

OPERATING DATA REPORT

DOCKET NO. 50-316
 DATE 8-4-80
 COMPLETED BY B. Gillett
 TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: D. C. Cook Unit 2
 2. Reporting Period: July 1980
 3. Licensed Thermal Power (MWe): 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	5,111	22,631
12. Number Of Hours Reactor Was Critical	438.8	4,267.4	15,347.3
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	431.9	4,175.3	14,677.2
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,408,949	13,602,976	45,827,356
17. Gross Electrical Energy Generated (MWH)	443,530	4,442,550	14,596,960
18. Net Electrical Energy Generated (MWH)	427,116	4,285,826	14,053,238
19. Unit Service Factor	58.0	81.7	73.0
20. Unit Availability Factor	58.0	81.7	73.0
21. Unit Capacity Factor (Using MDC Net)	53.0	77.5	67.5
22. Unit Capacity Factor (Using DER Net)	52.2	76.2	66.4
23. Unit Forced Outage Rate	0	1.4	10.3

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	_____	_____

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316

UNIT 2

DATE 8-1-80

COMPLETED BY W. T. Gillett

TELEPHONE 616-465-5901

MONTH July 1980

DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	-----	17	1020
2	-----	18	980
3	-----	19	368
4	-----	20	1013
5	-----	21	1018
6	-----	22	1022
7	-----	23	1044
8	-----	24	1042
9	-----	25	982
10	-----	26	910
11	-----	27	1042
12	-----	28	1051
13	157	29	1031
14	994	30	1036
15	1016	31	1032
16	1031		

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 July, 1980

DOCKET NO. 50-316
 UNIT NAME D.C.Cook-Unit 2
 DATE 8-6-80
 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
78	800627	S	304.2	H	1	N.A.	ZZ	ZZZZZZ	Outage continued from previous month. Primary purpose for the outage was to complete auxiliary feedwater system modification. Unit returned to service 800713. Reactor power at 100% 800714. Reactor/Turbine trip. The reactor tripped due to low-low level in No. 1 steam generator. The low steam generator level was caused by an apparent loss of steam supply to the east main feed pump turbine. The Unit was returned to power the same day. Reactor power increased to 100% 800720. Reactor power reduced to 60% to remove the east main feed pump turbine from service to check for feed pump turbine condenser tube leaks. One tube was plugged. Reactor power was returned to 100% 800726.
79	800719	F	7.9	A	3	N.A.	ZZ	ZZZZZZ	
80	800725	F	0	A	4	N.A.	ZZ	ZZZZZZ	

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)

(9/77)

⁵
 Exhibit I - Same Source

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:

- 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.

MONTHLY OPERATING ACTIVITIES -- JULY, 1980

Highlights :

The Unit entered the reporting period in a Cold Shutdown (Mode 5) outage. The Unit had been removed from service at 2307 hours 6/27/80 and cooled to Mode 5 by 0925 hours 6/28/80.

The primary purpose for this outage was to permit completion of the auxiliary feedwater modification, which will give each unit its independent auxiliary feedwater system.

The Unit was returned to service 7/13/80 which is detailed in the summary.

There was one other outage 7/19/80 when the flow reduced from one of the Main Feed Pumps. This is also detailed in the summary.

Total electrical generation for the month was 443,530 MWH.

Summary :

7/5/80 -- The Emergency Diesel Fire Pump was inoperable for a 29 hour period, starting at 0647 hours. This was for cleaning of the discharge strainer.

7/11/80 -- After completion of outage work, Unit Startup was initiated at 2345 hours.

