NRC FORM 195 (2-76)

U.S. NUCLEAR REGULATORY COMMISSION

DOCKET NUMBER: 50-269/270/287

FILE NUMBER: MONTHLY REPORT

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TO:	FROM:	DATE OF DOCUMENT
N. R. C.	Duke Power Company Charlotte, North Carolina William O. Parker, Jr.	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

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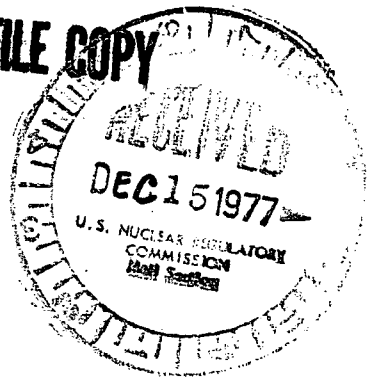
DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE: AREA 704
373-4083

December 9, 1977



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

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)

		This Month	Year to Date	Cumulative
5.	NUMBER OF HOURS THE REACTOR WAS CRITICAL	720.00	4,962.6	27,078.4
6.	REACTOR RESERVE SHUTDOWN HOURS	--	--	--
7.	HOURS GENERATOR ON-LINE	720.0	4,824.7	24,788.7
8.	UNIT RESERVE SHUTDOWN HOURS	--	--	--
9.	GROSS THERMAL ENERGY GENERATED(MWH)	1,418,049	10,743,586	57,129,297
10.	GROSS ELECTRICAL ENERGY GENERATED (MWH)	486,420	3,675,720	19,799,150
11.	NET ELECTRICAL ENERGY GENERATED (MWH)	459,598	3,460,701	18,693,234
12.	REACTOR SERVICE FACTOR	100.0	61.9	70.6
13.	REACTOR AVAILABILITY FACTOR	100.0	61.8	66.9
14.	UNIT SERVICE FACTOR	100.0	60.2	64.6
15.	UNIT AVILABILITY FACTOR	100.0	60.2	64.7
16.	UNIT CAPACITY FACTOR (Using Net Capability)	74.2	50.2	56.3
17.	UNIT CAPACITY FACTOR (Using Design Mwe)	72.0	48.7	54.9
18.	UNIT FORCED OUTAGE RATE	-0-	22.84	18.8

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:

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

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

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

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

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

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

DOCKET NO. 50-269

UNIT NAME Oconee Unit 1

DATE 12-09-77

UNIT SHUTDOWNS

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

(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:

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

DAY	AVERAGE DAILY POWER LEVEL (MWe-net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-net)
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) ____

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

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:

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

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

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

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

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

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

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

UNIT SHUTDOWNS

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

(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:

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 Oconee 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)

	This Month	Year to Date	Cumulative
5. NUMBER OF HOURS THE REACTOR WAS CRITICAL	8.5	6,145.8	19,548.5
6. REACTOR RESERVE SHUTDOWN HOURS	---	---	---
7. HOURS GENERATOR ON-LINE	-0-	6,039.5	19,063.0
8. UNIT RESERVE SHUTDOWN HOURS	---	---	---
9. GROSS THERMAL ENERGY GENERATED(MWH)	-0-	14,850,262	45,218,479
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	-0-	5,154,410	15,593,854
11. NET ELECTRICAL ENERGY GENERATED (MWH)	(5,515)	4,905,241	14,838,883
12. REACTOR SERVICE FACTOR	1.2	76.7	75.4
13. REACTOR AVAILABILITY FACTOR	-0-	75.5	75.4
14. UNIT SERVICE FACTOR	-0-	75.3	73.5
15. UNIT AVILABILITY FACTOR	-0-	75.3	73.5
16. UNIT CAPACITY FACTOR (Using Net Capability)	-0-	71.2	65.9
17. UNIT CAPACITY FACTOR (Using Design Mwe)	-0-	69.0	64.5
18. UNIT FORCED OUTAGE RATE	-0-	14.4	14.1

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

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

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

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

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

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

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

DOCKET NO. 50-287
UNIT NAME Oconee Unit 3
DATE 12-9-77

UNIT SHUTDOWNS

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.