# OPERATING DATA REPORT

DOCKET NO. 50-316
DATE 4/3/84
COMPLETED BY W.T. Gillett
TELEPHONE 616-465-5901

OPERATING STATUS

1. Unit Name: Donald C. Cook 2
2. Reporting Period: March 1984
3. Licensed Thermal Power (MWt): 3411
4. Nameplate Rating (Gross MWe): 1133
5. Design Electrical Rating (Net MWe): 1100
6. Maximum Dependable Capacity (Gross MWe): 1100
7. Maximum Dependable Capacity (Net MWe): 1060
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 | *54,768 |
| 12. Number Of Hours Reactor Was Critical | 220.6 | 1,636.8 | 39,422 |
| 13. Reactor Reserve Shutdown Hours | - | - | - |
| 14. Hours Generator On-Line | 220.1 | 1,628 | 38,428.1 |
| 15. Unit Reserve Shutdown Hours | - | - | - |
| 16. Gross Thermal Energy Generated (MWH) | 733,977 | *5,405,184 | 123,878,152 |
| 17. Gross Electrical Energy Generated (MWH) | 244,500 | 1,793,180 | 40,019,790 |
| 18. Net Electrical Energy Generated (MWH) | 236,235 | 1,731,606 | 38,584,977 |
| 19. Unit Service Factor | 29.6 | 74.5 | 73.4 |
| 20. Unit Availability Factor | 29.6 | 74.5 | 73.4 |
| 21. Unit Capacity Factor (Using MDC Net) | 30.0 | 74.3 | 70.1 |
| 22. Unit Capacity Factor (Using DER Net) | 28.9 | 72.1 | 68.9 |
| 23. Unit Forced Outage Rate | 0 | 1.9 | 13.4 |

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 | | |

* Corrected error in the February report.

(9/77)

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-316

UNIT 2

DATE 4/3/84

COMPLETED BY W. T. Gillett

TELEPHONE 616-465-5901

MONTH March 1984

| DAY | AVERAGE DAILY POWER LEVEL (MWE-Net) | DAY | AVERAGE DAILY POWER LEVEL (MWe-Net) |
|---|---|---|---|
| 1 | 1101 | 17 | - |
| 2 | 1101 | 18 | - |
| 3 | 1096 | 19 | - |
| 4 | 1099 | 20 | - |
| 5 | 1099 | 21 | - |
| 6 | 1099 | 22 | - |
| 7 | 1097 | 23 | - |
| 8 | 1089 | 24 | - |
| 9 | 1023 | 25 | - |
| 10 | 36 | 26 | - |
| 11 | - | 27 | - |
| 12 | - | 28 | - |
| 13 | - | 29 | - |
| 14 | - | 30 | - |
| 15 | - | 31 | - |
| 16 | - | | |

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

DOCKET NO. 50-316
UNIT NAME D.C. Cook - Unit 2
DATE 4-6-84
COMPLETED BY B.A. Svensson
TELEPHONE 616/465-5901

REPORT MONTH MARCH, 1984

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| 147 | 840310 | S | 523.9 | B&C | 1 | N.A. | ZZ | ZZZZZZ | The Unit was removed from service at 0403 hours on 840310 for scheduled Cycle IV-V refueling/maintenance outage. In addition to the refueling major maintenance work includes steam generator eddy current testing and tube plugging, R.C.P. motor modifications, main turbine condenser retubing and Appendix "R" design changes. The Unit is scheduled to return to service on June 9, 1984. |

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.

Docket No.: 50-316
Unit Name: D. C. Cook Unit 2
Completed By: G. J. Peak
Telephone: (616) 465-5901
Date: 4/4/84
Page: 1 of 1

MONTHLY OPERATING ACTIVITIES - MARCH 1984

Highlights:

The Unit entered the reporting period in Mode 1 with the reactor at 100% of rated thermal power. The coastdown to the start of the refueling outage began on March 6, 1984, as Tavg was allowed to sag in order to keep power at 100%. The generator output breakers were opened at 0403 hours on March 10, 1984, and the fourth refueling outage officially began. No other significant power reductions had occured prior to the start of the refueling outage. As the reporting period came to an end, refueling tool checkouts were in progress in preparation for the upcoming refueling of the reactor.

