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MONTHLY REPORT

TO:  
  
N. R. C.

FROM:  
Duke Power Company  
Charlotte, North Carolina  
William O. Parker, Jr.

DATE OF DOCUMENT  
5/10/77

DATE RECEIVED  
5/13/77

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DESCRIPTION

Letter trans the following:

ENCLOSURE

Monthly Report for APRIL, 1977  
Plant & Component Operability & Availability.  
This Report to be used in preparing Gray Book  
by Plans & Operations.

(1-P)

(9-P)

PLANT NAME: Oconee Units 1-2-3

RJL

**ACKNOWLEDGED**  
**DO NOT REMOVE**

FOR ACTION/INFORMATION

MIPC W/2 CYS FOR ACTION

INTERNAL DISTRIBUTION

Reg Files

NRC PDR

Branch Chief (L)

Lic Asst

**Schwencer**  
**Sheppard**

EXTERNAL DISTRIBUTION

LPDR: **Walthall, SC**  
TIC  
NSIC

CONTROL NUMBER

**771340010**

# 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 10, 1977

Regulatory

File Cy.

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

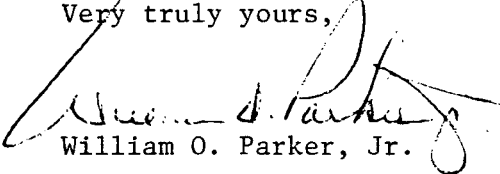
Re: Oconee Nuclear Station  
Docket Nos. 50-269, -270, -287



Dear Sir:

Please find attached information concerning the performance and operating status of the Oconee Nuclear Station for the month of April, 1977.

Very truly yours,

  
William O. Parker, Jr.

JAR:vr  
Attachment

cc: Mr. Norman C. Moseley

771340010

UNIT Oconee Unit 1  
DATE 5-10-77  
DOCKET NO. 50-269  
PREPARED BY J. A. Reavis

OPERATING STATUS

1. REPORTING PERIOD: April 1 THROUGH April 30, 1977  
GROSS HOURS IN REPORTING PERIOD: 719.00
2. CURRENTLY AUTHORIZED POWER LEVEL (MWt): 2568 NET CAPABILITY  
(MWe-Net): 860
3. POWER LEVEL TO WHICH RESTRICTED (IF ANY): (MWe-Net) \_\_\_\_\_
4. REASONS FOR RESTRICTION (IF ANY) \_\_\_\_\_
5. NUMBER OF HOURS THE REACTOR WAS CRITICAL

	<u>This Month</u>	<u>Year to Date</u>	<u>Cumulative</u>
6. REACTOR RESERVE SHUTDOWN HOURS	<u>-</u>	<u>-</u>	<u>-</u>
7. HOURS GENERATOR ON-LINE	<u>638.36</u>	<u>1868.93</u>	<u>21832.92</u>
8. UNIT RESERVE SHUTDOWN HOURS	<u>-</u>	<u>-</u>	<u>-</u>
9. GROSS THERMAL ENERGY GENERATED (MWH)	<u>1541075</u>	<u>4606784</u>	<u>50992495</u>
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	<u>533490</u>	<u>1591270</u>	<u>17714700</u>
11. NET ELECTRICAL ENERGY GENERATED (MWH)	<u>507320</u>	<u>1510016</u>	<u>16742549</u>
12. REACTOR SERVICE FACTOR	<u>89.78</u>	<u>65.88</u>	<u>72.24</u>
13. REACTOR AVAILABILITY FACTOR	<u>99.66</u>	<u>68.87</u>	<u>68.30</u>
14. UNIT SERVICE FACTOR	<u>88.78</u>	<u>64.92</u>	<u>65.68</u>
15. UNIT AVAILABILITY FACTOR	<u>88.78</u>	<u>64.92</u>	<u>65.68</u>
16. UNIT CAPACITY FACTOR (Using Net Capability)	<u>82.05</u>	<u>60.99</u>	<u>58.57</u>
17. UNIT CAPACITY FACTOR (Using Design Mwe)	<u>79.55</u>	<u>59.13</u>	<u>56.79</u>
18. UNIT FORCED OUTAGE RATE	<u>11.22</u>	<u>35.08</u>	<u>19.56</u>
19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE & DURATION OF EACH:)  
Refueling - June 25, 1977 - 6 weeks
20. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: \_\_\_\_\_

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

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

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

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

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

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

DOCKET NO. 50-269UNIT Oconee Unit 1DATE 5-10-77**AVERAGE DAILY UNIT POWER LEVEL**MONTH April, 1977

DAY	AVERAGE DAILY POWER LEVEL (MWe-net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-net)
1	-	17	856
2	-	18	852
3	-	19	852
4	659	20	857
5	822	21	860
6	864	22	859
7	865	23	662
8	864	24	164
9	853	25	406
10	845	26	687
11	849	27	689
12	860	28	832
13	855	29	855
14	862	30	849
15	851	31	
16	849		