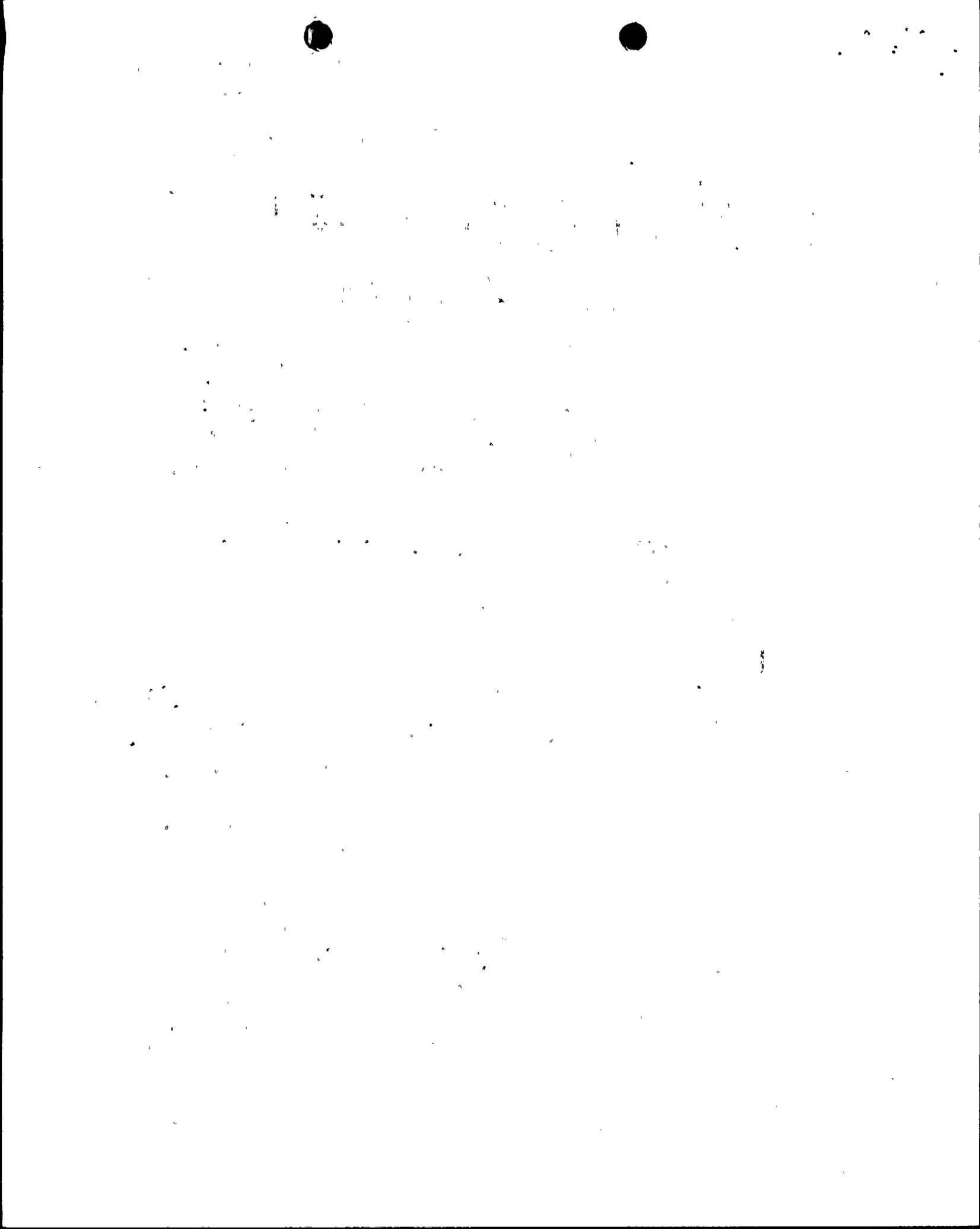
7/12/80 -- The Reactor Plant entered Mode 4 at 0608 hours.

The Reactor Plant entered Mode 3 at 1912 hours.

7/13/80 -- The Reactor was critical at 1235 hours.

The Turbine Generator Unit was rolled at 1418 hours and placed in parallel with the system at 1613 hours. Loading was increased to 100% power by 0510 hours 7/14/80.

7/17/80 -- The "CD" Emergency Diesel Generator was inoperable for a 7.5 hour period for replacement of a faulted thermocouple.



