

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

May 9, 1977

**REGULATORY DOCKET FILE COPY**



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

Serial No. 188/021974  
PO&M/TAP:dgt  
Docket Nos. 50-280  
50-281  
License Nos. DPR-32  
DPR-37

Dear Mr. McDonald:

Operating information for Surry Power Station, Unit Nos. 1 and 2, for the month of April 1977 is attached.

Very truly yours,

C. M. Stallings  
Vice President-Power Supply  
and Production Operations

Attachments

cc: Mr. Norman C. Moseley

771320110

UNIT Surry Unit #1

DATE May 2, 1977

COMPLETED BY E. P. DeWandel

DOCKET NO. 50-280

OPERATING STATUS

1. REPORTING PERIOD: 0001 770401 THROUGH 2400 770430  
HOURS IN REPORTING PERIOD: 719
2. CURRENTLY AUTHORIZED POWER LEVEL (MW<sub>th</sub>) 2441 MAX. DEPENDABLE CAPACITY (MWe-NET) 775
3. LOWEST POWER LEVEL TO WHICH SPECIFICALLY RESTRICTED (IF ANY) (MWe-NET): \_\_\_\_\_
4. REASONS FOR RESTRICTION (IF ANY): \_\_\_\_\_

	THIS REPORTING PERIOD	YR TO DATE	CUMULATIVE TO DATE
5. HOURS REACTOR WAS CRITICAL . . . . .	<u>254.8</u>	<u>1849.2</u>	<u>24,403.6</u>
6. REACTOR RESERVE SHUTDOWN HOURS . . . . .	<u>0</u>	<u>0</u>	<u>0</u>
7. HOURS GENERATOR ON LINE . . . . .	<u>254.6</u>	<u>1780.0</u>	<u>23,680.0</u>
8. UNIT RESERVE SHUTDOWN HOURS . . . . .	<u>0</u>	<u>0</u>	<u>0</u>
9. GROSS THERMAL ENERGY GENERATED (MWH) . . . . .	<u>619,793</u>	<u>4,301,804</u>	<u>53,390,160</u>
10. GROSS ELECTRICAL ENERGY GENERATED (MWH) . . . . .	<u>204,835</u>	<u>1,428,015</u>	<u>17,506,378</u>
11. NET ELECTRICAL ENERGY GENERATED (MWH) . . . . .	<u>195,185</u>	<u>1,360,299</u>	<u>16,604,064</u>
12. REACTOR AVAILABILITY FACTOR (1) . . . . .	<u>35.4%</u>	<u>64.2%</u>	<u>63.9%</u>
13. UNIT AVAILABILITY FACTOR (2) . . . . .	<u>35.4%</u>	<u>61.8%</u>	<u>62.0%</u>
14. UNIT CAPACITY FACTOR (3) . . . . .	<u>35.0%</u>	<u>61.0%</u>	<u>56.1%</u>
15. UNIT FORCED OUTAGE RATE (4) . . . . .	<u>0%</u>	<u>4.5%</u>	<u>20.9%</u>
16. SHUTDOWNS SCHEDULED TO BEGIN IN NEXT 6 MONTHS (STATE TYPE, DATE, AND DURATION OF EACH): <u>Inspection of Steam Generators - 9/10/77 for 3 weeks</u>			
17. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: <u>5/8 /77</u>			
18. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION) REPORT THE FOLLOWING:			

DATE LAST FORECAST      DATE ACHIEVED

INITIAL CRITICALITY \_\_\_\_\_  
INITIAL ELECTRICAL  
POWER GENERATION \_\_\_\_\_  
COMMERCIAL OPERATION \_\_\_\_\_

- (1) REACTOR AVAILABILITY FACTOR =  $\frac{\text{HOURS REACTOR WAS CRITICAL}}{\text{HOURS IN REPORTING PERIOD}} \times 100$
- (2) UNIT AVAILABILITY FACTOR =  $\frac{\text{HOURS GENERATOR ON LINE}}{\text{HOURS IN REPORTING PERIOD}} \times 100$
- (3) UNIT CAPACITY FACTOR =  $\frac{\text{NET ELECTRICAL POWER GENERATED}}{\text{MAX. DEPENDABLE CAPACITY (MWe-NET) X HOURS IN REPORTING PERIOD}}$
- (4) UNIT FORCED OUTAGE RATE =  $\frac{\text{FORCED OUTAGE HOURS}}{\text{HOURS GENERATOR ON LINE + FORCED OUTAGE HOURS}} \times 100$

