

APPENDIX 8
AVERAGE DAILY POWER LEVEL

DOCKET NO. 850-0325
UNIT BRUNSWICK UNIT 1
DATE 12/02/80
COMPLETED BY EULIS WILLIS
TELEPHONE 919-457-9321

NOVEMBER 80

DAY	AVG. DAILY POWER LEVEL (MWE-NET)	DAY	AVG. DAILY POWER LEVEL (MWE-NET)
1	759.	17	759.
2	767.	18	753.
3	764.	19	747.
4	760.	20	739.
5	686.	21	712.
6	354.	22	718.
7	515.	23	750.
8	660.	24	747.
9	387.	25	749.
10	396.	26	753.
11	538.	27	751.
12	658.	28	751.
13	634.	29	743.
14	764.	30	756.
15	751.		
16	757.		

OPERATING DATA REPORT

DOCKET NO. 050-0020
 DATE 12-02/80
 COMPLETED BY EULIS WILLIS
 TELEPHONE 919-487-9020

OPERATING STATUS

- | | | |
|---|---|-------|
| 1. UNIT NAME: BRUNSWICK UNIT 1 | I | NOTES |
| 2. REPORTING PERIOD: NOVEMBER 80 | I | |
| 3. LICENSED THERMAL POWER (MWT): 2436 | I | |
| 4. NAMEPLATE RATING (GROSS MWE): 367.0 | I | |
| 5. DESIGN ELECTRICAL RATING (NET MWE): 321.0 | I | |
| 6. MAX DEPENDABLE CAPACITY (GROSS MWE): 315.0 | I | |
| 7. MAX DEPENDABLE CAPACITY (NET MWE): 290.0 | I | |
| 8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS 3 THRU 7) SINCE LAST REPORT, GIVE REASONS: | | |

9. POWER LEVEL TO WHICH RESTRICTED IF ANY (NET MWE): NONE
 10. REASONS FOR RESTRICTION IF ANY:

	THIS MONTH	YR TO DATE	CUMULATIVE
11. HOURS IN REPORTING PERIOD	720.0	8040.0	32497.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	720.0	5749.6	23139.2
13. REACTOR RESERVE SHUTDOWN HOURS	0.0	0.0	1647.0
14. HOURS GENERATOR ON LINE	720.0	5386.1	21719.0
15. UNIT RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED (MWH)	1549226.4	10867255.5	44696752.5
17. GROSS ELECTRICAL ENERGY GENERATED (MWH)	509576.0	3625420.0	14864239.0
18. NET ELECTRICAL ENERGY GENERATED (MWH)	493826.0	3492815.0	14300625.0
19. UNIT SERVICE FACTOR	100.0	67.0	66.0
20. UNIT AVAILABILITY FACTOR	100.0	67.0	66.0
21. UNIT CAPACITY FACTOR (USING MDC NET)	86.8	55.0	55.0
22. UNIT CAPACITY FACTOR (USING DER NET)	83.5	52.9	53.0
23. UNIT FORCED OUTAGE RATE	0.0	3.4	18.0
24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH)			

Maintenance, 81 03 07, 1344 Hours

25. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF START UP: 07/07/81
 26. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION): FORECAST ACHEIVE

INITIAL CRITICALITY -----

INITIAL ELECTRICITY -----

COMMERCIAL OPERATION -----

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 050-0325
 UNIT NAME Brunswick No. 1
 DATE December 1980
 COMPLETED BY Eulis A. Willis
 TELEPHONE (919) 457-9521

REPORT MONTH NOVEMBER 1980

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
025	801105	S	13.9	H	1	N/A	ZZ	ZZZZZZ	Reduced power for a rod sequence exchange. Rod changes are necessary for an even fuel burnup. No corrective action required.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance of 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 C - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NURLG-0161)

⁵
 Exhibit I - Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH NOVEMBER 1980

DOCKET NO. 050-0325
 UNIT NAME Brunswick No. 1
 DATE December 1980
 COMPLETED BY Eulis A. Willis
 TELEPHONE (919) 457-9521

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
026	801108	F	41.7	B	1	N/A	HC	HTEXCH	Reduced power to leak check 1B north condenser waterbox. Leaking tubes were located by using the helium leak check method. Two tubes were plugged.

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)

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⁵ Exhibit I - Same Source

APPENDIX

DOCKET NO. 050-0325
UNIT Brunswick No. 1
DATE December 1980
COMPLETED BY Eulis A. Willis

OPERATIONS SUMMARY

BRUNSWICK NO. 1

Brunswick No. 1 operated at a 100% availability factor for the month of November with an 86.8% capacity factor. There were two power reductions this month, both are detailed in Appendix D, the Unit Shutdown and Power Reductions Log.

There are 476 BWR and 154 PWR spent fuel bundles in the Brunswick Unit No. 1 fuel pool.

APPENDIX B
AVERAGE DAILY POWER LEVEL

DOCKET NO. 950-0324
UNIT BRUNSWICK UNIT 2
DATE 12/02/80
COMPLETED BY EULIS WILLIS
TELEPHONE 919-457-9521

NOVEMBER 80

DAY	AVG. DAILY POWER LEVEL (MWE-NET)	DAY	AVG. DAILY POWER LEVEL (MWE-NET)
1	551.	17	575.
2	525.	18	187.
3	698.	19	0.
4	655.	20	459.
5	775.	21	622.
6	781.	22	627.
7	780.	23	556.
8	770.	24	667.
9	771.	25	717.
10	690.	26	733.
11	424.	27	677.
12	570.	28	699.
13	10.	29	699.
14	52.	30	725.
15	234.		
16	264.		