7/19/80 -- The Unit tripped at 0004 hours due to Low-Low level in #1 Steam Generator. This was caused by reduced flow from the East Main Feed Pump which was seen to be losing speed. Power level at time of trip was near 100%. An attempt was being made to reduce loading to match the reduced feed-water flow.

Early analysis of the feed pump problem was that steam pressure regulating valve ARV-11, which supplies steam to the feed pump turbine, had malfunctioned. Thorough check-out of the feed pump turbine and its steam supply could not identify any problem, and this pump was returned to service with the Unit.

The Reactor was returned to criticality at 0439 hours.

The Turbine Generator Unit was rolled at 0626 hours and placed in parallel with the system at 0757 hours.

The Unit was loaded to 50% power by 1159 hours and held at this point while check-out of the East Main Feed Pump was taking place.

Unit loading was initiated at 1740 hours.

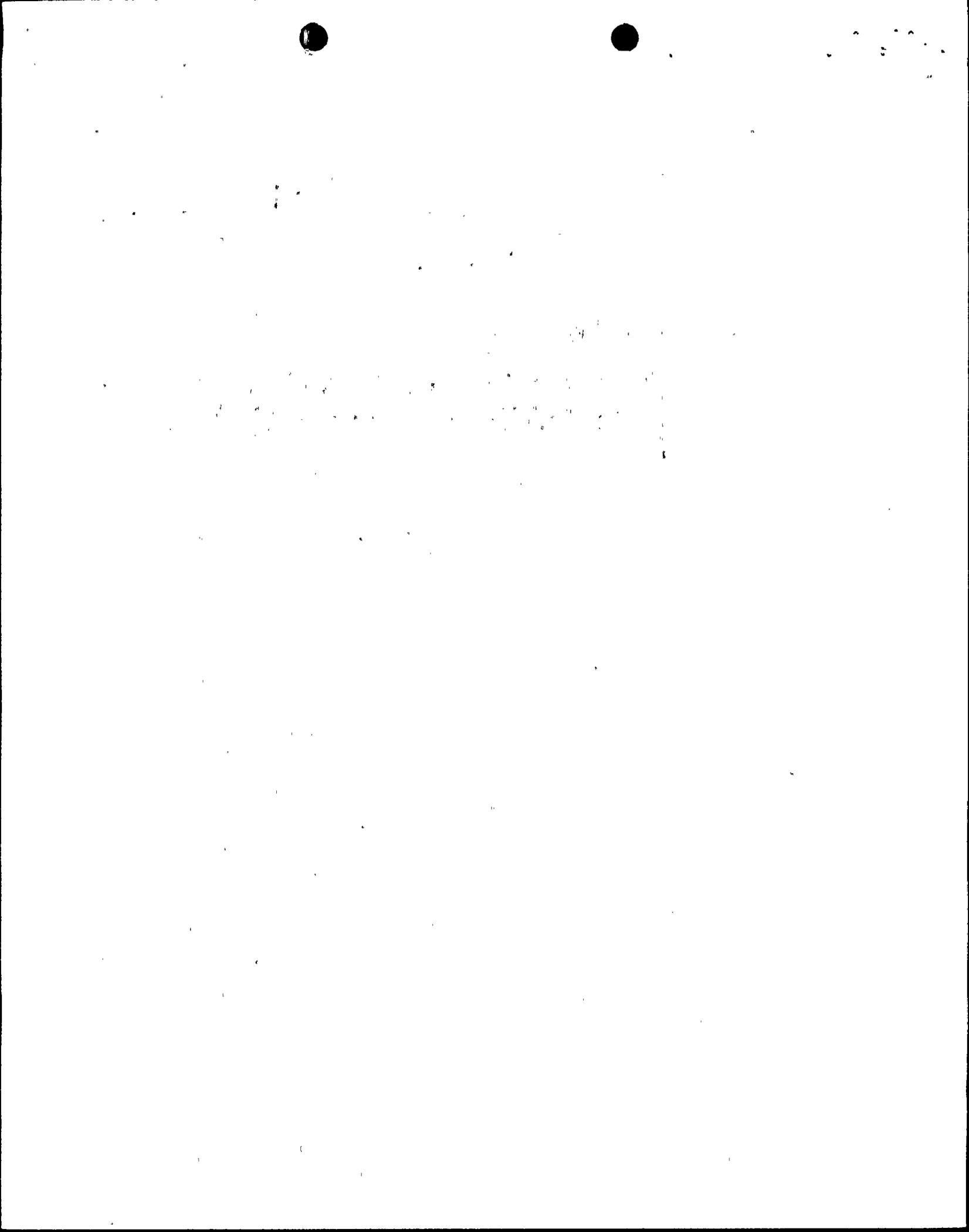
7/20/80 -- Unit was loaded to 100% power by 0355 hours.