**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 SHUTDOWNS

DOCKET NO. 50-269

UNIT NAME Oconee Unit 1

DATE 5-10-77

REPORT MONTH April, 1977

NO.	DATE	TYPE F-FORCED S-SCHEDULED	DURATION (HOURS)	REASON (1)	METHOD OF SHUTTING DOWN THE REACTOR (2)	CORRECTIVE ACTIONS/COMMENTS
7	77-04-01	F	66.94	A	1	Continuation of previous outage for repair of turning gear oil pump bearing and inspection of turbine bearing for damage.
8	77-04-03	F	2.46	A	3	Failure in ICS feedwater control module circuitry.
9	77-04-24	F	11.24	A	3	Reheater drain valve failed to open resulting in reheater high level trip.
						<div> <div> (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) </div> <div> (2) METHOD  1-MANUAL  2-MANUAL  SCRAM  3-AUTOMATIC  SCRAM  4-Other </div> </div>

## SUMMARY:

No major outage this month.

UNIT Oconee Unit 2  
DATE 5-10-77  
DOCKET NO. 50-270  
PREPARED BY J. A. Reavis

OPERATING STATUS

1. REPORTING PERIOD: April 1 THROUGH April 30, 1977  
GROSS HOURS IN REPORTING PERIOD: 719.00
2. CURRENTLY AUTHORIZED POWER LEVEL (MWt): 2568 NET CAPABILITY  
(MWe-Net): 860
3. POWER LEVEL TO WHICH RESTRICTED (IF ANY): (MWe-Net) \_\_\_\_\_
4. REASONS FOR RESTRICTION (IF ANY) \_\_\_\_\_
5. NUMBER OF HOURS THE REACTOR WAS CRITICAL

	<u>This Month</u>	<u>Year to Date</u>	<u>Cumulative</u>
6. REACTOR RESERVE SHUTDOWN HOURS	<u>-</u>	<u>-</u>	<u>-</u>
7. HOURS GENERATOR ON-LINE	<u>719.00</u>	<u>2871.73</u>	<u>16637.27</u>
8. UNIT RESERVE SHUTDOWN HOURS	<u>-</u>	<u>-</u>	<u>-</u>
9. GROSS THERMAL ENERGY GENERATED (MWH)	<u>1817333</u>	<u>7177870</u>	<u>39939131</u>
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	<u>615380</u>	<u>2438050</u>	<u>13593656</u>
11. NET ELECTRICAL ENERGY GENERATED (MWH)	<u>589395</u>	<u>2335557</u>	<u>12919680</u>
12. REACTOR SERVICE FACTOR	<u>100.00</u>	<u>99.92</u>	<u>73.85</u>
13. REACTOR AVAILABILITY FACTOR	<u>100.00</u>	<u>100.00</u>	<u>72.33</u>
14. UNIT SERVICE FACTOR	<u>100.00</u>	<u>99.75</u>	<u>71.84</u>
15. UNIT AVAILABILITY FACTOR	<u>100.00</u>	<u>99.75</u>	<u>71.84</u>
16. UNIT CAPACITY FACTOR (Using Net Capability)	<u>95.32</u>	<u>94.33</u>	<u>64.87</u>
17. UNIT CAPACITY FACTOR (Using Design Mwe)	<u>92.42</u>	<u>91.46</u>	<u>62.89</u>
18. UNIT FORCED OUTAGE RATE	<u>0</u>	<u>00.25</u>	<u>21.99</u>
19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE & DURATION OF EACH:)  
Hydraulic Suppressor Inspection and CRD Stator Repair - May 20, 1977 - 1 week  
Refueling - August 5, 1977 - 6 weeks
20. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP:

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

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

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

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

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

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

DOCKET NO. 50-270  
UNIT Oconee Unit 2  
DATE 5-10-77

### AVERAGE DAILY UNIT POWER LEVEL

MONTH April, 1977

DAY	AVERAGE DAILY POWER LEVEL (MWe-net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-net)
1	<u>827</u>	17	<u>830</u>
2	<u>825</u>	18	<u>830</u>
3	<u>824</u>	19	<u>830</u>
4	<u>824</u>	20	<u>829</u>
5	<u>822</u>	21	<u>829</u>
6	<u>824</u>	22	<u>766</u>
7	<u>826</u>	23	<u>731</u>
8	<u>831</u>	24	<u>756</u>
9	<u>829</u>	25	<u>825</u>
10	<u>829</u>	26	<u>825</u>
11	<u>827</u>	27	<u>827</u>
12	<u>826</u>	28	<u>832</u>
13	<u>821</u>	29	<u>815</u>
14	<u>822</u>	30	<u>827</u>
15	<u>824</u>	31	<u>      </u>
16	<u>828</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.