OPERATING DATA REPORT

DOCKET NO. 850-0324
 DATE 12/02/80
 COMPLETED BY EULIS WILLIS
 TELEPHONE 919-457-9321

OPERATING STATUS

- | | | |
|---|---|-------|
| 1. UNIT NAME: BRUNSWICK UNIT 2 | I | NOTES |
| 2. REPORTING PERIOD: NOVEMBER 80 | I | |
| 3. LICENSED THERMAL POWER (MWT): 2436 | I | |
| 4. NAMEPLATE RATING (GROSS MWE): 867.0 | I | |
| 5. DESIGN ELECTRICAL RATING (NET MWE): 821.0 | I | |
| 6. MAX DEPENDABLE CAPACITY (GROSS MWE): 815.0 | I | |
| 7. MAX DEPENDABLE CAPACITY (NET MWE): 790.0 | I | |
| 8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS 3 THRU 7) SINCE LAST REPORT, GIVE REASONS: | | |
| | | |
| 9. POWER LEVEL TO WHICH RESTRICTED IF ANY (NET MWE): NONE | | |
| 10. REASONS FOR RESTRICTION IF ANY: | | |

	THIS MONTH	YR TO DATE	CUMULATIVE
11. HOURS IN REPORTING PERIOD	720.0	8040.0	44521.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	683.6	3221.5	28545.0
13. REACTOR RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
14. HOURS GENERATOR ON LINE	635.6	2709.8	26583.0
15. UNIT RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED (MWH)	1262122.7	5278924.4	49013387.0
17. GROSS ELECTRICAL ENERGY GENERATED (MWH)	410737.0	1757617.0	16372691.0
18. NET ELECTRICAL ENERGY GENERATED (MWH)	395693.0	1684026.0	15724498.0
19. UNIT SERVICE FACTOR	88.3	33.7	59.0
20. UNIT AVAILABILITY FACTOR	88.3	33.7	59.0
21. UNIT CAPACITY FACTOR (USING MDC NET)	69.6	26.5	44.0
22. UNIT CAPACITY FACTOR (USING DER NET)	66.9	25.5	43.0
23. UNIT FORCED OUTAGE RATE	11.7	13.3	13.0
24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH			

Maintenance, 80 12 06, 171 Hours

- | | |
|--|------------------|
| 25. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF START UP: | 31 81 |
| 26. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION): | FORECAST ACHIEVE |

INITIAL CRITICALITY	-----	-----
INITIAL ELECTRICITY	-----	-----
COMMERCIAL OPERATION	-----	-----

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH NOVEMBER 1980

DOCKET NO. 050-0324
 UNIT NAME Brunswick No. 2
 DATE December 1980
 COMPLETED BY Eulis A. Willis
 TELEPHONE (919) 457-9521

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
012	801101	F	11.4	B	1	N/A	XX	PUMPXX	Reduced power for heater drain pump maintenance. Removed motor from pump 2A and placed on pump 2B.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance of 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)

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 Exhibit I - Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 050-0324
 UNIT NAME Brunswick No. 2
 DATE December 1980
 COMPLETED BY Eulis A. Willis
 TELEPHONE (919) 457-9521

REPORT MONTH NOVEMBER 1980

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
013	801111	F	17.6	B	1	N/A	HC	HTEXCH	Reduced power to leak check 2A south condenser waterbox. Leaking tubes were located by using the helium leak check method. Two tubes were plugged.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance of Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Examination
 F-Administrative
 G-Operational Error (Explain)
 H-Other (Explain)

³
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UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 050-0324
 UNIT NAME Brunswick No. 2
 DATE December 1980
 COMPLETED BY Eulis A. Willis
 TELEPHONE (919) 457-9521

REPORT MONTH NOVEMBER 1980

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
014	801113	F	34.8	A	3	N/A	IA	ELECON	Reactor scram due to a Reactor Protection System power supply group. Investigation revealed an insulation breakdown and burn-through of the ground cable at a point where the cable physically rested against a 120 volt control power relay contact. Corrective action consisted of repairing the damaged insulation in accordance with plant procedures. The cable was then restrained away from the relay contact to prevent a future reoccurrence.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance of Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Examination
 F-Administrative
 G-Operational Error (Explain)
 H-Other (Explain)

³
 Method:
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UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH NOVEMBER 1980

DOCKET NO. 050-0324
 UNIT NAME Brunswick No. 2
 DATE December 1980
 COMPLETED BY Eulis A. Willis
 TELEPHONE (919) 457-9521

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
015	801115	F	122	B	1	N/A	XX	PUMPXX	Separated from grid to repair leak in heater drain pumps. The leak was attributed to a failure of recirculation piping between heater drain pump 2C and the deaerator tank. The 21" section of pipe was cut out and a new section welded in place.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance of Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Examination
 F-Administrative
 G-Operational Error (Explain)
 H-Other (Explain)

³
 Method:
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UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 050-0324
 UNIT NAME Brunswick No. 2
 DATE December 1980
 COMPLETED BY Enlis A. Willis
 TELEPHONE (919) 457-9521

REPORT MONTH NOVEMBER 1980

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
016	801118	F	37.5	A	3	N/A	HA	INSTRU	Reactor scram due to a power load unbalance condition sensed by the turbine control EHC system. Replaced the control intercept valve amplifier and trigger printed wire board.

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)

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APPENDIX

DOCKET NO. 050-0324
UNIT Brunswick No. 2
DATE December 1980
COMPLETED BY Eulis A. Willis

OPERATIONS SUMMARY

BRUNSWICK NO. 2

Brunswick No. 2 operated at a 69.6% capacity factor for the month of November with an 88.3% availability factor. The unit was separated from the grid three times during the month for various reasons, with two major power reductions. All outages and power reductions are detailed in Appendix D of this report.

There are 264 BWR and 124 PWR spent fuel bundles stored in the Brunswick Unit No. 2 fuel pool.