OPERATING DATA REPORT

DOCKET NO. 50-316
DATE 4-2-80
COMPLETED BY W. T. Gillett
TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook 2
2. Reporting Period: March 1980
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	744	2,184	19,704
12. Number Of Hours Reactor Was Critical	728.4	1,729.8	12,809.7
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	726.1	1,647.1	12,149
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,418,799	5,212,606	37,436,986
17. Gross Electrical Energy Generated (MWH)	801,060	1,698,480	11,852,890
18. Net Electrical Energy Generated (MWH)	773,780	1,636,917	11,404,329
19. Unit Service Factor	97.6	75.4	70.5
20. Unit Availability Factor	97.6	75.4	70.5
21. Unit Capacity Factor (Using MDC Net)	96.1	69.3	64.5
22. Unit Capacity Factor (Using DER Net)	94.5	68.1	63.4
23. Unit Forced Outage Rate	2.4	2.6	12.3

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		

(9/77)

8004150365

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316
UNIT 2
DATE 4-2-80
COMPLETED BY W. T. Gillett
TELEPHONE 616-465-5901

MONTH March 1980

DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	100	17	1,092
2	782	18	1,079
3	1,023	19	1,084
4	1,002	20	1,090
5	1,078	21	1,088
6	1,088	22	1,089
7	1,087	23	1,093
8	1,087	24	1,093
9	1,089	25	1,092
10	1,040	26	1,091
11	1,089	27	1,091
12	1,090	28	1,091
13	1,091	29	1,093
14	1,065	30	1,090
15	1,080	31	1,088
16	1,092		

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 March, 1980

DOCKET NO. 50-316
UNIT NAME D.C.Cook-Unit 2
DATE 4-8-80
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
74	800301	F	17.9	A	3	N.A.	CH	VALVOP	Reactor/Unit trip due to extreme low level in No. 4 steam generator caused by problems with the feed-water regulating valve for steam generator No. 4. The Unit was returned to service the same day. 100% reactor power was reached 800302.

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 (LER) File (NUREG-0161)

5
Exhibit I - Same Source

(9/77)

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[1]. 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 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 critieria:

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.

[1]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, 50 MW is too small a change to warrant explanation.

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For long textual reports continue narrative on separate paper and reference the shutdown or power reduction for this narrative.

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MONTHLY OPERATING EXPERIENCES -- MARCH, 1980

Highlights :

The Unit operated at 100% power the entire reporting period except as detailed in the Summary.

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

Total electrical generation for the month was 801,060 Mwh.

Summary :

3/1/80 -- The Reactor and Unit tripped from 100% power at 0044 hours. Turbine Valves were being tested and Turbine Control had been left in manual mode. This caused greater than normal load deflection. Level control of No. 4 Steam Generator was sticky and sluggish and did not keep up to the demand. The actual cause of the trip was lo lo level in No. 4 Steam Generator.

The Reactor was returned to criticality at 1623 hours.

The Turbine Generator Unit was paralleled to the system at 1839 hours.

The Unit was loaded to 48% power by 2145 hours and held at this point for clean up of Steam Generators.

3/2/80 -- The Unit was loaded to 100% power between the hours of 0320 and 1510.

3/4/80 -- The North Reheater Coils were isolated at 0925 hours. Cause of isolation was failure of one of the second pass drain controls. The South Reheater Coils were removed from service. All Reheater Coils were returned to service by 1415 hours.

The "A" string of Low Pressure Heaters were returned to service at 2330 hours. This string of heaters had been left out of service from the start-up of 3/1/80, for tube leak repairs in the No. 4 Heater.

3/10/80 -- The South Heater Drain Pump tripped at 1055 hours due to a malfunction of the Automatic Discharge Valve. This started a transient on the Unit which resulted in the other drain pump also tripping and isolation of steam to the Reheater Coils. Loading of the Unit was reduced to 90% and stabilized at this point.

Two Heater Drain Pumps were again available for service at 1630 hours and the Reheater Coils were returned to service at 1710 hours. The Unit was loaded to 100% power by 1850 hours.

3/12/80 -- The Turbine Driven Auxiliary Feedwater Pump was inoperable for a 7.5 hour period for replacement of the outboard pump bearing.

3/13/80 -- The Turbine Driven Auxiliary Feedwater Pump was inoperable for a 6.25 hour period for adjustment to the Trip and Throttle Valve.

3/14/80 -- The South Reheater Coils isolated at 1720 hours followed by isolation of the North Coils. This was due to an extreme high alarm on a First Pass Drain Tank. Unit power was reduced to 95% and stabilized at this point.

3/15/80 -- The Reheater Coils were returned to service and the Unit loaded 100% power by 0330 hours.

The 69/4KV Reserve Off-site Power Source was out of service for a 6.25 hour period for preventive maintenance.

3/21/80 -- The Turbine Driven Auxiliary Feedwater Pump became inoperable at 1330 hours when the Turbine Trip Coil was found to be burned up. The Trip Coil was removed and the Turbine tested to verify that the mechanical overspeed would still function. This pump was again declared operable at 0330 hours, 3/22/80.