Total electrical generation for the month was 244,500 MWH.

Summary:

3/5/84 The East Containment Spray pump was inoperable from 0505 hours on 3/5/84 to 0759 hours on 3/6/84 to repair a weld crack on the discharge pressure sensing line.

3/6/84 The South Safety Injection pump was inoperable for about nine hours to repair a leak on valve ICM-265 (Pump Discharge Containment Isolation Valve).

3/9/84 The power reduction to remove the Unit from service for the refueling outage started at 2125 hours and stopped at 48% at 2236 hours to perform a number of miscellaneous tests on the West Main Feed Pump.

3/10/84 Power was further reduced to 25% at 0117 hours for a chemistry hold prior to removing the Unit from service. The generator output breakers were opened at 0403 hours. The turbine was tripped at 0412 hours. The reactor trip breakers were opened at 0450 hours. Mode 4 was entered at 1431 hours.

3/11/84 Mode 5 was entered at 0936 hours.

3/12/84 The Reactor Coolant System Degassing was complete at 0020 hours.

3/14/84 The peroxide cleaning of the Reactor Coolant System was complete at 0400 hours.

3/15/84 The Reactor Coolant System was drained to the half loop level at 1425 hours.

Docket No.: 50-316
Unit Name: D. C. Cook Unit 2
Completed By: G. J. Peak
Telephone: (616) 465-5901
Date: 4/4/84
Page: 1 of 1

The Control Room Cable Vault Halon System remains inoperable as of 1707 hours on 4/14/83. The backup $CO_2$ System remains operable.

| | |
|---|---|
| DOCKET NO. | 50 - 316 |
| UNIT NAME | D. C. Cook - Unit No. 2 |
| DATE | 4-6-84 |
| COMPLETED BY | B. A. Svensson |
| TELEPHONE | (616) 465-5901 |
| PAGE | 1 of 1 |

## MAJOR SAFETY-RELATED MAINTENANCE

## MARCH, 1984

M-1 A weld leak was observed at the instrument tap socket for IPI-210 on the Unit 2 east containment spray pump. The 1" nipple and instrument isolation valve were replaced. QC performed an inspection and the line was returned to service.

M-2 The breaker for 2CD emergency diesel generator jacket water heater would not remain in the on position. The breaker was replaced. Testing was performed and the heater was returned to service.

M-3 The "W" containment spray heat exchanger inlet valve, 2-CTS-121W, was reported to be leaking. The internals were inspected, the disc was lapped and blued and the valve reassembled with new gaskets and packing.

M-4 During a 24-hour surveillance run of the AB diesel generator, leakage was observed on the #6 rear bank fuel injector line. The fuel line and injector were replaced.

M-5 Weld leaks were observed on the residual heat removal piping between RH-123 and RH-124. A section of pipe and RH-123 were replaced.

C&I-1 Delta T/Tavg Protection Set I overtemperature reactor trip/turbine runback bistables, TB-411C/D, were observed to have drifted during performance of monthly surveillance test STP.104. The dual bistable was replaced and recalibrated. A subsequent check showed no calibration drift.

C&I-2 Delta T/Tavg Protection Set IV overtemperature reactor trip/turbine runback bistables, TB-441C/D were found to have drifted during performance of STP.107. The dual bistable was recalibrated per IMP.197. When retested by STP.107, no subsequent calibration drift was noted.

C&I-3 Battery charger 2-AB-2 tripped its AC input circuit breaker when the charger was placed in service. An SCR had shorted, blowing a protective fuse. After replacement of these parts, the charger was returned to service.

American Electric Power System
INDIANA & MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT
P.O. Box 458, Bridgman, Michigan 49106
(616) 465-5901

April 6, 1984

Director, Office Of Management Information
and Program Control
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Gentlemen:

Pursuant to the requirements of Donald C. Cook Nuclear Plant Unit 2 Technical Specification 6.9.1.6, the attached Monthly Operating Report for the Month of March, 1984 is submitted.

Sincerely,

for W. G. Smith, Jr.
Plant Manager

WGS:ab

Attachments

cc: J. E. Dolan
M. P. Alexich
R. W. Jurgensen
NRC Region III
E. R. Swanson
R. O. Bruggee (NSAC)
R. C. Callen
S. J. Mierzwa
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