

50-269/270/287

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER
MONTHLY REPORT

TO:
N. R. C.

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

DATE OF DOCUMENT
12/09/77

DATE RECEIVED
12/15/77

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DESCRIPTION

LTR TRANS THE FOLLOWING:

PLANT NAME: Oconee Units. 1-2-3
RJL 12/15/77

(1-P)

ENCLOSURE

MONTHLY REPORT FOR November 1977
PLANT & COMPONENT OPERABILITY & AVAILABILITY.
THIS REPORT TO BE USE IN PREPARING GRAY BOOK
BY PLANS & OPERATIONS.

(9-P)

1 ENCL

FOR ACTION/INFORMATION

MPC W/2 CYS FOR ACTION

INTERNAL DISTRIBUTION

REG FILES
NRC PDR
BRANCH CHIEF (1) (2) SCHWENGER
LIC ASST.

EXTERNAL DISTRIBUTION

LPDR: WALKER SC.
TIC:
NSIC

CONTROL NUMBER

MR
773500029

DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

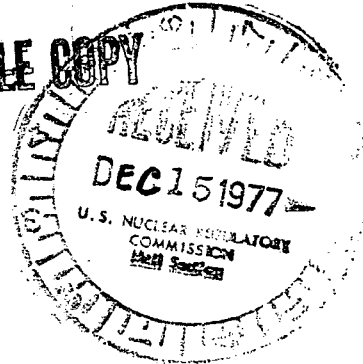
WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

December 9, 1977

TELEPHONE: AREA 704
373-4083

REGULATORY DOCKET FILE COPY

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

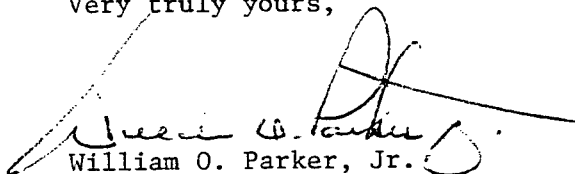


RE: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287

Dear Sir:

Please find attached information concerning the performance and operating status of the Oconee Nuclear Station for the month of November, 1977. During the period Oconee Nuclear Station has been in operation the maximum dependable capacity has been changed from 820 MWe for the period July 16, 1973 through November 8, 1973 to 887 MWe for the period November 8, 1973 through December 31, 1973 to 871 MWe for January, 1974 through December, 1976 and to 860 MWe for January 1977 to present. In previous Monthly Operating Reports the cumulative capacity factors, defined as the cumulative net generation divided by maximum dependable capacity times cumulative period hours, have been calculated using the maximum dependable capacity current at that time. Beginning with this report, November, 1977, the cumulative capacity factors will be calculated using a weighted maximum dependable capacity which will reflect the past variations in this number.

Very truly yours,


William O. Parker, Jr.

JAR:ge
Attachment

cc: Mr. Norman C. Moseley

773500028

UNIT Oconee Unit 1
 DATE 12-09-77
 DOCKET NO. 50-269
 PREPARED BY J. A. Reavis

OPERATING STATUS

1. REPORTING PERIOD: November 1 THROUGH November 30, 1977
 GROSS HOURS IN REPORTING PERIOD: 720.00
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) _____
- | | <u>This Month</u> | <u>Year to Date</u> | <u>Cumulative</u> |
|---|-------------------|---------------------|-------------------|
| 5. NUMBER OF HOURS THE REACTOR WAS CRITICAL | <u>720.00</u> | <u>4,962.6</u> | <u>27,078.4</u> |
| 6. REACTOR RESERVE SHUTDOWN HOURS | <u>--</u> | <u>--</u> | <u>--</u> |
| 7. HOURS GENERATOR ON-LINE | <u>720.0</u> | <u>4,824.7</u> | <u>24,788.7</u> |
| 8. UNIT RESERVE SHUTDOWN HOURS | <u>--</u> | <u>--</u> | <u>--</u> |
| 9. GROSS THERMAL ENERGY GENERATED (MWH) | <u>1,418,049</u> | <u>10,743,586</u> | <u>57,129,297</u> |
| 10. GROSS ELECTRICAL ENERGY GENERATED (MWH) | <u>486,420</u> | <u>3,675,720</u> | <u>19,799,150</u> |
| 11. NET ELECTRICAL ENERGY GENERATED (MWH) | <u>459,598</u> | <u>3,460,701</u> | <u>18,693,234</u> |
| 12. REACTOR SERVICE FACTOR | <u>100.0</u> | <u>61.9</u> | <u>70.6</u> |
| 13. REACTOR AVAILABILITY FACTOR | <u>100.0</u> | <u>61.8</u> | <u>66.9</u> |
| 14. UNIT SERVICE FACTOR | <u>100.0</u> | <u>60.2</u> | <u>64.6</u> |
| 15. UNIT AVILABILITY FACTOR | <u>100.0</u> | <u>60.2</u> | <u>64.7</u> |
| 16. UNIT CAPACITY FACTOR (Using Net Capability) | <u>74.2</u> | <u>50.2</u> | <u>56.3</u> |
| 17. UNIT CAPACITY FACTOR (Using Design Mwe) | <u>72.0</u> | <u>48.7</u> | <u>54.9</u> |
| 18. UNIT FORCED OUTAGE RATE | <u>-0-</u> | <u>22.84</u> | <u>18.8</u> |
19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE & DURATION OF EACH:)
 None
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 12-09-77