3/25/80 -- The Turbine Driven Auxiliary Feedwater Pump was inoperable for a 5 hour period to renew the Turbine Trip Coil.

Auxiliary Feedwater Valve FMO-221, was inoperable for a 1.25 hour period when it was found that this valve could not be operated from the Control Room. The problem was found to be a loose wire in the motor operator of the valve.

Various Condenser Halfs were out of service, one half at a time, for a total of 51.5 hours during the reporting period. This is for checking and location of tube leaks.

DOCKET NO. 50 - 316
UNIT NAME D. C. Cook - Unit No. 2
DATE 4-8-80
COMPLETED BY B. A. Svensson
TELEPHONE (616) 465-5901
PAGE 1 of 3

MAJOR SAFETY-RELATED MAINTENANCE

MARCH, 1980

M-1 Motor to pump coupling on radiation monitors R11 and R12 sample pump failed. Replaced coupling.

M-2 Turbine driven auxiliary feedpump outboard pump bearing was running hot. Replaced bearing and had pump tested.

M-3 The motor operated discharge valve from the turbine driven auxiliary feedpump to number 2 steam generator, FMO-221, would not operate from the control room. Found one armature lead burned off in the connection box. Installed a new lug and reterminated. Had valve tested.

C&I-1 Pressurizer pressure bistable NPP-151 was found to be actuating the pressurizer heaters when the pressure reached 2225 psig. Specifications call for heater actuation at 2210 psig.

The bistable actuation point was found to be too low and was adjusted to the proper 13.75 ma. The reset point was also checked and found to be in specification at 15.73 ma.

C&I-2 Pressurizer spray valve NRV-163, loop 3, was leaking in the "automatic" position, causing the pressure to drop.

Investigation disclosed that the zero point on the spray valve positioner had shifted. The positioner was rezeroed and the valve was verified to be seating properly.

C&I-3 Steam flow/feed flow mismatch alarm and status light were given on steam generator 2, channel 11, steam flow.

The steam flow transmitter was vented and refilled with water and proper output from the transmitter was verified.

C&I-4 Steam generator number 1, feedwater flow regulating valve was operating with valve indication full open and maximum low deviation on demand. Steam flow/feed flow and level indications were all normal. The positioner for feed flow regulator valve, FRV-210, was recalibrated and the valve stroke was verified.

C&I-5 Radiation monitoring channel R-11, containment air particulate monitor filter paper drive system failed. The filter paper drive assembly, microswitch, take-up reel, supply reel and shafts were replaced.

DOCKET NO. 50 - 316
UNIT NAME D. C. Cook - Unit No. 2
DATE 4-8-80
COMPLETED BY B. A. Svensson
TELEPHONE (616) 465-5901
PAGE 2 of 3

MAJOR SAFETY-RELATED MAINTENANCE

MARCH, 1980

C&I-6 The axial power distribution monitoring system would not print the detector being utilized, and would actuate sporadically. Power supply PS3 was replaced with a spare. The 1-2 input card and stepping switch were also replaced. Normal operation of the APDMS was verified.

C&I-7 Main turbine stop valve "C" would not operate in the test mode. The coil for the stop valve test solenoid valve had failed. A spare coil was installed and the stop valve test was performed.

C&I-8 Critical control room power inverter "CCRP" frequency would change periodically. The frequency on the oscillator board was adjusted to provide synchronous operation.

C&I-9 Radiation monitoring system channel R-19, steam generator blowdown monitor failed. The high voltage cable and alarm cable were found broken. The cables were repaired and the channel was returned to normal.

C&I-10 During the performance of a surveillance test, steam generator level bistable 2LB-538A/B, was found to be exceeding specifications. 2LB-538A/B bistable was removed, and a spare bistable was installed and calibrated.

C&I-11 DCR-206, reactor coolant drain tank pump suction isolation valve would not remain open. A control relay coil and resistor had failed. The relay and resistor were replaced. The open and closure time was measured.

C&I-12 The 50 foot wind direction indication on the control room recorder failed to the low end of scale. The output module failed. The output module was replaced with a spare, and the calibration was tested. The 150 foot and 50 foot wind direction indication were checked and indicated the proper direction.

C&I-13 The PLB-1 battery charger would not increase the output voltage when manually switched into the equalize charge mode. The automatic equalizer timer was removed and cleaned. Proper operation of the charger was verified prior to returning the charger to service.

DOCKET NO. 50 - 316
UNIT NAME D. C. Cook - Unit No. 2
DATE 4-8-80
COMPLETED BY B. A. Svensson
TELEPHONE (616) 465-5901
PAGE 3 of 3

MAJOR SAFETY-RELATED MAINTENANCE

MARCH, 1980

C&I-14 The 50 foot wind direction recorder indication failed. The wind direction sensor, secondary system, had failed. The primary wind direction sensor had previously failed. The primary sensor was replaced and placed into operation.

C&I-15 The turbine driven auxiliary feedpump turbine tripped and would not reset. The coils on the solenoid for the trip and throttle valve indicated damage and would not pull in the mechanism. The coils were replaced on the solenoid and the linkage to the trip and throttle valve was adjusted.