DOCKET NO. 50-280

UNIT Surry #1

DATE May 2, 1977

COMPLETED BY E. P. DeWandel

**AVERAGE DAILY UNIT POWER LEVEL**

MONTH APRIL 1977

DAY	AVERAGE DAILY POWER LEVEL (MWe-net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-net)
1	<u>773.5</u>	17	<u>0</u>
2	<u>768.6</u>	18	<u>0</u>
3	<u>768.7</u>	19	<u>0</u>
4	<u>769.0</u>	20	<u>0</u>
5	<u>770.3</u>	21	<u>0</u>
6	<u>774.8</u>	22	<u>0</u>
7	<u>770.2</u>	23	<u>0</u>
8	<u>769.0</u>	24	<u>0</u>
9	<u>770.7</u>	25	<u>0</u>
10	<u>769.4</u>	26	<u>0</u>
11	<u>428.8</u>	27	<u>0</u>
12	<u>0</u>	28	<u>0</u>
13	<u>0</u>	29	<u>0</u>
14	<u>0</u>	30	<u>0</u>
15	<u>0</u>	31	<u>0</u>
16	<u>0</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. 50-280

UNIT NAME Surry #1

DATE May 2, 1977

COMPLETED BY E. P. DeWandel

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
I-1	4/11/77	S	464.4	D	1	<p>Unit shutdown as directed by NRC to inspect S/G's. Unit shutdown at end of report period. Time reflects one hour time change on 0200 4/24/77.</p> <p>(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)</p> <p>(2) METHOD            1-MANUAL            2-MANUAL SCRAM            3-AUTOMATIC SCRAM</p>

SUMMARY:

UNIT Surry Unit #2

DATE May 2, 1977

COMPLETED BY E. P. DeWandel

DOCKET NO. 50-281

OPERATING STATUS

1. REPORTING PERIOD: 0001 770401 THROUGH 2400 770430  
HOURS IN REPORTING PERIOD: 719
2. CURRENTLY AUTHORIZED POWER LEVEL (MWh) 2441 MAX. DEPENDABLE CAPACITY (MWe-NET) 775
3. LOWEST POWER LEVEL TO WHICH SPECIFICALLY RESTRICTED (IF ANY) (MWe-NET): \_\_\_\_\_
4. REASONS FOR RESTRICTION (IF ANY): \_\_\_\_\_

	THIS REPORTING PERIOD	YR TO DATE	CUMULATIVE TO DATE
5. HOURS REACTOR WAS CRITICAL . . . . .	<u>474.0</u>	<u>1451.1</u>	<u>21,770.0</u>
6. REACTOR RESERVE SHUTDOWN HOURS . . . . .	<u>0</u>	<u>0</u>	<u>0</u>
7. HOURS GENERATOR ON LINE . . . . .	<u>462.2</u>	<u>1433.6</u>	<u>21,379.0</u>
8. UNIT RESERVE SHUTDOWN HOURS . . . . .	<u>0</u>	<u>0</u>	<u>0</u>
9. GROSS THERMAL ENERGY GENERATED (MWH) . . . . .	<u>1,117,303</u>	<u>3,386,703</u>	<u>48,731,330</u>
10. GROSS ELECTRICAL ENERGY GENERATED (MWH) . . . . .	<u>367,110</u>	<u>1,127,370</u>	<u>15,998,744</u>
11. NET ELECTRICAL ENERGY GENERATED (MWH) . . . . .	<u>349,246</u>	<u>1,071,009</u>	<u>15,166,711</u>
12. REACTOR AVAILABILITY FACTOR (1) . . . . .	<u>65.9%</u>	<u>50.4%</u>	<u>62.1%</u>
13. UNIT AVAILABILITY FACTOR (2) . . . . .	<u>64.3%</u>	<u>49.8%</u>	<u>61.0%</u>
14. UNIT CAPACITY FACTOR (3) . . . . .	<u>62.7%</u>	<u>48.0%</u>	<u>55.8%</u>
15. UNIT FORCED OUTAGE RATE (4) . . . . .	<u>35.7%</u>	<u>50.2%</u>	<u>28.0%</u>
16. SHUTDOWNS SCHEDULED TO BEGIN IN NEXT 6 MONTHS (STATE TYPE, DATE, AND DURATION OF EACH): <u>August 1977 - Steam Generator Inspection - 3 weeks, September 1977 - Refueling</u>			
17. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: _____			
18. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION) REPORT THE FOLLOWING:			

