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MONTHLY REPORT

TO: NRC

FROM: Duke Power Co.
Charlotte N.C. 28242
William O. Parker Jr.

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1-10-77

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DESCRIPTION

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Note; Distribution Per J. E. Humphry
on 1-18-77

(1 page)

PLANT NAME: OCONEE UNITS 1-3

ENCLOSURE

MONTHLY REPORT FOR December, 1976
PLANT & COMPONENT OPERABILITY &
AVAILABILITY. THIS REPORT TO BE USED IN
PREPARING GRAY BOOK BY PLANS & OPERATIONS.

(1 encl rec'd)
(9 pages)

**DO NOT REMOVE
ACKNOWLEDGED**

SAFETY

FOR ACTION/INFORMATION

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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

January 10, 1977

TELEPHONE: AREA 704
373-4083

Regulatory Docket File

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

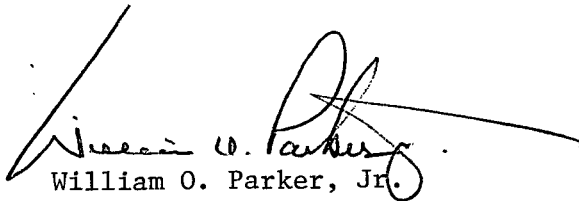


RE: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287

Dear Sir:

Please find attached information concerning the performance and operating status of the Oconee Nuclear Station for the month of December, 1976.

Please note that effective 12:00 midnight, December 31, 1976, the previously submitted value for the Maximum Dependable Capacity (Net MWe) has been changed from 871 MWe to 860 MWe.


William O. Parker, Jr.

LJB:ge

Attachment

cc: Mr. Norman C. Moseley



UNIT Oconee Unit 1
 DATE 1/10/77
 DOCKET NO. 50-269
 PREPARED BY L. J. Bare

OPERATING STATUS

1. REPORTING PERIOD: December 1 THROUGH December 31, 1976
 GROSS HOURS IN REPORTING PERIOD: 744.0

2. CURRENTLY AUTHORIZED POWER LEVEL (MWt): 2568 NET CAPABILITY
 (MWe-Net): 871

3. POWER LEVEL TO WHICH RESTRICTED (IF ANY): (MWe-Net) _____

4. REASONS FOR RESTRICTION (IF ANY) _____

	<u>This Month</u>	<u>Year to Date</u>	<u>Cumulative</u>
5. NUMBER OF HOURS THE REACTOR WAS CRITICAL	<u>282.3</u>	<u>5343.7</u>	<u>22115.8</u>
6. REACTOR RESERVE SHUTDOWN HOURS	_____	_____	_____
7. HOURS GENERATOR ON-LINE	<u>274.2</u>	<u>5033.2</u>	<u>19964.0</u>
8. UNIT RESERVE SHUTDOWN HOURS	_____	_____	_____
9. GROSS THERMAL ENERGY GENERATED (MWH)	<u>658776</u>	<u>12161569</u>	<u>46385711</u>
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	<u>228750</u>	<u>4228710</u>	<u>16123430</u>
11. NET ELECTRICAL ENERGY GENERATED (MWH)	<u>212844</u>	<u>3993884</u>	<u>15232533</u>
12. REACTOR SERVICE FACTOR	<u>37.9</u>	<u>60.8</u>	<u>72.8</u>
13. REACTOR AVAILABILITY FACTOR	<u>56.4</u>	<u>63.3</u>	<u>68.3</u>
14. UNIT SERVICE FACTOR	<u>36.9</u>	<u>57.3</u>	<u>65.8</u>
15. UNIT AVAILABILITY FACTOR	<u>36.9</u>	<u>57.3</u>	<u>65.9</u>
16. UNIT CAPACITY FACTOR (Using Net Capability)	<u>32.9</u>	<u>52.2</u>	<u>57.6</u>
17. UNIT CAPACITY FACTOR (Using Design Mwe)	<u>32.3</u>	<u>51.3</u>	<u>56.6</u>
18. UNIT FORCED OUTAGE RATE	<u>63.1</u>	<u>20.5</u>	<u>17.7</u>

19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE & DURATION OF EACH:)

Refueling June 5, 1976 - 6 weeks

20. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP:

$$\text{REACTOR SERVICE FACTOR} = \frac{\text{HOURS REACTOR WAS CRITICAL}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{REACTOR AVAILABILITY FACTOR} = \frac{\text{HOURS REACTOR WAS AVAILABLE TO OPERATE}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT SERVICE FACTOR} = \frac{\text{HOURS GENERATOR ON LINE}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT AVAILABILITY FACTOR} = \frac{\text{HOURS UNIT WAS AVAILABLE TO GENERATE}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT CAPACITY FACTOR} = \frac{\text{NET ELECTRICAL POWER GENERATED}}{[\text{Net Capability or Design (Mwe-Net)}] \times \text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT FORCED OUTAGE RATE} = \frac{\text{FORCED OUTAGE HOURS}}{\text{HOURS GENERATOR ON LINE} + \text{FORCED OUTAGE HOURS}} \times 100$$

