OPERATING DATA REPORT

DOCKET NO. 50-315
DATE 2-4-80
COMPLETED BY W. T. Gillett
TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook 1
2. Reporting Period: January 1980
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

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	44,568
12. Number Of Hours Reactor Was Critical	346.8	346.8	33,308.5
13. Reactor Reserve Shutdown Hours	0	0	463
14. Hours Generator On-Line	340.6	340.6	32,423.8
15. Unit Reserve Shutdown Hours	0	0	321
16. Gross Thermal Energy Generated (MWH)	980,650	980,650	90,046,955
17. Gross Electrical Energy Generated (MWH)	323,510	323,510	29,480,850
18. Net Electrical Energy Generated (MWH)	311,267	311,267	28,308,581
19. Unit Service Factor	45.8	45.8	74.6
20. Unit Availability Factor	45.8	45.8	74.6
21. Unit Capacity Factor (Using MDC Net)	40.1	40.1	66.5
22. Unit Capacity Factor (Using DER Net)	39.7	39.7	61.6
23. Unit Forced Outage Rate	54.2	54.2	8.1

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		

8002200 63.4 (9/77)

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO: 50-315

UNIT 1

DATE 2-4-80

COMPLETED BY W. T. Gillett

TELEPHONE 616-465-5901

MONTH JANUARY 1980

DAY	AVERAGE DAILY POWER LEVEL (MWE-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	0	17	248
2	0	18	993
3	0	19	1039
4	0	20	1038
5	0	21	1042
6	0	22	1044
7	0	23	1040
8	0	24	925
9	0	25	1043
10	0	26	1030
11	0	27	691
12	0	28	519
13	0	29	656
14	0	30	687
15	0	31	980
16	0		

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 January, 1980

DOCKET NO. 50-315
UNIT NAME D.C.Cook-Unit 1
DATE 2-11-80
COMPLETED BY B.A. Svensson
TELEPHONE (616) 465-5901
PAGE 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
155 Cont'd.	791224	F	396.2	H	1	79-065/01T-0	SE	SUPORT	Outage continued from previous month to correct discrepancies in piping supports on safety-related piping systems as a result of IE Bulletin No. 79-14. Unit returned to Service 800117. Reactor power increased to 100% 800118. Total duration of outage 570.8 hours.
156	800124	F	0	B	4	N.A.	ZZ	ZZZZZZ	Reactor power reduced to 60% to permit removal of one main feedwater pump. One feedpump removed at a time for cleaning of feedpump turbine condenser tube sheets. Reactor Power returned to 100% 10 hours later.
157	800127	F	7.2	A	3	N.A.	CH	ZZZZZZ	Reactor/Turbine trip caused by Steam Flow/Feedwater Flow mismatch coincident with low level in No. 4 steam generator due to trip of West main (Continued On Next Page)

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.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH January, 1980

DOCKET NO. 50-315
UNIT NAME D.C.Cook-Unit 1
DATE 2-11-80
COMPLETED BY B.A. Svensson
TELEPHONE (616) 465-5901
PAGE 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
157 (Continued)									feedpump turbine. The feedpump turbine trip was due to pump coupling failure. Unit returned to service the same day. Reactor power was held at 68% until 800131 due to West feedpump being out of service. Reactor power reached 100% 800131.

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)
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3
Method:
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2-Manual Scram.
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(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

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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.

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MONTHLY OPERATING EXPERIENCES -- JANUARY, 1980

Highlights :

The Unit entered the reporting period in the "Cold Shutdown" condition. The Unit had been shutdown 12/24/79 when Design Analysis had shown design deficiencies in the Containment Hydrogen Skimmer System.

The Unit was started and electrical generation was again obtained 1/17/80, details of which are in the summary.

There was one more Outage during the reporting period and this is also detailed in the summary.

Total electrical generation for the month was 323,510 Mwh.

Summary :

1/2/80 -- Normal 4KV Auxiliary Power Bus 1-C was deenergized for a 5.5 hour period for testing of the Bus. Safeguards 4KV Bus T-11-C was also deenergized during this period.

1/4/80 -- The "AB" Emergency Diesel Generator was inoperable for an 11 hour period for modification to the Generator Field Flashing Circuit.

Vent Stack Radiation Montors R-31 and R-32 were inoperable for a 10 hour period for revision to piping.

1/7/80 -- The "CD" Emergency Diesel Generator was inoperable for a 17.25 hour period for modification to the Generator Field Flashing Circuit and installation of Jacket Water Temperature Detection Wells.

1/8/80 -- The "AB" Emergency Diesel Generator was inoperable for a 9.25 hour period for installation of Jacket Water Temperature Detection Wells.

Containment Radiation Monitors R-11 and R-12 were inoperable for a 9 hour period for revision to piping.

1/9/80 -- Containment Radiation Monitors R-11 and R-12 were inoperable for a 6 hour period for revision to piping.

