AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316
UNIT 2
DATE 2-2-79
COMPLETED BY W.T. Gillett
TELEPHONE 616-465-5901

MONTH January 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	1075	17	1083
2	820	18	1080
3	628	19	1074
4	1045	20	1070
5	995	21	1059
6	370	22	1065
7	795	23	968
8	1084	24	902
9	1075	25	924
10	1069	26	1008
11	1073	27	1040
12	1054	28	1070
13	546	29	1069
14	152	30	1067
15	719	31	1070
16	1077		

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)

7902220027

OPERATING DATA REPORT

DOCKET NO. 50-316
DATE 2-2-79
COMPLETED BY W.T. Gillett
TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook 2
2. Reporting Period: January 1979
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

Notes

8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:

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	744	9504
12. Number Of Hours Reactor Was Critical	710.5	710.5	5941.2
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	690.6	690.6	5418.2
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,240,714	2,240,714	15,345,821
17. Gross Electrical Energy Generated (MWH)	724,740	724,740	4,710,270
18. Net Electrical Energy Generated (MWH)	699,081	699,081	4,513,080
19. Unit Service Factor	92.8	92.8	79.5
20. Unit Availability Factor	92.8	92.8	79.5
21. Unit Capacity Factor (Using MDC Net)	86.8	86.8	68.4
22. Unit Capacity Factor (Using DER Net)	85.4	85.4	67.3
23. Unit Forced Outage Rate	7.2	7.2	7.0

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)

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH January, 1979

DOCKET NO. 50-316
UNIT NAME D.C.Cook-Unit 2
DATE 2-12-79
COMPLETED BY B.A. Svensson
TELEPHONE 616 - 465-5901
Sheet 1 of 2

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
45	790102	F	0	A	4	N/A	ZZ	ZZZZZZ	Reactor power reduced to 54% to remove east main f-p turbine from service to repair leaks in the f-p turbine condenser.. Reactor power returned to 100% 790103.
46	790103	F	6.1	G	1	N/A	ZZ	ZZZZZZ	Reactor tripped manually when feedwater isolation valves to steam generators 1 and 2 were inadvertently closed. Reactor power returned to 100% 790104.
47	790106	F	16.5	H	3	79-003/03L-0	ZZ	ZZZZZZ	Reactor trip with safety injection actuation due to indicated "High" steam line differential pressure. False indication of high steam line pressure was caused by instrument lines freezing. Reactor power returned to 100% 790107

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

(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH January, 1979

DOCKET NO. 50-316
UNIT NAME D.C.Cook-Unit 2
DATE 2-12-79
COMPLETED BY B.A. Svensson
TELEPHONE 616 - 465-5901
Sheet 2 of 2

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
48	790113	F	8.6	A	3	N/A	HC	HTEXCH	Unit trip due to drop in "A" Condenser vacuum caused by multiple tube failures.
49	790114	F	22.2	H	3	N/A	ZZ	ZZZZZZ	Unit trip from 96% power during power escalation due to main transformer Phase 2 ground fault. Ground fault was due to ice build-up on bus support insulator causing a phase to ground flash-over. Reactor power at 100% 790115.

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)

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Method:
1-Manual
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Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5
Exhibit I - Same Source

(9/77)

Docket No.: 50-316
Unit Name: D. C. Cook Unit #2
Completed By: R. S. Lease
Telephone: (616) 465-5901
Date: February 12, 1979

OPERATING EXPERIENCE -- JANUARY, 1979

Highlights

There were four full power trips on this Unit during the reporting period.

Summary

01/01/79 -- The South half of "B" Condenser was out of service for an 8.75 hour period for checking of tube leaks.

01/02/79 -- Unit loading was reduced from 100% power (1110 MWe) to 55% power (600 MWe) to remove the East Feed Pump from service. This was to inspect the Feed Pump's Condenser for tube leaks and one leak was located. The Feed Pump was returned to service and the Unit was reloaded to 100% power (1110 MWe). Total time span of reduced load was 16 hours.

The South half of "B" Condenser was again out of service while the Feed Pump was out of service.

01/03/79 -- At 0915 hours the Unit was manually tripped from 100% power when Feedwater Isolation Valves #1 and #2 Steam Generator were inadvertantly closed. The Reactor was returned to critical at 1322 hours and the Generator was paralleled with the system at 1523 hours the same day.