	DATE LAST FORECAST	DATE ACHIEVED
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICAL POWER GENERATION	_____	_____
COMMERCIAL OPERATION	_____	_____

- (1) REACTOR AVAILABILITY FACTOR =  $\frac{\text{HOURS REACTOR WAS CRITICAL}}{\text{HOURS IN REPORTING PERIOD}} \times 100$
- (2) UNIT AVAILABILITY FACTOR =  $\frac{\text{HOURS GENERATOR ON LINE}}{\text{HOURS IN REPORTING PERIOD}} \times 100$
- (3) UNIT CAPACITY FACTOR =  $\frac{\text{NET ELECTRICAL POWER GENERATED}}{\text{MAX. DEPENDABLE CAPACITY (MWe-NET)} \times \text{HOURS IN REPORTING PERIOD}}$
- (4) UNIT FORCED OUTAGE RATE =  $\frac{\text{FORCED OUTAGE HOURS}}{\text{HOURS GENERATOR ON LINE} + \text{FORCED OUTAGE HOURS}} \times 100$

DOCKET NO. 50-281

UNIT Surry #2

DATE May 2, 1977

COMPLETED BY E. P. DeWandel

### AVERAGE DAILY UNIT POWER LEVEL

MONTH APRIL 1977

DAY	AVERAGE DAILY POWER LEVEL (MWe-net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-net)
1	<u>0</u>	17	<u>765.3</u>
2	<u>0</u>	18	<u>766.0</u>
3	<u>0</u>	19	<u>766.3</u>
4	<u>0</u>	20	<u>766.1</u>
5	<u>0</u>	21	<u>767.4</u>
6	<u>0</u>	22	<u>767.4</u>
7	<u>0</u>	23	<u>750.6</u>
8	<u>0</u>	24	<u>398.7</u>
9	<u>0</u>	25	<u>762.2</u>
10	<u>0</u>	26	<u>764.0</u>
11	<u>400.0</u>	27	<u>766.1</u>
12	<u>762.5</u>	28	<u>766.5</u>
13	<u>764.9</u>	29	<u>764.0</u>
14	<u>762.2</u>	30	<u>765.1</u>
15	<u>762.6</u>	31	<u>      </u>
16	<u>763.8</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.

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UNIT SHUTDOWNS

DOCKET NO. 50-281

UNIT NAME Surry #2

DATE May 2, 1977

COMPLETED BY E. P. DeWandel

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
2-1	4/1/77	F	248.5	A	1	Primary to Secondary Leakage; the unit was shut down from beginning of the month for inspection. CRDM problems were also experienced during recovery. Two CRDM's were replaced.
2-2	4/23/77	F	8.3	H	3	Unit tripped from Hi-Hi S/G level during ramp down to perform PT-29.1 (Turbine Valve Freedom Test)

- |  |             |
|--|-------------|
| (1) REASON                                     | (2) METHOD  |
| A-EQUIPMENT FAILURE (EXPLAIN)                  | 1-MANUAL    |
| B-MAINT. OR TEST                               | 2-MANUAL    |
| C-REFUELING                                    | SCRAM       |
| D-REGULATORY RESTRICTION                       | 3-AUTOMATIC |
| E-OPERATOR TRAINING AND<br>LICENSE EXAMINATION | SCRAM       |
| F-ADMINISTRATIVE                               |             |
| G-OPERATIONAL ERROR<br>(EXPLAIN)               |             |
| H-OTHER (EXPLAIN)                              |             |

SUMMARY: