1035</u>
15	<u>1034</u>
16	<u>1026</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>1037</u>
18	<u>1028</u>
19	<u>1032</u>
20	<u>1034</u>
21	<u>1030</u>
22	<u>1020</u>
23	<u>600</u>
24	<u>1018</u>
25	<u>1005</u>
26	<u>539</u>
27	<u>531</u>
28	<u>640</u>
29	<u>1018</u>
30	<u>1027</u>
31	<u>988</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, 1982

DOCKET NO. 50-315
 UNIT NAME D.C. Cook - Unit 1
 DATE 11-12-82
 COMPLETED BY B.A. Svensson
 TELEPHONE 616-465-5901
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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
186	820930	S	33.6	B	1	N.A.	ZZ	ZZZZZZ	Unit was removed from service on 820930 for turbine overspeed testing and to repair body-to-bonnet leak on pressurizer auxiliary spray valve, QRV-51. The unit was returned to service 821002, and the power escalation testing program was commenced. 100% reactor power was reached on 821011. Total length of the outage was 45.6 hours.
187	821023	F	0	B	4	N.A.	ZZ	ZZZZZZ	Reactor power reduced to 55% to remove the West main feedpump turbine from service to repair leak in the hydraulic oil system. Reactor power returned to 100% 821024.
188	821026	F	0	B	4	N.A.	ZZ	ZZZZZZ	Reactor power reduced to 55% to remove the West main feedpump from service to correct high vibration problem on pump outboard bearing. Reactor power returned to 100% 821029.

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 (IER) File (NURIG-
 0161)

⁵ 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 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:

- If a component failed, use the component directly involved.
- If not a component failure, use the related component; e.g., wrong valve operated through error: list valve as component.
- 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 ACTIVITIES - OCTOBER 1982

Highlights:

The Unit entered the reporting period with the completion of repairs to the Pressurizer Auxiliary Spray Valve. Unit heatup from ~368°F to ~540°F was begun on October 1. The Unit was paralleled to the grid at 0937 hours on October 2 and reactor power was escalated to 100% power at 1815 hours on Oct. 11. Power escalations during the Nuclear Section testing are addressed in the summary.

A power reduction was started at 2204 hours on Oct. 22. The reactor power level of 55% was achieved at 0427 hours on Oct. 23. The power was reduced in preparation to the removal of the West Main Feedpump for repairs to its Lube Oil System.

Following repairs to the West Feedpump a reactor power increase was commenced at 1910 hours on Oct. 23 and 100% power was achieved at 0546 hours on Oct. 24.

A reduction in reactor power was started at 1615 hours on Oct. 25 in preparation to again remove the West Main Feedpump, this time to correct a vibration problem. At 0231 hours on Oct. 26, reactor power was lowered to 55% and the West Feedpump was removed from service at 0755 that day.

Following repairs to the West Feedpump, a power increase was started at 1459 hours on Oct. 28. 100% power was achieved at 0600 hours on Oct. 29.

Power reductions for Turbine Valve testing was performed on Oct. 22 and 29. These are addressed in the summary.

The gross electrical generation for the month was 637,410 MWH.

Summary:

10/2/82 Commenced Reactor Startup at 0428 hours.
Reactor critical at 0451 hours.
Mode 1 at 0631 hours.
Unit parallel to grid at 0937 hours.
30% power at 12:00 hours.
48% power at 1949 hours.

10/5/82 68% power at 2038 hours and holding for "Moderator Temperature Coefficient" testing.

10/7/82 80% power at 1346 hours.

Component Cooling Water System, Train B, inoperable for 19.25 hours while Maintenance repaired the ESW Cooling Water Outlet Valve on the CCW Heat Exchanger (WMO-737).

10/8/82 90% power at 1513 hours.

10/9/82 97% power at 1640 hours.

10/11/82 100% power at 1815 hours.

10/12/82 South Safety Injection Pump, inoperable for a 93.5 hour period due to excessive vibration. Note: The LCO time limit was extended for 10 days by the NRC.

10/19/82 West RHR pump was inoperable for a 6 hour period for Maintenance to repair an oil leak.

10/22/82 95% power at 2255 hours for turbine valve testing.

10/23/82 55% power at 0427 hours, to make repair to the West Main Feedpump Lube Oil System.

Repairs completed to the West Main Feedpump at 1830 hours.