# UNIT SHUTDOWNS

DOCKET NO. 50-270

UNIT NAME Oconee Unit 2

DATE 5-10-77

REPORT MONTH April, 1977

NO.	DATE	TYPE F-FORCED S-SCHEDULED	DURATION (HOURS)	REASON (1)	METHOD OF SHUTTING DOWN THE REACTOR (2)	CORRECTIVE ACTIONS/COMMENTS
						<div> <div> (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) </div> <div> (2) METHOD  1-MANUAL  2-MANUAL    SCRAM  3-AUTOMATIC    SCRAM  4-Other </div> </div>

SUMMARY: No outages this month.



UNIT Oconee Unit 3  
 DATE 5-10-77  
 DOCKET NO. 50-287  
 PREPARED BY J. A. Reavis

OPERATING STATUS

1. REPORTING PERIOD: April 1 THROUGH April 30, 1977  
 GROSS HOURS IN REPORTING PERIOD: 719.00
2. CURRENTLY AUTHORIZED POWER LEVEL (MWt): 2568 NET CAPABILITY  
 (MWe-Net): 860
3. POWER LEVEL TO WHICH RESTRICTED (IF ANY): (MWe-Net) \_\_\_\_\_
4. REASONS FOR RESTRICTION (IF ANY) \_\_\_\_\_
5. NUMBER OF HOURS THE REACTOR WAS CRITICAL
 

	<u>This Month</u>	<u>Year to Date</u>	<u>Cumulative</u>
6. REACTOR RESERVE SHUTDOWN HOURS	<u>-</u>	<u>-</u>	<u>-</u>
7. HOURS GENERATOR ON-LINE	<u>706.79</u>	<u>2602.84</u>	<u>15626.34</u>
8. UNIT RESERVE SHUTDOWN HOURS	<u>-</u>	<u>-</u>	<u>-</u>
9. GROSS THERMAL ENERGY GENERATED (MWH)	<u>1748484</u>	<u>6558930</u>	<u>36927146</u>
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	<u>613270</u>	<u>2296190</u>	<u>12735634</u>
11. NET ELECTRICAL ENERGY GENERATED (MWH)	<u>586535</u>	<u>2196985</u>	<u>12130627</u>
12. REACTOR SERVICE FACTOR	<u>99.23</u>	<u>91.17</u>	<u>77.03</u>
13. REACTOR AVAILABILITY FACTOR	<u>98.30</u>	<u>90.59</u>	<u>77.48</u>
14. UNIT SERVICE FACTOR	<u>98.30</u>	<u>90.41</u>	<u>75.10</u>
15. UNIT AVAILABILITY FACTOR	<u>98.30</u>	<u>90.41</u>	<u>75.10</u>
16. UNIT CAPACITY FACTOR (Using Net Capability)	<u>94.86</u>	<u>88.73</u>	<u>67.79</u>
17. UNIT CAPACITY FACTOR (Using Design Mwe)	<u>91.97</u>	<u>86.03</u>	<u>65.73</u>
18. UNIT FORCED OUTAGE RATE	<u>1.70</u>	<u>9.59</u>	<u>13.27</u>
19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE & DURATION OF EACH:)  
Refueling - September 23, 1977 - 6 weeks
20. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: \_\_\_\_\_

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

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

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

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

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

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

DOCKET NO. 50-287UNIT Oconee Unit 3DATE 5-10-77**AVERAGE DAILY UNIT POWER LEVEL**MONTH April, 1977

AVERAGE DAILY POWER LEVEL (MWe-net)		AVERAGE DAILY POWER LEVEL (MWe-net)	
DAY		DAY	
1	<u>865</u>	17	<u>863</u>
2	<u>869</u>	18	<u>863</u>
3	<u>840</u>	19	<u>854</u>
4	<u>864</u>	20	<u>831</u>
5	<u>854</u>	21	<u>839</u>
6	<u>682</u>	22	<u>840</u>
7	<u>589</u>	23	<u>838</u>
8	<u>838</u>	24	<u>802</u>
9	<u>860</u>	25	<u>848</u>
10	<u>849</u>	26	<u>835</u>
11	<u>851</u>	27	<u>826</u>
12	<u>870</u>	28	<u>809</u>
13	<u>442</u>	29	<u>817</u>
14	<u>776</u>	30	<u>836</u>
15	<u>848</u>	31	<u></u>
16	<u>843</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.

# UNIT SHUTDOWNS

DOCKET NO. 50-287

UNIT NAME Oconee Unit 3

DATE 5-10-77

REPORT MONTH April, 1977

NO.	DATE	TYPE F-FORCED S-SCHEDULED	DURATION (HOURS)	REASON (1)	METHOD OF SHUTTING DOWN THE REACTOR (2)	CORRECTIVE ACTIONS/COMMENTS
4	77-04-07	F	6.10	A	3	Momentary loss of 125V DC power to the turbine control system. RC pumps tripped during the power supply transfer to the startup source.
5	77-04-14	F	6.11	A	3	Spurious reactor power/flow trip.
						<div> <div> (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) </div> <div> (2) METHOD  1-MANUAL  2-MANUAL  SCRAM  3-AUTOMATIC  SCRAM  4-Other </div> </div>

## SUMMARY:

No major outages this month.