REPORT MONTH November, 1977

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: 60%;"> <p>(1) REASON</p> <ul style="list-style-type: none"> 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 style="width: 35%;"> <p>(2) METHOD</p> <ul style="list-style-type: none"> 1-MANUAL 2-MANUAL SCRAM 3-AUTOMATIC SCRAM </div> </div>						

SUMMARY:

No outages this month. Note that cumulative capacity factors for Oconee Unit 1 have been calculated using a weighted maximum dependable capacity to reflect past variations in this number.

DOCKET NO. 50-269
 UNIT Oconee Unit 1
 DATE 12-09-77

AVERAGE DAILY UNIT POWER LEVEL

MONTH November, 1977

AVERAGE DAILY POWER LEVEL (MWe-net)		AVERAGE DAILY POWER LEVEL (MWe-net)	
DAY		DAY	
1	625	17	618
2	627	18	620
3	629	19	625
4	342	20	625
5	215	21	624
6	393	22	623
7	579	23	624
8	615	24	785
9	615	25	841
10	612	26	836
11	616	27	834
12	621	28	833
13	622	29	836
14	620	30	838
15	622	31	
16	622		

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 12-09-77
DOCKET NO. 50-270
PREPARED BY J. A. Reavis

OPERATING STATUS

1. REPORTING PERIOD: November 1 THROUGH November 30, 1977
GROSS HOURS IN REPORTING PERIOD: 720.00

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) _____

	<u>This Month</u>	<u>Year to Date</u>	<u>Cumulative</u>
5. NUMBER OF HOURS THE REACTOR WAS CRITICAL	<u>519.1</u>	<u>4,891.8</u>	<u>19,118.8</u>
6. REACTOR RESERVE SHUTDOWN HOURS	<u>--</u>	<u>--</u>	<u>--</u>
7. HOURS GENERATOR ON-LINE	<u>510.2</u>	<u>4,774.6</u>	<u>18,540.1</u>
8. UNIT RESERVE SHUTDOWN HOURS	<u>--</u>	<u>--</u>	<u>--</u>
9. GROSS THERMAL ENERGY GENERATED (MWH)	<u>726,208</u>	<u>10,944,013</u>	<u>43,705,274</u>
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	<u>248,210</u>	<u>3,707,690</u>	<u>14,863,296</u>
11. NET ELECTRICAL ENERGY GENERATED (MWH)	<u>227,511</u>	<u>3,506,528</u>	<u>14,090,651</u>
12. REACTOR SERVICE FACTOR	<u>72.1</u>	<u>61.0</u>	<u>67.6</u>
13. REACTOR AVAILABILITY FACTOR	<u>80.4</u>	<u>60.7</u>	<u>66.2</u>
14. UNIT SERVICE FACTOR	<u>70.9</u>	<u>59.6</u>	<u>65.5</u>
15. UNIT AVILABILITY FACTOR	<u>70.9</u>	<u>59.6</u>	<u>65.5</u>
16. UNIT CAPACITY FACTOR (Using Net Capability)	<u>36.7</u>	<u>50.9</u>	<u>57.4</u>
17. UNIT CAPACITY FACTOR (Using Design Mwe)	<u>35.6</u>	<u>49.3</u>	<u>56.1</u>
18. UNIT FORCED OUTAGE RATE	<u>29.1</u>	<u>17.8</u>	<u>23.6</u>

19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE & DURATION OF EACH:)
None

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 12-09-77

REPORT MONTH November, 1977

NO.	DATE	TYPE F-FORCED S-SCHEDULED	DURATION (HOURS)	REASON (1)	METHOD OF SHUTTING DOWN THE REACTOR (2)	CORRECTIVE ACTIONS/COMMENTS
11	77-11-03	F	201.84	A	1	Suspected OTSG tube leak, repair leak on powdex system.
12	77-11-13	F	7.97	A	3	Emerg. feedwater pump trip
						<p>(1) REASON</p> <p>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</p> <p>1-MANUAL 2-MANUAL SCRAM 3-AUTOMATIC SCRAM</p>

SUMMARY:

Note that cumulative capacity factors for Oconee Unit 2 have been calculated using a weighted maximum dependable capacity to reflect past variations in this number.

DOCKET NO. 50-270
 UNIT Oconee Unit 2
 DATE 12-09-77

AVERAGE DAILY UNIT POWER LEVEL

MONTH November, 1977

DAY	AVERAGE DAILY POWER LEVEL (MWe-net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-net)
1	555	17	394
2	655	18	395
3	560	19	395
4	---	20	396
5	---	21	395
6	---	22	431
7	---	23	476
8	---	24	473
9	---	25	477
10	---	26	513
11	---	27	549
12	110	28	578
13	106	29	556
14	315	30	456
15	415	31	
16	416		

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 Onnee Unit 3
 DATE 12-09-77
 DOCKET NO. 50-287
 PREPARED BY J. A. Reavis

OPERATING STATUS

1. REPORTING PERIOD: November 1 THROUGH November 30, 1977
 GROSS HOURS IN REPORTING PERIOD: 720
2. CURRENTLY AUTHORIZED POWER LEVEL (MWt): 2568 NET CAPABILITY
 (MWe-Net): 860.00
3. POWER LEVEL TO WHICH RESTRICTED (IF ANY): (MWe-Net) _____
4. REASONS FOR RESTRICTION (IF ANY) _____
5. NUMBER OF HOURS THE REACTOR WAS CRITICAL
6. REACTOR RESERVE SHUTDOWN HOURS
7. HOURS GENERATOR ON-LINE
8. UNIT RESERVE SHUTDOWN HOURS
9. GROSS THERMAL ENERGY GENERATED (MWH)
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)
11. NET ELECTRICAL ENERGY GENERATED (MWH)
12. REACTOR SERVICE FACTOR
13. REACTOR AVAILABILITY FACTOR
14. UNIT SERVICE FACTOR
15. UNIT AVILABILITY FACTOR
16. UNIT CAPACITY FACTOR (Using Net Capability)
17. UNIT CAPACITY FACTOR (Using Design Mwe)
18. UNIT FORCED OUTAGE RATE
19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE & DURATION OF EACH:)
20. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP:
December 10, 1977

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

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

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

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

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

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

UNIT SHUTDOWNS

DOCKET NO. 50-287

UNIT NAME Oconee Unit 3

DATE 12-9-77

REPORT MONTH November, 1977

NO.	DATE	TYPE F-FORCED S-SCHEDULED	DURATION (HOURS)	REASON (1)	METHOD OF SHUTTING DOWN THE REACTOR (2)	CORRECTIVE ACTIONS/COMMENTS
12	77-11-01	S	720.00	C	1	Refueling outage (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) (2) METHOD 1--MANUAL 2--MANUAL SCRAM 3--AUTOMATIC SCRAM

SUMMARY:

Refueling outage continued. Note that cumulative capacity factors for Oconee Unit 3 have been calculated using a weighted maximum dependable capacity to reflect past variations in this number.

DOCKET NO. 50-287

UNIT Oconee Unit 3

DATE 12-9-77

AVERAGE DAILY UNIT POWER LEVEL

MONTH November, 1977

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	-
7	-	23	-
8	-	24	-
9	-	25	-
10	-	26	-
11	-	27	-
12	-	28	-
13	-	29	-
14	-	30	-
15	-	31	-
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.