01/04/79 -- The Unit was loaded to 100% power (1110 MWe) by 0039 hours.

The East Containment Spray System was inoperable for a 3.75 hour period for repacking of a valve.

01/05/79 -- Loading was reduced to 80% power (850 MWe) to remove the "A" set of low pressure heaters from service due to a suspected tube leak in the #4 heater. Once the set of heaters was out of service, the Unit was reloaded to 100% power (1110 MWe). Total time of reduced load was 15.75 hours..

The Diesel Fire Pump was out of service for a 4.5 hour period for routine lubrication.

01/06/79 -- The Unit tripped from 100% power at 0901 hours. The initiation of trip was from a Safety Injection due to an indicated pressure difference of 100 psi between two steam leads. The pressure difference was false and was really caused by steam pressure indication lines being frozen. The outside weather temperature was -6°F and some openings in the steam stop valve enclosure had not been sealed. The frozen lines were known and work was underway at the time of trip to thaw them out.

Even though the Safety Injection was considered false due to the frozen pressure lines, the Boron Injection Tank was allowed to flow to the core. This required returning this tank to Chemical Specification prior to start-up.

Auxiliary Feedwater Valve FMO-232 was inoperable for a 2 hour period when it could not be closed. The problem was traced to a broken wire and repaired.

The Reactor was returned to critical at 2226 hours.

01/07/79 -- The Turbine was rolled and the Generator paralleled with the system at 0128 hours. Parallel was through only one Generator Braker -- A-1. The A-2 braker was unavailable because of a damaged capacitor. The A-2 braker was repaired and closed at 1228 hours.

The Unit was loaded to 100% power (1110 MWe) by 1020 hours.

The "A" set of low pressure heaters was returned to service at 2030 hours. 8 leaking tubes had been identified and plugged in the #4 Heater.

The North half of "B" Condenser was out of service for a 4 hour period for checking of tube leaks.

01/08/79 -- The High Demand Fire Pump was out of service for a 5.75 hour period for routine lubrication.

Radiation Monitors R-31 and R-32 were out of service for a 2 hour period for calibration of the R-32 instrument.

01/09/79 -- The South half of "A" Condenser was removed from service at 0910 hours. This remained out of service for a period of 31 hours. Attempt was made to return it to service several times and each time leakage was again indicated. The leakage was finally found.

Each Component Cooling Water Pump was out of service for a one hour period, on a staggered basis, for routine lubrication.

01/10/79 -- The North Safety Injection Pump was out of service for a 4.5 hour period for routine lubrication followed by the South Safety Injection Pump being out of service for a 1.75 hour period for routine lubrication.

#2 Steam Generator Stop Valve Trip Valve MRV-221 was inoperable for a 3 hour period for replacement of a leaking gasket.

The South Condensate Booster Pump was removed from service for a motor bearing inspection.

01/11/79 -- The East RHR Pump was inoperable for a 4.25 hour period for routine lubrication followed by the West RHR Pump inoperable for a 2 hour period for routine lubrication.

The Turbine Driven Auxiliary Feedwater Pump was inoperable for a 16.5 hour period for repairs to the Suction Strainer.

01/12/79 -- The North half of "C" Condenser was out of service for a 5 hour period for plugging of tube leaks.

The North half of "A" Condenser was out of service for a 12.75 hour period for checking of tube leaks.

The East Centrifugal Charging Pump was out of service for a 6.5 hour period for routine lubrication.

Loading was reduced to 90% power (1000 MWe) for testing of Turbine valves. Total time span of reduced power was 3 hours.

01/13/79 -- The Unit tripped from 100% power at 1005 hours as the South half of "A" Condenser was being drained. The cause of the trip was low vacuum in the Condenser due to air being sucked in due to leaking Condenser tubes.

During the outage this Condenser was checked and 21 leaking tubes were identified and plugged.

01/13/79 -- (cont.) The Reactor was returned to critical at 1659 hours and the Unit paralleled to the system at 1839 hours. The Unit was loaded to 100% power by 0400 hours January 14, 1979.

01/14/79 -- The Unit again tripped from 100% power at 0421 hours. Cause of the trip was differential relay operations on Phases 2 and 3 of the Main Transformers. The differential protection operated on both the transformer protection and the overall protection.