UNIT SHUTDOWNS

DOCKET NO. 50-269

UNIT NAME Oconee Unit 1

DATE 1/10/77

REPORT MONTH December, 1976

NO.	DATE	TYPE F-FORCED S-SCHEDULED	DURATION (HOURS)	REASON (1)	METHOD OF SHUTTING DOWN THE REACTOR (2)	CORRECTIVE ACTIONS/COMMENTS
16	76/12/01	F	145.56	A	1	Continuation of outage to correct high turbine vibration condition.
17	76/12/08	F	287.46	A	1	Repair steam generator tube leak.
18	76/12/20	F	36.77	A	4	Repair inoperable hydraulic shock suppressors.
<p>(1) REASON A--EQUIPMENT FAILURE (EXPLAIN) B--MAINT. OR TEST. C--REFUELING D--REGULATORY RESTRICTION E--OPERATOR TRAINING AND LICENSE EXAMINATION F--ADMINISTRATIVE G--OPERATIONAL ERROR (EXPLAIN) H--OTHER (EXPLAIN)</p>						<p>(2) METHOD 1--MANUAL 2--MANUAL SCRAM 3--AUTOMATIC SCRAM 4--Other</p>

SUMMARY:

Unit experienced two major outages during the month. The unit remained shutdown after outage No. 17 to repair inoperable hydraulic shock suppressors.

DOCKET NO. 50-269

UNIT Oconee Unit 1

DATE 1/10/77

AVERAGE DAILY UNIT POWER LEVEL

MONTH December, 1976

DAY	AVERAGE DAILY POWER LEVEL (MWe-net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-net)
1	---	17	---
2	---	18	---
3	---	19	---
4	---	20	---
5	---	21	---
6	---	22	633
7	529	23	807
8	271	24	850
9	---	25	852
10	---	26	851
11	---	27	855
12	---	28	857
13	---	29	854
14	---	30	854
15	---	31	854
16	---		

DAILY UNIT POWER LEVEL FORM INSTRUCTIONS

On this form, list the average daily unit power level in MWe-net for each day in the reporting month. Compute to the nearest whole megawatt.

These figures will be used to plot a graph for each reporting month. Note that by using maximum dependable capacity for the net electrical rating of the unit, there may be occasions when the daily average power level exceeds the 100% line (or the restricted power level line). In such cases, the average daily unit power output sheet should be footnoted to explain the apparent anomaly.

UNIT Oconee Unit 2
 DATE 1/10/77
 DOCKET NO. 50-270
 PREPARED BY L. J. Bare

OPERATING STATUS

1. REPORTING PERIOD: December 1 THROUGH December 31, 1976
 GROSS HOURS IN REPORTING PERIOD: 744.0

2. CURRENTLY AUTHORIZED POWER LEVEL (MWt): 2568 NET CAPABILITY
 (MWe-Net): 871

3. POWER LEVEL TO WHICH RESTRICTED (IF ANY): (MWe-Net) _____

4. REASONS FOR RESTRICTION (IF ANY) _____

	<u>This Month</u>	<u>Year to Date</u>	<u>Cumulative</u>
5. NUMBER OF HOURS THE REACTOR WAS CRITICAL	<u>256.2</u>	<u>5668.0</u>	<u>14227.0</u>
6. REACTOR RESERVE SHUTDOWN HOURS	_____	_____	_____
7. HOURS GENERATOR ON-LINE	<u>238.1</u>	<u>5486.1</u>	<u>13765.5</u>
8. UNIT RESERVE SHUTDOWN HOURS	_____	_____	_____
9. GROSS THERMAL ENERGY GENERATED (MWH)	<u>568843</u>	<u>13093303</u>	<u>32765731</u>
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	<u>188470</u>	<u>4455050</u>	<u>11155606</u>
11. NET ELECTRICAL ENERGY GENERATED (MWH)	<u>175677</u>	<u>4228972</u>	<u>10584123</u>
12. REACTOR SERVICE FACTOR	<u>34.4</u>	<u>64.5</u>	<u>70.2</u>
13. REACTOR AVAILABILITY FACTOR	<u>32.0</u>	<u>62.8</u>	<u>68.4</u>
14. UNIT SERVICE FACTOR	<u>32.0</u>	<u>62.5</u>	<u>67.9</u>
15. UNIT AVAILABILITY FACTOR	<u>32.0</u>	<u>62.5</u>	<u>67.9</u>
16. UNIT CAPACITY FACTOR (Using Net Capability)	<u>27.1</u>	<u>55.3</u>	<u>59.9</u>
17. UNIT CAPACITY FACTOR (Using Design Mwe)	<u>26.6</u>	<u>54.3</u>	<u>58.8</u>
18. UNIT FORCED OUTAGE RATE	<u>68.0</u>	<u>25.9</u>	<u>25.4</u>
19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE & DURATION OF EACH:)	_____		

20. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: _____

$$\text{REACTOR SERVICE FACTOR} = \frac{\text{HOURS REACTOR WAS CRITICAL}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{REACTOR AVAILABILITY FACTOR} = \frac{\text{HOURS REACTOR WAS AVAILABLE TO OPERATE}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT SERVICE FACTOR} = \frac{\text{HOURS GENERATOR ON LINE}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT AVAILABILITY FACTOR} = \frac{\text{HOURS UNIT WAS AVAILABLE TO GENERATE}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT CAPACITY FACTOR} = \frac{\text{NET ELECTRICAL POWER GENERATED}}{[\text{Net Capability or Design (Mwe-Net)}] \times \text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT FORCED OUTAGE RATE} = \frac{\text{FORCED OUTAGE HOURS}}{\text{HOURS GENERATOR ON LINE} + \text{FORCED OUTAGE HOURS}} \times 100$$

UNIT SHUTDOWNS

DOCKET NO. 50-270
 UNIT NAME Oconee Unit 2
 DATE 1/10/77

REPORT MONTH December, 1976

NO.	DATE	TYPE F-FORCED S-SCHEDULED	DURATION (HOURS)	REASON (1)	METHOD OF SHUTTING DOWN THE REACTOR (2)	CORRECTIVE ACTIONS/COMMENTS
14	76/12/04	F	344.90	A	1	Repair steam generator tube leak
15	76/12/19	F	147.30	A	4	Repair high pressure injection system valve.
16	76/12/27	F	13.73	A	2	Control rod drive power supply relay failure.

<p>(1) REASON A--EQUIPMENT FAILURE (EXPLAIN) B--MAINT. OR TEST. C--REFUELING D--REGULATORY RESTRICTION E--OPERATOR TRAINING AND LICENSE EXAMINATION F--ADMINISTRATIVE G--OPERATIONAL ERROR (EXPLAIN) H--OTHER (EXPLAIN)</p>	<p>(2) METHOD 1--MANUAL 2--MANUAL SCRAM 3--AUTOMATIC SCRAM 4--Other</p>
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SUMMARY:

The unit remained shutdown after outage No. 14 to repair a high pressure injection system valve.

DOCKET NO. 50-270UNIT Oconee Unit 2DATE 1/10/77

AVERAGE DAILY UNIT POWER LEVEL

MONTH December, 1976

DAY	AVERAGE DAILY POWER LEVEL (MWe-net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-net)
1	832	17	---
2	834	18	---
3	838	19	---
4	768	20	---
5	---	21	---
6	---	22	---
7	---	23	---
8	---	24	---
9	---	25	214
10	---	26	689
11	---	27	332
12	---	28	506
13	---	29	774
14	---	30	832
15	---	31	833
16	---		

DAILY UNIT POWER LEVEL FORM INSTRUCTIONS

On this form, list the average daily unit power level in MWe-net for each day in the reporting month. Compute to the nearest whole megawatt.

These figures will be used to plot a graph for each reporting month. Note that by using maximum dependable capacity for the net electrical rating of the unit, there may be occasions when the daily average power level exceeds the 100% line (or the restricted power level line). In such cases, the average daily unit power output sheet should be footnoted to explain the apparent anomaly.

