C05/24/78

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FORWARDING SUBJECT FACILITY"S MONTHLY OPERATING REPT FOR THE MONTH OF APRIL, 1978.

PLANT NAME: OCONEE - UNIT 1
OCONEE - UNIT 2
OCONEE - UNIT 3
REVIEWER INITIAL: XJM
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DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE: AREA 704
373-4083

May 15, 1978

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

RE: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287

Dear Sir:

Please find attached information concerning the performance and operating status of the Oconee Nuclear Station for the month of April, 1978.

The following correction is being submitted to the operating date for March, 1978, previously provided by my letter of April 14, 1978. On Oconee Unit 3 Unit Shutdowns and Power Reductions, the component code was reported as PUMPXX. The component code should be MOTORX. Attached for your information, is a corrected copy of the Unit Shutdowns and Power Reductions for Oconee Unit 3.

Very truly yours,

William O. Parker, Jr.

JAR:scs
Attachment

cc: Mr. J. P. O'Reilly

A003
S11

DOCKET NO: 50-269
UNIT: Oconee Unit 1
DATE: 05-15-78

NARRATIVE SUMMARY

MONTH: April, 1978

Oconee 1 began the month of April at near rated power. On 4/17 power was reduced to 91% for maintenance on the 1D2 heater drain pump. The unit was returned to near rated power the same day. On 4/21 the unit was removed from service because of a leak in the "B" OTSG. It remained out of service the duration of the month.

MONTHLY REFUELING INFORMATION REQUEST

1. Facility name: Oconee Unit 1.

2. Scheduled next refueling shutdown: October 15, 1978.

3. Scheduled restart following refueling: December 3, 1978.

4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? Yes.
If yes, what will these be? Amendment to incorporate technical specifications for Oconee Nuclear Station, Unit 1 Cycle 5.

If no, has reload design and core configuration been reviewed by Safety Review Committee regarding unreviewed safety questions? _____.
If no, when is review scheduled? _____.

5. Scheduled date(s) for submitting proposed licensing action and supporting information: September 1, 1978.

6. Important licensing considerations (new or different design or supplier, unreviewed design or performance analysis methods, significant changes in design or new operating procedures). _____

7. Number of fuel assemblies (a) in the core: 177.
(b) in the spent fuel pool: 141.

8. Present licensed fuel pool capacity: 306 in Oconee 1 & 2 pool.
Size of requested or planned increase: no increase planned.

9. Projected date of last refueling which can be accommodated by present licensed capacity: 3/3/80.

DUKE POWER COMPANY

Date: May 15, 1978.

Name of Contact: J. A. Reavis.

DOCKET NO: 50-270
UNIT: Oconee Unit 2
DATE: 05-15-78

NARRATIVE SUMMARY

MONTH: April, 1978

Oconee 2 began the month of April at near rated power. On 4/6 the unit was removed from service because of valve packing leakage on the RC system. After a complete cooldown and inspection, valves 2RC-2 AND 2RC-3 were repacked. During heatup another leak was noted during a leak check of the Reactor Building. The leak was coming from an O-ring seal on the middle heater bundle of the pressurizer which required a cooldown and draining for repair. The unit was returned to service on 4/25 and after necessary holds reached near rated power level on 4/28 and continued through the month's end.

MONTHLY REFUELING INFORMATION REQUEST

1. Facility name: Oconee Unit 2.

2. Scheduled next refueling shutdown: December 3, 1978.

3. Scheduled restart following refueling: January 21, 1979.

4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? Yes.
   If yes, what will these be? Amendment to incorporate technical specifications for Oconee Nuclear Station Unit 2 Cycle 4.

   If no, has reload design and core configuration been reviewed by Safety Review Committee regarding unreviewed safety questions? _____.
   If no, when is review scheduled? _____.

5. Scheduled date(s) for submitting proposed licensing action and supporting information: October 15, 1978.

6. Important licensing considerations (new or different design or supplier, unreviewed design or performance analysis methods, significant changes in design or new operating procedures). _____.

