APPENDIX B
AVERAGE DAILY POWER LEVEL

DOCKET NO. 050-0324
UNIT BRUNSWICK UNIT 2
DATE 08/03/79
COMPLETED BY EULIS MILLIS
TELEPHONE 919-457-9521

JULY 79

| DAY | AVG. DAILY POWER LEVEL (MWE-NET) | DAY | AVG. DAILY POWER LEVEL (MWE-NET) |
|---|---|---|---|
| 1 | 0. | 17 | 707. |
| 2 | 0. | 18 | 740. |
| 3 | 0. | 19 | 320. |
| 4 | 0. | 20 | 0. |
| 5 | 225. | 21 | 290. |
| 6 | 443. | 22 | 620. |
| 7 | 533. | 23 | 669. |
| 8 | 540. | 24 | 753. |
| 9 | 673. | 25 | 715. |
| 10 | 724. | 26 | 702. |
| 11 | 715. | 27 | 750. |
| 12 | 715. | 28 | 739. |
| 13 | 711. | 29 | 743. |
| 14 | 367. | 30 | 741. |
| 15 | 646. | 31 | 123. |
| 16 | 728. | | |

# OPERATING DATA REPORT

DOCKET NO. 050-0324
DATE 08/03/79
COMPLETED BY EULIS MILLIS
TELEPHONE 919-457-9521

OPERATING STATUS

1. UNIT NAME: BRUNSWICK UNIT 2
2. REPORTING PERIOD: JULY 79
3. LICENSED THERMAL POWER (MWT): 2436
4. NAMEPLATE RATING (GROSS MWE): 867.0
5. DESIGN ELECTRICAL RATING (NET MWE): 821.0
6. MAX DEPENDABLE CAPACITY (GROSS MWE): 815.0
7. MAX DEPENDABLE CAPACITY (NET MWE): 790.0

NOTES

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 | 744.0 | 5087.0 | 32808.0 |
| 12. NUMBER OF HOURS REACTOR WAS CRITICAL | 600.1 | 2720.4 | 22006.6 |
| 13. REACTOR RESERVE SHUTDOWN HOURS | 0.0 | 0.0 | 0.0 |
| 14. HOURS GENERATOR ON LINE | 582.2 | 2541.3 | 20670.4 |
| 15. UNIT RESERVE SHUTDOWN HOURS | 0.0 | 0.0 | 0.0 |
| 16. GROSS THERMAL ENERGY GENERATED (MWH) | 1163758.4 | 4752512.9 | 37200347.1 |
| 17. GROSS ELECTRICAL ENERGY GENERATED (MWH) | 390470.0 | 1608365.0 | 12424692.0 |
| 18. NET ELECTRICIAL ENERGY GENERATED (MWH) | 374136.0 | 1537605.0 | 11925817.0 |
| 19. UNIT SERVICE FACTOR | 78.3 | 50.0 | 63.0 |
| 20. UNIT AVAILABILITY FACTOR | 78.3 | 50.0 | 63.0 |
| 21. UNIT CAPACITY FACTOR (USING MDC NET) | 63.7 | 38.3 | 46.0 |
| 22. UNIT CAPACITY FACTOR (USING DER NET) | 61.3 | 36.8 | 44.3 |
| 23. UNIT FORCED OUTAGE RATE | 9.5 | 5.4 | 14.0 |

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

Support Inspection, 790913, 120 HRS.

25. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF START UP: 8/ 3/79
26. UNITS IN TEST STATUS (PRIOR TO COMMERICIAL OPERATION): FORCAST ACHEIVED

| | | |
|---|---|---|
| INITIAL CRITICALITY | ------- | ------- |
| INITIAL ELECTRICITY | ------- | ------- |
| COMMERICIAL OPERATION | ------- | ------- |

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 050-0324
UNIT NAME Brunswick No. 2
DATE August 1979
COMPLETED BY Eulis A. Willis
TELEPHONE (919) 457-9521

REPORT MONTH July

| 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 | 790719 | F | 41.6 | A | 1 | 2-79-57 | HB | VALVEX | Unit was separated from the grid because safety relief valve F013E opened below its required set pressure on two occasions.<br><br>The valve was removed and replaced with one from stock. The defective valve was sent to Wyllie Laboratory for disassembly and inspection by Target Rock personnel. Overtime was worked. |



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)

4
Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NURLG-0161)

5
Exhibit I - Same Source

(9/77)

APPENDIX

Docket No. 050-0324
Unit Brunswick No. 2
Date August 1979
Completed By Eulis A. Willis

## Operations Summary

## Brunswick No. 2

Availability factor for Brunswick Unit No. 2 was 78.3% for July with three shutdowns lasting a total of 161.8 hours occurring this month:

June 29: Separated from grid for pipe support inspections and modifications. Back on line July 5 at 0422.

July 19: Separated from the grid because a safety relief valve opened below its required set pressure.

July 31: Circulating water pump trip caused a turbine trip and reactor scram. Unit expected back on line August 3.

Capacity factor was limited to 63.7% mainly because of "preconditioning" the fuel following each outage.

There are 42 PWR spent fuel assemblies and 132 BWR spent fuel assemblies stored in the BSEP #2 spent fuel pool.

APPENDIX B
AVERAGE DAILY POWER LEVEL

DOCKET NO. 050-0325
UNIT BRUNSWICK UNIT 1
DATE 08/03/79
COMPLETED BY JULIS WILLIS
TELEPHONE 919-457-9521

JULY 79

| DAY | AVG. DAILY POWER LEVEL (MWE-NET) | DAY | AVG. DAILY POWER LEVEL (MWE-NET) |
|---|---|---|---|
| 1 | 763. | 17 | 615. |
| 2 | 760. | 18 | 647. |
| 3 | 755. | 19 | 83. |
| 4 | 746. | 20 | 546. |
| 5 | 469. | 21 | 578. |
| 6 | 260. | 22 | 652. |
| 7 | 564. | 23 | 764. |
| 8 | 375. | 24 | 769. |
| 9 | 617. | 25 | 769. |
| 10 | 673. | 26 | 771. |
| 11 | 528. | 27 | 768. |
| 12 | 487. | 28 | 355. |
| 13 | 664. | 29 | 166. |
| 14 | 663. | 30 | 597. |
| 15 | 452. | 31 | 503. |
| 16 | 467. | | |

# OPERATING DATA REPORT

DOCKET NO. 050-0325
DATE 08/03/79
COMPLETED BY EULIS WILLIS
TELEPHONE 919-457-9521

OPERATING STATUS

1. UNIT NAME: BRUNSWICK UNIT 1
2. REPORTING PERIOD: JULY 79
3. LICENSED THERMAL POWER (MWT): 2436
4. NAMEPLATE RATING (GROSS MWE): 867.0
5. DESIGN ELECTRICAL RATING (NET MWE): 821.0
6. MAX DEPENDABLE CAPACITY (GROSS MWE): 815.0
7. MAX DEPENDABLE CAPACITY (NET MWE): 790.0
8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS 3 THRU 7) SINCE LAST REPORT, GIVE REASONS:

NOTES

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 | 744.0 | 5087.0 | 20784.0 |
| 12. NUMBER OF HOURS REACTOR WAS CRITICAL | 723.4 | 2454.8 | 14756.4 |
| 13. REACTOR RESERVE SHUTDOWN HOURS | 0.0 | 0.0 | 1647.1 |
| 14. HOURS GENERATOR ON LINE | 712.9 | 2304.7 | 13854.5 |
| 15. UNIT RESERVE SHUTDOWN HOURS | 0.0 | 0.0 | 0.0 |
| 16. GROSS THERMAL ENERGY GENERATED (MWH) | 1345626.9 | 4778952.2 | 28726143.4 |
| 17. GROSS ELECTRICAL ENERGY GENERATED (MWH) | 444157.0 | 1588205.0 | 9519482.0 |
| 18. NET ELECTRICIAL ENERGY GENERATED (MWH) | 428759.0 | 1522718.0 | 9161316.0 |
| 19. UNIT SERVICE FACTOR | 95.8 | 45.3 | 66.7 |
| 20. UNIT AVAILABILITY FACTOR | 95.8 | 45.3 | 66.7 |
| 21. UNIT CAPACITY FACTOR (USING MDC NET) | 72.9 | 37.9 | 55.8 |
| 22. UNIT CAPACITY FACTOR (USING DER NET) | 70.2 | 36.5 | 53.7 |
| 23. UNIT FORCED OUTAGE RATE | 4.2 | 6.1 | 21.1 |

24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH)

Support Inspection, 790906, 120 HRS.

25. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF START UP: 0/ 0/ 0
26. UNITS IN TEST STATUS (PRIOR TO COMMERICIAL OPERATION):

| | FORCAST | ACHEIVED |
|---|---|---|
| INITIAL CRITICALITY | | |
| INITIAL ELECTRICITY | | |
| COMMERICIAL OPERATION | | |

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 050-0325
UNIT NAME Brunswick No. 1
DATE August 1979
COMPLETED BY Eulis A. Willis
TELEPHONE (919) 457-9521

REPORT MONTH July

| 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 | 790728 | F | 13.4 | B | 3 | N/A | IB | INSTRU | Reactor scram on APRM flow biased upscale. The APRM flow biased upscale was caused while placing the B recirculating loop in service following a trip of the B recirculating pump M-G set. The M-G set had tripped on low lube oil pressure following a motor and breaker failure on one of two operating M-G set lube oil pumps. The standby lube oil pump failed to start on loss of the operating pump. (1) Checked all recirculation flow units and transmitters. All were within limits but lowest one (Unit C) was readjusted. (2)Performed functional test on flow Unit C. Results satisfactory. |



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)

4
Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5
Exhibit I - Same Source

(9/77)

Cause & Corrective Action to Prevent Recurrence (Continued)

(3) The lube oil pump motor and breaker were replaced. (4) The reasons for the standby lube oil pump not starting will be investigated and corrected when plant conditions permit. Calibration records were checked and showed that calibration was done on pressure switches during 1979 refueling outage. (5) Operating Procedure No. 2 will be revised considering the following: (a) Going no lower than 50% flow on the running recirc pump to give slightly more flow that existed at the time of this scram, (b) Optimizing the jog-and-wait procedure for opening the pump discharge valve considering both pump and preconditioning recommendations from GE, and (c) Checking the margin to rod block (and, therefore, scram) setpoints on APRMs before returning the idle loop to service.

Overtime was worked.

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 050-0325
UNIT NAME Brunswick No. 1
DATE August 1979
COMPLETED BY Eulis A. Willis
TELEPHONE (919) 457-8521

REPORT MONTH July

| 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 | 790728 | F | 13.4 | B | 3 | N/A | IB | INSTRU | Reactor scram while valving in remote shutdown instrumentation B21 NO17D-3. The instrument low side isolation root valve was opened as part of the normal procedure for placing the instrument in service. When the valve was opened, sensitive instruments on the same reference leg connected to the reactor scrammed the reactor on a false low level signal. B21-NO17D-3 was installed during a recent outage as part of the protection modification. The high and low pressure legs of this instrument are not piped to the reference legs in the conventional manner; they are reversed. This may have contributed to the scram. (1) A plant modification has been prepared to repipe B21-NO17D-3 in |



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 G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5
Exhibit I - Same Source

(9/77)

Cause & Corrective Action to Prevent Recurrence (Continued)

order that the low side is connected to the variable leg and the high side to the reference leg. (2) In order to prevent similar occurrences on other instruments, detailed procedures are being prepared on how to place instruments in and out of service. (3) Reference legs will be colored a distinctive color for better identification. (4) This event will be reviewed by all I&C technicians. (5) The digital-to-analog conversion will help solve this problem. Overtime was worked.

APPENDIX

Docket No. 050-0325
Unit Brunswick No.1
Date August 1979
Completed By Eulis A. Willis

Operations Summary

Brunswick No. 1

Brunswick Unit No. 1 operated at 72.9% capacity factor for the month of July with only two interruptions preventing the unit from reaching 100% availability.

July 18: Reactor scram on APRM flow biased upscale while placing the "B" reactor recirc loop in service.

July 28: Reactor scram because of a false low level signal which occurred while valving in remote shutdown level instrumentation.

Total downtime for the unit was 31 hours and four minutes, resulting in a 95.8% availability factor. For more detailed information on individual outages, see Appendix D of this report.

There are 154 PWR spent fuel assemblies and 320 BWR spent fuel assemblies stored in the BSEP #1 spent fuel pool.