UNIT Oconee Unit 3
 DATE 1/10/77
 DOCKET NO. 50-287
 PREPARED BY L. J. Bare

OPERATING STATUS

1. REPORTING PERIOD: December 1 THROUGH December 31, 1976

GROSS HOURS IN REPORTING PERIOD: 744.0

2. CURRENTLY AUTHORIZED POWER LEVEL (Mwt): 2568 NET CAPABILITY
 (MWe-Net): 871

3. POWER LEVEL TO WHICH RESTRICTED (IF ANY):(MWe-Net) _____

4. REASONS FOR RESTRICTION (IF ANY) _____

	<u>This Month</u>	<u>Year to Date</u>	<u>Cumulative</u>
5. NUMBER OF HOURS THE REACTOR WAS CRITICAL	<u>744.0</u>	<u>6258.4</u>	<u>13402.7</u>
6. REACTOR RESERVE SHUTDOWN HOURS	_____	_____	_____
7. HOURS GENERATOR ON-LINE	<u>744.0</u>	<u>6074.8</u>	<u>13023.5</u>
8. UNIT RESERVE SHUTDOWN HOURS	_____	_____	_____
9. GROSS THERMAL ENERGY GENERATED (MWH)	<u>1910406</u>	<u>14450167</u>	<u>30368217</u>
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	<u>671760</u>	<u>4994530</u>	<u>10439444</u>
11. NET ELECTRICAL ENERGY GENERATED (MWH)	<u>645184</u>	<u>4755208</u>	<u>9933642</u>
12. REACTOR SERVICE FACTOR	<u>100.0</u>	<u>71.3</u>	<u>74.8</u>
13. REACTOR AVAILABILITY FACTOR	<u>100.0</u>	<u>69.4</u>	<u>75.4</u>
14. UNIT SERVICE FACTOR	<u>100.0</u>	<u>69.2</u>	<u>72.6</u>
15. UNIT AVAILABILITY FACTOR	<u>100.0</u>	<u>69.2</u>	<u>72.6</u>
16. UNIT CAPACITY FACTOR (Using Net Capability)	<u>99.6</u>	<u>62.2</u>	<u>63.6</u>
17. UNIT CAPACITY FACTOR (Using Design Mwe)	<u>97.8</u>	<u>61.0</u>	<u>62.5</u>
18. UNIT FORCED OUTAGE RATE	<u>0</u>	<u>16.8</u>	<u>14.0</u>
19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE & DURATION OF EACH:)	_____		

20. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: _____

$$\text{REACTOR SERVICE FACTOR} = \frac{\text{HOURS REACTOR WAS CRITICAL}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{REACTOR AVAILABILITY FACTOR} = \frac{\text{HOURS REACTOR WAS AVAILABLE TO OPERATE}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT SERVICE FACTOR} = \frac{\text{HOURS GENERATOR ON LINE}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT AVAILABILITY FACTOR} = \frac{\text{HOURS UNIT WAS AVAILABLE TO GENERATE}}{\text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT CAPACITY FACTOR} = \frac{\text{NET ELECTRICAL POWER GENERATED}}{[\text{Net Capability or Design (Mwe-Net)}] \times \text{HOURS IN REPORTING PERIOD}} \times 100$$

$$\text{UNIT FORCED OUTAGE RATE} = \frac{\text{FORCED OUTAGE HOURS}}{\text{HOURS GENERATOR ON LINE} + \text{FORCED OUTAGE HOURS}} \times 100$$

UNIT SHUTDOWNS

DOCKET NO. 50-287

UNIT NAME Oconee Unit 3

DATE 1/10/77

REPORT MONTH December, 1976

NO.	DATE	TYPE F-FORCED S-SCHEDULED	DURATION (HOURS)	REASON (1)	METHOD OF SHUTTING DOWN THE REACTOR (2)	CORRECTIVE ACTIONS/COMMENTS
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>(1) REASON A--EQUIPMENT FAILURE (EXPLAIN) B- MAINT. OR TEST. C- REFUELING D-REGULATORY RESTRICTION E-OPERATOR TRAINING AND LICENSE EXAMINATION F-ADMINISTRATIVE G-OPERATIONAL ERROR (EXPLAIN) H-OTHER (EXPLAIN)</p> </div> <div style="width: 45%;"> <p>(2) METHOD 1-MANUAL 2-MANUAL SCRAM 3-AUTOMATIC SCRAM 4-Other</p> </div> </div>						

SUMMARY:

No outages this month.

DOCKET NO. 50-287UNIT Oconee Unit 3DATE 1/10/77**AVERAGE DAILY UNIT POWER LEVEL**MONTH December, 1976

DAY	AVERAGE DAILY POWER LEVEL (MWe-net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-net)
1	<u>859</u>	17	<u>868</u>
2	<u>862</u>	18	<u>867</u>
3	<u>856</u>	19	<u>863</u>
4	<u>874</u>	20	<u>866</u>
5	<u>870</u>	21	<u>861</u>
6	<u>868</u>	22	<u>871</u>
7	<u>865</u>	23	<u>869</u>
8	<u>861</u>	24	<u>870</u>
9	<u>861</u>	25	<u>870</u>
10	<u>861</u>	26	<u>879</u>
11	<u>862</u>	27	<u>866</u>
12	<u>868</u>	28	<u>871</u>
13	<u>869</u>	29	<u>873</u>
14	<u>871</u>	30	<u>872</u>
15	<u>871</u>	31	<u>871</u>
16	<u>868</u>		

DAILY UNIT POWER LEVEL FORM INSTRUCTIONS

On this form, list the average daily unit power level in MWe-net for each day in the reporting month. Compute to the nearest whole megawatt.

These figures will be used to plot a graph for each reporting month. Note that by using maximum dependable capacity for the net electrical rating of the unit, there may be occasions when the daily average power level exceeds the 100% line (or the restricted power level line). In such cases, the average daily unit power output sheet should be footnoted to explain the apparent anomaly.