7. Number of fuel assemblies (a) in the core: 177.
   (b) in the spent fuel pool: 141.

8. Present licensed fuel pool capacity: see Oconee Unit #1.
   Size of requested or planned increase: see Oconee Unit #1.

9. Projected date of last refueling which can be accommodated by present licensed capacity: 3/3/80.

DUKE POWER COMPANY

Date: May 15, 1978.

Name of Contact: J. A. Reavis.

DOCKET NO: 50-287
UNIT: Oconee Unit 3
DATE: 05-15-78

NARRATIVE SUMMARY

MONTH: April, 1978

Oconee 3 began the month of April at near 75% power due to the 3B1 reactor coolant pump (RCP) being out of service because of the motor upper oil pot low level alarm. Also on 4/1 during RCP tests being performed during shutdown, the reactor tripped when 3A1 RCP was being put in service. The oil level was corrected in 3B1 RCP motor and the unit returned to service. A planned turbine trip test was performed and the unit was again put in service. After normal startup hold for Xenon the unit returned to near rated power on 4/4 and continued the remainder of the month.

INSTRUCTIONS FOR COMPLETING OPERATING DATA REPORT

This report should be furnished each month by licensees. The name and telephone number of the preparer should be provided in the designated spaces. The instructions below are provided to assist licensees in reporting the data consistently. The number of the instruction corresponds to the item number of the report format.

1. **UNIT NAME**. Self-explanatory.

2. **REPORTING PERIOD**. Designate the month for which the data are presented.

3. **LICENSED THERMAL POWER (MW_t)** is the maximum thermal power, expressed in megawatts, currently authorized by the Nuclear Regulatory Commission.

4. **NAMEPLATE RATING (GROSS MW_e)**. The nameplate power designation of the turbine-generator in megavolt amperes (MVA) times the nameplate power factor of the turbine generator.

5. **DESIGN ELECTRICAL RATING (NET MW_e)** is the nominal net electrical output of the unit specified by the utility and used for the purpose of plant design.

6. **MAXIMUM DEPENDABLE CAPACITY (GROSS MW_e)** is the gross electrical output as measured at the output terminals of the turbine-generator during the most restrictive seasonal conditions.

7. **MAXIMUM DEPENDABLE CAPACITY (NET MW_e)**. Maximum dependable capacity (gross) less the normal station service loads.

8. Self-explanatory.

9. **POWER LEVEL TO WHICH RESTRICTED, IF ANY (NET MW_e)**. Note that this item is applicable only if restrictions on the power level are in effect. Short-term (less than one month) limitations on power level need not be presented in this item.

   Since this information is used to develop figures on capacity lost due to restrictions and because most users of the "Operating Plant Status Report" are primarily interested in energy actually fed to the distribution system, it is requested that this figure be expressed in MWe-Net in spite of the fact that the figure must be derived from MWt or percent power.

10. **REASONS FOR RESTRICTIONS, IF ANY**. If item 9 is used, item 10 should explain why. Brief narrative is acceptable. Cite references as appropriate. Indicate whether restrictions are self-imposed or are regulatory requirements. Be as specific as possible within space limitations. Plants in startup and power ascension test phase should be identified here.

11. **HOURS IN REPORTING PERIOD**. For units in power ascension at the end of the period, the gross hours from the beginning of the period or the first electrical production, whichever comes last, to the end of the period.

    For units in commercial operation at the end of the period, the gross hours from the beginning of the period or of commercial operation, whichever comes last, to the end of the period or decommissioning, whichever comes first. Adjustments in clock hours should be made in which a change from standard to daylight-savings time (or vice versa) occurs.

12. **NUMBER OF HOURS REACTOR WAS CRITICAL**. Show the total number of hours the reactor was critical during the gross hours of the reporting period.

13. **REACTOR RESERVE SHUTDOWN HOURS**. The total number of hours during the gross hours of reporting period that the reactor was removed from service for administrative or other reasons but was available for operation.

14. **HOURS GENERATOR ON-LINE**. Also called Service Hours. The total number of hours expressed to the nearest tenth of an hour during the gross hours of the reporting period that the unit operated with breakers closed to the station bus. These hours, plus those listed in Unit Shutdowns for the generator outage hours, should equal the gross hours in the reporting period.

15. **UNIT RESERVE SHUTDOWN HOURS**. The total number of hours expressed to the nearest tenth of an hour during the gross hours of the reporting period that the unit was removed from service for economic or similar reasons but was available for operation.

16. **GROSS THERMAL ENERGY GENERATED (MWH)**. The thermal output of the nuclear steam supply system during the gross hours of the reporting period, expressed in megawatt hours (no decimals).

17. **GROSS ELECTRICAL ENERGY GENERATED (MWH)**. The electrical output of the unit measured at the output terminals of the turbine-generator during the gross hours of the reporting period, expressed in megawatt hours (no decimals).

18. **NET ELECTRICAL ENERGY GENERATED (MWH)**. The gross electrical output of the unit measured at the output terminals of the turbine-generator minus the normal station service loads during the gross hours of the reporting period, expressed in megawatt hours. Negative quantities should not be used. If there is no net positive value for the period, enter zero (no decimals).

19-23. For units still in the startup and power ascension test phase, items 19-23 should not be computed. Instead, enter N/A in the current month column. These five factors should be computed starting at the time the unit is declared to be in commercial operation. The cumulative figures in the second and third columns should be based on commercial operation as a starting date.

19. **UNIT SERVICE FACTOR**. Compute by dividing hours the generator was on line (item 14) by the gross hours in the reporting period (item 11). Express as percent to the nearest tenth of a percent. Do not include reserve shutdown hours in the calculation.

20. **UNIT AVAILABILITY FACTOR**. Compute by dividing the unit available hours (item 14 plus item 15) by the gross hours in the reporting period (item 11). Express as percent to the nearest tenth of a percent.

21. **UNIT CAPACITY FACTOR (USING MDC NET)**. Compute by dividing net electrical energy generated (item 18) by the product of maximum dependable capacity (item 7) times the gross hours in the reporting period (item 11). Express as percent to the nearest tenth of a percent.

22. **UNIT CAPACITY FACTOR (USING DER NET)**. Compute as in item 21, substituting design electrical rating (item 5) for maximum dependable capacity.

23. **UNIT FORCED OUTAGE RATE**. Compute by dividing the total forced outage hours (from the table in Unit Shutdowns and Power Reductions) by the sum of hours generator on line (item 14) plus total forced outage hours (from the table in Unit Shutdowns and Power Reductions). Express as percent to the nearest tenth of a percent.

24. **SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH)**. Include type (refueling, maintenance, other), proposed date of start of shutdown, and proposed length of shutdown. It is recognized that shutdowns may be scheduled between reports and that this item may not be all inclusive. Be as accurate as possible as of the date the report is prepared. This item is to be prepared each month and updated if appropriate until the actual shutdown occurs.

25. Self-explanatory.

26. Self-explanatory. Note, however, that this information is requested for all units in startup and power ascension test status and is not required for units already in commercial operation.

    TEST STATUS is defined as that period following initial criticality during which the unit is tested at successively higher outputs, culminating with operation at full power for a sustained period and completion of warranty runs. Following this phase, the unit is generally considered by the utility to be available for commercial operation.

    Date of **COMMERCIAL OPERATION** is defined as the date that the unit was declared by the utility owner to be available for the regular production of electricity, usually related to the satisfactory completion of qualification tests as specified in the purchase contract and to the accounting policies and practices of the utility.

OPERATING DATA REPORT

DOCKET NO. 50-287
DATE 05-15-78
COMPLETED BY J. A. Reavis
TELEPHONE (704) 373-8552

OPERATING STATUS

1. Unit Name: Oconee Unit 3
2. Reporting Period: April, 1978
3. Licensed Thermal Power (MWt): 2568
4. Nameplate Rating (Gross MWe): 887
5. Design Electrical Rating (Net MWe): 887
6. Maximum Dependable Capacity (Gross MWe): 899
7. Maximum Dependable Capacity (Net MWe): 860
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:
   NONE
9. Power Level To Which Restricted, If Any (Net MWe): NONE
10. Reasons For Restrictions, If Any:

Notes
Year-to-date & cumulative capacity factors are calculated using a weighted average for maximum dependable capacity.

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	719.0	2,879.0	29,567.0
12. Number Of Hours Reactor Was Critical	719.0	2,756.8	22,921.4
13. Reactor Reserve Shutdown Hours	-	-	-
14. Hours Generator On-Line	708.3	2,719.8	22,293.5
15. Unit Reserve Shutdown Hours	-	-	-
16. Gross Thermal Energy Generated (MWH)	1,755,270	6,685,323	52,918,643
17. Gross Electrical Energy Generated (MWH)	616,970	2,346,100	18,297,944
18. Net Electrical Energy Generated (MWH)	590,722	2,242,873	17,415,480
19. Unit Service Factor	98.5	94.5	75.4
20. Unit Availability Factor	98.5	94.5	75.4
21. Unit Capacity Factor (Using MDC Net)	95.5	90.5	68.0
22. Unit Capacity Factor (Using DER Net)	92.6	87.8	66.4
23. Unit Forced Outage Rate	1.2	5.5	13.4

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
    June 6, 1978 - 5 Weeks
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 April, 1978

DOCKET NO. 50-287
UNIT NAME Oconee Unit 3
DATE 05-15-78
COMPLETED BY J. A. Reavis
TELEPHONE (704) 373-8552

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
9	78-04-01	F	0	A	---		CB	MOTORX	3B1 reactor coolant pump (RCP) off due to motor upper oil pot level alarm.
10	78-04-01	F	8.38	B	3		CB	PUMPXX	During RCP test the reactor tripped when putting 3A1 RCP on.
11	78-04-01	S	2.34	B	---		HA	XXXXXX	Performed turbine trip test.
12	78-04-03	F	0	D	---		RC	FUELXX	Xenon hold at 88%.

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 30 MW as the break point. For larger power reactors, 30 MW is too small a change to warrant explanation.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-287
UNIT Oconee Unit 3
DATE 05-15-78
COMPLETED BY J. A. Reavis
TELEPHONE (704) 373-8552

MONTH April, 1978

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	174	17	858
2	574	18	857
3	761	19	854
4	828	20	853
5	865	21	853
6	861	22	851
7	862	23	853
8	865	24	849
9	865	25	846
10	867	26	850
11	868	27	854
12	866	28	858
13	861	29	856
14	864	30	819
15	863	31	
16	860		

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.

MONTHLY REFUELING INFORMATION REQUEST

1. Facility name: Oconee Unit 3.

2. Scheduled next refueling shutdown: June 6, 1978.

3. Scheduled restart following refueling: July 11, 1978.

4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? Yes.
   If yes, what will these be? Amendment to incorporate technical specifications for Oconee Nuclear Station Unit 3 Cycle 4.

   If no, has reload design and core configuration been reviewed by Safety Review Committee regarding unreviewed safety questions? _____.
   If no, when is review scheduled? _____.

5. Scheduled date(s) for submitting proposed licensing action and supporting information: June 1, 1978.

6. Important licensing considerations (new or different design or supplier, unreviewed design or performance analysis methods, significant changes in design or new operating procedures). _____

7. Number of fuel assemblies (a) in the core: 177.
   (b) in the spent fuel pool: 260.

8. Present licensed fuel pool capacity: 465.
   Size of requested or planned increase: no increase planned.

9. Projected date of last refueling which can be accommodated by present licensed capacity: 3/3/80.

DUKE POWER COMPANY

Date: May 15, 1978.

Name of Contact: J. A. Reavis.

OCONEE NUCLEAR STATION
MONTHLY OPERATING REPORT
APRIL, 1978

1. Personnel Exposure

For the month of March no individual(s) exceeded 10 percent of their allowable annual radiation dose limit.

2. Radioactive Waste Releases

The total station liquid release for March has been compared with the Technical Specifications annual value of 15 curies; the total release for March was less than 10 percent of this limit.

The total station gaseous release for March has been compared with the derived Technical Specification annual value of 51,000 curies; the total release for March was less than 10 percent of this limit.