Valve IMO-910 (suction from Refueling Water Storage Tank to Charging Pumps) was inoperable for an 11.75 hour period when the valve failed to stroke with power.

7/21/80 -- Containment Radiation Monitors R-11 and R-12 were inoperable for a 7 hour period while repairs were made to the filter paper drive.

7/23/80 -- The East Residual Heat Removal System was inoperable for a 17 hour period for preventive maintenance.

7/25/80 -- The Fire Detection System of Engineered Safety Feature Ventilation Charcoal Filter HV-AES-1 was inoperable for a 3.5 hour period for necessary repairs.



- 7/25/80 -- Unit loading was reduced to 60% over a 1.25 hour ramp starting at 2157 hours to remove the East Main Feed Pump from service to check its condenser for a tube leak.
- 7/26/80 -- After plugging one leaking tube in the Condenser of the East Main Feed Pump, the pump was returned to service and the Unit Loaded to 100% power over a 5.25 hour ramp starting at 0350 hours.
- 7/30/80 -- The "AB" Emergency Diesel Generator was inoperable for a 5.25 hour period for cleaning of relays.

Main condenser halves were out of service, one-half at a time, for a total of 29 hours during the reporting period for location and repairs to circulating water leaks.

Prior to the cold outage at the start of the reporting period, the Unit was operating non-reheat due to tube leaks in some of the reheater coils. During the outage, four of the eight reheater coils were identified to have tube leaks. The leaking tubes were removed and tube sheets plugged. Several attempts have been made to place the coils in service but this has been unsuccessful. The Unit continues to operate non-reheat.

DOCKET NO.	50 - 316
UNIT NAME	<u>D. C. Cook - Unit No. 2</u>
DATE	<u>8-6-80</u>
COMPLETED BY	<u>B. A. Svensson</u>
TELEPHONE	<u>(616) 465-5901</u>
PAGE	<u>1 of 1</u>

MAJOR SAFETY-RELATED MAINTENANCE

JULY, 1980

- M-1 No. 1 steam generator blowdown regulating valve, DRV-312, had a body to bonnet leak. Lapped the valve seats and replaced all the gaskets. Had valve tested.
- M-2 A weld leak was detected downstream of a newly installed test valve on the discharge of the motor driven auxiliary feedpump. The 1" socket weld connection was rewelded and NDE was completed.
- C&I-1 Loop 3 protection channel II High Steam Line Flow status light was periodically received. MFP-130 calibration was performed and returned to service.
- C&I-2 ILA-121, accumulator level indication was cycling between 50 and 60 percent. The redundant channel ILA-120 was remaining constant. Transmitter ILA-121 was calibrated and returned to service. Normal control room indication was restored.
- C&I-3 FRV-240, steam generator No. 4 feedwater regulating valve, was sticking in various positions. The valve actuator was replaced and proper valve operation verified.
- C&I-4 The axial power distribution monitoring system failed to print the data. The power supply for the printer had failed. A spare power supply was installed and normal operation of the printer was verified.