At this time, weather conditions were extremely poor due to high winds and blowing snow. Investigation found that a 765 KV support insulation on the Phase 2 Main Transformer had flashed over. There was a build up of ice in this area. The flash over area only required clean up and this was accomplished by 0100 hours January 15, 1979.

01/15/79 -- The West Component Cooling Water Pump was out of service for a 6 hour period for routine lubrication.

The North half of "A" Condenser was out of service for a 9 hour period for checking of tube leaks.

The Reactor had been returned to critical at 1325 hours January 14, 1979.

The Unit was paralleled to the system at 0235 hours and loaded to 100% power (1110 MWe) by 2400 hours.

01/16/79 -- The North Control Room Air Conditioning Unit was out of service for a 9.75 hour period for rerouting of air lines.

#21 Circulating Water Pump was returned to service. This pump had been out of service since December 30, 1978 and rebuilt.

01/19/79 -- Loading was reduced to 90% power (1000 MWe) for testing of Turbine Valves. Total time span of reduced power 5 hours.

01/21/79 -- The Southwest Steam Coil in the left reheater started showing indication of leakage. The heating steam was valved off the Southwest coils of both reheaters at 0930 hours.

01/21/79 -- (cont.) Radiation Monitors R-11 and R-12 were inoperable for 36 minutes for replacement of paper.

As the South half of "A" Condenser was being drained for leak inspection, Condenser Vacuum dropped by 2.5 inches Hg. and electrical load sagged by 60 Mw. Two Condenser tubes were plugged. One acted like total severence. The vacuum recovered and the Condenser half was returned to service. Total Condenser outage time 3 hours.

01/23/79 -- Loading of the Unit was reduced to 90% power (980 MWe) for removal of the "A" set of high pressure heaters. Reason -- suspected tube leaks in the #5 heater.

01/24/79 -- The "AB" Emergency Diesel Generator was inoperable for a 15.5 hour period for repair to cooling water check valve ESW-143.

01/26/79 -- Unit loading increased to 100% power (1110 MWe). The "A" set of high pressure heaters remain out of service.

Unit load was reduced to 90% power (980 MWe) for testing of Turbine valves. Total time span of reduced load 4.5 hours.

01/27/79 -- The South Condensate Booster Pump was returned to service. What started as a motor bearing inspection ended up as a motor replacement.

The "A" set of High Pressure heaters was returned to service. Tube leaks were plugged in both the 5 and 6 heaters.

All motor operated Auxiliary Feedwater Valves were removed from service, one at a time, for inspection of electrical connections and checking of tightness of terminals.

D

DOCKET NO. 50 - 316
UNIT NAME D. C. Cook - Unit No. 2
DATE 2-12-79
COMPLETED BY B. A. Svensson
TELEPHONE (616) 465-5901

MAJOR SAFETY-RELATED MAINTENANCE

JANUARY, 1979

M-1 IMO-211, East containment spray discharge valve would not close. The termination at the torque switch failed and was repaired. Retest was satisfactory.

M-2 FMO-232 auxiliary feed valve, would not shut from control room. A broken wire to the torque switch was replaced. Retest was satisfactory.

M-3 Seal leakage on #3 boric acid transfer pump. Replaced mechanical seal and had pump retested.

C&I-1 The low and low-low rod insertion limit alarms for Rod Banks C and D were received while the rods were in their correct positions. The Bank D insertion alarms were the result of the pulse to analog converter improper operation. The pulser was manually pulsed to the correct rod position. The high limit of the Bank C rod insertion limit computer had drifted high. The high limit of the instrument was adjusted for the correct value.

C&I-2 During the performance of 2 THP 4030 STP.145, Train B Logic Channel Surveillance Test, the logic for steam generator high high water level loop 3 failed to test as required. The universal logic board R214 was replaced in the Train B Solid State Protection System. The logic was retested and verified operable.

C&I-3 The permissive status lights P-6, P-7, P-8, P-10 and P-13 were illuminated without the solid state protection system requiring these outputs. The problem was determined as a failure of Z7 on universal logic card A214. The logic board was replaced and the Train B system logic was verified by performing surveillance test 2 THP 4030 STP.145.