1/11/80 -- Meteorological instruments for wind speed and direction were out of service for a 1 hour period for repairs. These instruments are common to both units.

1/14/80 -- Required modifications to hangers and restraints of safety related piping systems were completed and the Unit was released for start-up. The Reactor Plant entered Mode 4 at 1443 hours.

At 2028 hours Source Range Nuclear Instrument N-32 failed to the point that it required replacement of the Detector. This did not prevent heat-up, however, the Reactor Plant was held in Mode 4 until replacement was assured.

1/16/80 -- A new Source Range Detector was installed and made operable at 1850 hours.

Heat-up was again initiated with the Reactor Plant entering Mode 3 at 1610 hours.

1/17/80 -- Full temperature and pressure was obtained on the Reactor Coolant System at 0430 hours.

The reactor was returned to criticality at 0725 hours.

The Turbine/Generator was rolled at 1121 hours and paralleled to the system at 1212 hours.

1/18/80 -- The Unit was load to 100% power by 1010 hours.

The South Hotwell Pump tripped due to a grounded motor lead. Repairs were made the same day.

The West Component Cooling Water Pump was inoperable for 4.5 hour period while repairs were made to a stalled oil ring in one of the motor bearings.

1/19/80 -- The Middle Heater Drain Pump was removed from service at 1980 hours for repairs to the Inboard Pump Seal. This pump was again operable 1/23/80.

1/23/80 -- Control Rod Drive Ability failed at 0425 hours due to a "Urgent Failure" in the Drive Control. A failed solid state card was replaced and the ability to move rods by the drive system was obtained at 0843 hours.

1/23/80 (Cont.) -- Power was reduced to 60% over a two hour ramp starting at 2300 hours to remove the West Feed Pump from service for hand cleaning of its condenser. After cleaning of this condenser, the two feed pumps were exchanged for hand cleaning of the East Feed Pump Condenser.

1/24/80 -- Power was returned to 100% over a 4.5 hour ramp starting at 0445 hours.

1/25/80 Loop 3ΔT and Tavg Channels were inoperable for a 10.5 hour period while a spare RTD was connected in place of a failed one.

1/26/80 -- Power was reduced to 90% for testing of Main Turbine Control Valves, total time below 100% power was 4.75 hours.

1/27/80 -- The Unit tripped from 100% power at 1550 hours due to Steam Flow/Feed Flow Mismatch coincident with low level in #4 Steam Generator. The cause of the low level was that the Coupling between the West Feed Pump Turbine and the Pump failed. This is a Disconnect Coupling and indication was that the last engagement had not been full.

The Reactor was returned to criticality at 2138 hours.

The Turbine/Generator unit was paralleled with the System at 2300 hours.

1/28/80 -- Power was increased to 48% by 0300 hours and held at this point due to an indicated Quadrant Power Tilt. Power increase was resumed at 0815 when it was determined that the tilt was within allowable limits.

The Unit was loaded to 62% by 1000 hours. The Unit had returned to service with only the East Main Feed Pump while repairs were being made to the West Main Feed Pump. The power level was slowly increased to 68% by 1/29/80.

1/30/80 -- The "AB" Emergency Diesel Generator was inoperable for a 6.5 hour period for replacement of several electrical relays.

1/31/80 -- The "CD" Emergency Diesel Generator was inoperable for a 7 hour period for replacement of several electrical relays.

1/31/80 -- The West Main Feed Pump was returned to service
(Cont'd) at 0147 hours.

The Unit was loaded to 100% power by 0652 hours.

DOCKET NO.	50 - 315
UNIT NAME	D. C. Cook - Unit No. 1
DATE	2-11-80
COMPLETED BY	B. A. Svensson
TELEPHONE	(616) 465-5901
PAGE	1 of 1

MAJOR SAFETY-RELATED MAINTENANCE

JANUARY, 1980

M-1 Containment isolation valve in glycol supply line, VCR-10, would not close. Straightened stem and replaced valve diaphragm. Had valve tested.

M-2 The reciprocating charging pump was leaking. Replaced two plungers, packing and adapters. Reassembled with new gaskets and tested.

M-3 Reactor coolant system letdown valve, QRV-111, had a body to bonnet leak. Replaced gaskets and had valve tested.

C&I-1 A Reactor Coolant Pump No. 2 undervoltage reactor trip was received. The 0.5 second time delay agastat relay was found to have an open coil. The coil was replaced and the relay was timed.

C&I-2 The Delta T-Tavg Protection Set I, indicated a value of Tavg 3°F lower than the other protection sets. The calibration of the resistance to voltage converters and the voltage to current converter of the protection set were tested. The instruments as found data did not indicate the source of the 3°F error. A problem on the cable to the hot leg RTD was found. The resistance on one lead indicated a higher value which affected the R/E lead compensation circuit. The wiring problem was resolved and the protection set returned to normal operation.