10/24/82 100% power at 0546 hours.

10/26/82 55% power at 0231 hours, to make repairs to the West Main Feedpump, high vibration.

10/28/82 Repairs completed to the West Main Feedpump at 1230 hours.

10/29/82 100% power at 0600 hours.

10/30/82 93% power at 0030 hours for turbine valve testing.
100% power at 0505 hours.

DOCKET NO.	50 - 315
UNIT NAME	D. C. Cook - Unit No. 1
DATE	11-12-82
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MAJOR SAFETY-RELATED MAINTENANCE

OCTOBER, 1982

- M-1 The reciprocating charging pump packing was leaking. Replaced #1 stuffing box, five plungers, packing and male and female adapters. Had pump tested.
- M-2 The West CCW heat exchanger essential service water outlet valve, WMO-737, was leaking by. Replaced the butterfly valve with a new valve and had it tested.
- M-3 The West residual heat removal pump motor had an oil leak. Replaced the top bearing cover gasket and had the pump tested.
- M-4 The South safety injection pump had high vibration indication. Disassembled pump, straightened shaft, shimmed intermediate covers, balanced and lapped impellers and realigned pump to motor. Had the pump tested.
- M-5 The power operated relief valve for #3 steam generator, MRV-233, was leaking by. Replaced the valve internals and had the valve tested.
- C&I-1 Pressurizer level channels NLP-151 and NLP-152 were in disagreement of approximately 5% of level span. Recalibration of the pressurizer level transmitter, NLP-151, was completed with the unit at a power level of 5% or less. This brought the level indication channels into close agreement.
- C&I-2 Non-essential service water containment isolation valve from #4 containment lower vent, WCR-914, failed closed. The difficulty was due to excessive moisture build-up in the "Asco" actuating valve coil. The coil housing was dried and the defective coil was replaced. After repairs, valve closing time was 7.8 seconds.
- C&I-3 Feedwater regulating valve, FRV-240, to steam generator #4 would not control properly in "automatic" and would occasionally cycle open and shut without command. Observation of the valve disclosed excessive movement, which was corrected by adjusting the booster sensitivity. The positioner, "Asco" valve and piping were examined for leaks; none were found.
- C&I-4 Non-essential service water containment isolation valve from #4 containment upper vent, WCR-932, kept tripping closed and caused a "ground" alarm on "CD" battery. Water had entered the "Asco" valve coil and had shorted it to ground. The "Asco" coil housing was dried and the coil was replaced. Correct operation of WCR-932 was verified by stroking it.

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MAJOR SAFETY-RELATED MAINTENANCE

OCTOBER, 1982

- C&I-5 Heat tracing circuit #411 would not maintain temperature above 145°F on "N" boric acid filter pressure line to QPI-416 and -417. The problem was diagnosed as a open-circuited heat tape. The defective tape was replaced by maintenance personnel.
- C&I-6 Reactor coolant loop 4 delta T/T average protection set IV lost its input signal from upper flux detector N44. To enable testing of the protection set, the associated bistables were placed in the "trip" mode. Isolation amplifier NM-307 in N44's electronics drawer was found to be microphonic. Replacement of this amplifier restored operation to the N44 signal input. The bistables were reset, having been in the trip mode for approximately 26 minutes. No further problems were encountered with loop 4 delta T/T average.
- C&I-7 Pressurizer level instrument loops, NLP-151 and -152, displayed a 5% difference in readings. The reference leg of NLP-152 was refilled. No change in level indication was noted. Recalibration of NLP-152 disclosed that this loop had been 2% high.
- C&I-8 Non-essential service water containment isolation valve, WCR-914, to #4 containment lower ventilation unit was inoperable due to rainwater entering the "Asco" solenoid actuating valve coil. The shorted coil was replaced and the valve was time-tested at six seconds.
- C&I-9 Critical control room power circuit #22, which feeds the radiation monitoring system electro-larms, repeatedly tripped its circuit breaker on high current flow. "HFA" relay R-1924 was found to be causing the excessive current drain on circuit #22. The relay was replaced.
- C&I-10 Non-essential service water containment isolation valve, WCR-914, feeding #4 containment lower ventilation unit was inoperative due to rainwater short-circuiting its "Asco" solenoid valve. The defective "Asco" coil was replaced and the WCR was time-tested.