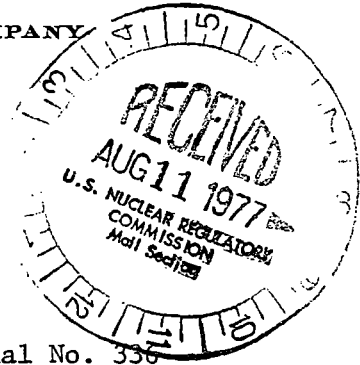


VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

August 9, 1977



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

Serial No. 336  
PO&M/TAP:das  
Docket Nos. 50-280  
50-281  
License Nos. DPR-32  
DPR-37

Dear Mr. McDonald:

**Regulatory**

**File Cy.**

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

Very truly yours,

*C. M. Stallings*

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

Attachments

cc: Mr. James P. O'Reilly

772230052

Regulatory

File Cy

UNIT Surry Unit 1

DATE August 1, 1977

COMPLETED BY E. P. DeWandel

DOCKET NO. 50-280

OPERATING STATUS

- 1. REPORTING PERIOD: 0001 770701 THROUGH 2400 770731  
HOURS IN REPORTING PERIOD: 744
- 2. CURRENTLY AUTHORIZED POWER LEVEL (MWth) 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>741.2</u>	<u>3,720.0</u>	<u>26,294.4</u>
6. REACTOR RESERVE SHUTDOWN HOURS . . . . .	<u>0</u>	<u>0</u>	<u>0</u>
7. HOURS GENERATOR ON LINE . . . . .	<u>740.3</u>	<u>3,646.4</u>	<u>25,546.4</u>
8. UNIT RESERVE SHUTDOWN HOURS . . . . .	<u>0</u>	<u>0</u>	<u>0</u>
9. GROSS THERMAL ENERGY GENERATED (MWH) . . . . .	<u>1,777,311</u>	<u>8,817,646</u>	<u>57,906,002</u>
10. GROSS ELECTRICAL ENERGY GENERATED (MWH) . . . . .	<u>576,860</u>	<u>2,909,235</u>	<u>18,987,598</u>
11. NET ELECTRICAL ENERGY GENERATED (MWH) . . . . .	<u>547,791</u>	<u>2,767,856</u>	<u>18,011,621</u>
12. REACTOR AVAILABILITY FACTOR (1) . . . . .	<u>99.6%</u>	<u>73.1%</u>	<u>65.1%</u>
13. UNIT AVAILABILITY FACTOR (2) . . . . .	<u>99.5%</u>	<u>71.7%</u>	<u>63.2%</u>
14. UNIT CAPACITY FACTOR (3) . . . . .	<u>95.0%</u>	<u>70.2%</u>	<u>57.5%</u>
15. UNIT FORCED OUTAGE RATE (4) . . . . .	<u>.5%</u>	<u>2.4%</u>	<u>19.7%</u>
16. SHUTDOWNS SCHEDULED TO BEGIN IN NEXT 6 MONTHS (STATE TYPE, DATE, AND DURATION OF EACH): <u>Steam Generator Inspection - 11/19/77 - 6 weeks</u>			
17. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: <u>N/A</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 =  $\frac{\text{NET ELECTRICAL POWER GENERATED}}{\text{MAX. DEPENDABLE CAPACITY (MWe-NET)} \times \text{HOURS IN REPORTING PERIOD}}$
- (4) UNIT FORCED OUTAGE RATE =  $\frac{\text{FORCED OUTAGE HOURS}}{\text{HOURS GENERATOR ON LINE} + \text{FORCED OUTAGE HOURS}} \times 100$

DOCKET NO. 50-280

UNIT Surry Unit 1

DATE August 1, 1977

COMPLETED BY E. P. DeWandel

AVERAGE DAILY UNIT POWER LEVEL

MONTH July 1977

DAY	AVERAGE DAILY POWER LEVEL (MWe-net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-net)
1	<u>757.5</u>	17	<u>741.8</u>
2	<u>758.2</u>	18	<u>746.5</u>
3	<u>758.8</u>	19	<u>742.4</u>
4	<u>758.0</u>	20	<u>745.3</u>
5	<u>755.7</u>	21	<u>749.0</u>
6	<u>755.5</u>	22	<u>750.1</u>
7	<u>753.5</u>	23	<u>750.2</u>
8	<u>754.4</u>	24	<u>752.3</u>
9	<u>428.5</u>	25	<u>756.3</u>
10	<u>755.1</u>	26	<u>683.7</u>
11	<u>757.5</u>	27	<u>658.5</u>
12	<u>745.9</u>	28	<u>760.5</u>
13	<u>742.6</u>	29	<u>757.5</u>
14	<u>746.4</u>	30	<u>759.6</u>
15	<u>740.6</u>	31	<u>758.7</u>
16	<u>744.2</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. 50-230

UNIT NAME Surry Unit 1

DATE August 1, 1977

COMPLETED BY E. P. DeWandel

REPORT MONTH July 1, 1977

NO.	DATE	TYPE F-FORCED S-SCHEDULED	DURATION (HOURS)	REASON (1)	METHOD OF SHUTTING DOWN THE REACTOR (2)	CORRECTIVE ACTIONS/COMMENTS
77-06	7/26/77	F	3.7	H	3	Reactor trip on Lo Lo Steam Generator level due to governor valve oscillation. Verified proper operation of EHC system and recovered from 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:

UNIT Surry Unit 2

DATE August 1, 1977

COMPLETED BY E. P. DeWandel

DOCKET NO. 50-281

OPERATING STATUS

1. REPORTING PERIOD: 0001 770701 THROUGH 2400 770731  
HOURS IN REPORTING PERIOD: 744  
2. CURRENTLY AUTHORIZED POWER LEVEL (MWth) 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>447.3</u>	<u>3,362.4</u>	<u>23,681.3</u>
6. REACTOR RESERVE SHUTDOWN HOURS . . . . .	<u>0</u>	<u>0</u>	<u>0</u>
7. HOURS GENERATOR ON LINE . . . . .	<u>441.4</u>	<u>3,339.0</u>	<u>23,284.4</u>
8. UNIT RESERVE SHUTDOWN HOURS . . . . .	<u>0</u>	<u>0</u>	<u>0</u>
9. GROSS THERMAL ENERGY GENERATED (MWH) . . . . .	<u>1,059,513</u>	<u>8,008,276</u>	<u>53,352,903</u>
10. GROSS ELECTRICAL ENERGY GENERATED (MWH) . . . . .	<u>341,320</u>	<u>2,634,540</u>	<u>17,505,914</u>
11. NET ELECTRICAL ENERGY GENERATED (MWH) . . . . .	<u>323,502</u>	<u>2,502,565</u>	<u>16,598,267</u>
12. REACTOR AVAILABILITY FACTOR (1) . . . . .	<u>60.1%</u>	<u>66.1%</u>	<u>63.5%</u>
13. UNIT AVAILABILITY FACTOR (2) . . . . .	<u>59.3%</u>	<u>65.6%</u>	<u>62.5%</u>
14. UNIT CAPACITY FACTOR (3) . . . . .	<u>56.1%</u>	<u>63.5%</u>	<u>57.5%</u>
15. UNIT FORCED OUTAGE RATE (4) . . . . .	<u>40.7%</u>	<u>34.4%</u>	<u>27.0%</u>
16. SHUTDOWNS SCHEDULED TO BEGIN IN NEXT 6 MONTHS (STATE TYPE, DATE, AND DURATION OF EACH): <u>Steam Generator Inspection and Refueling - 9/18/77 - 6 weeks</u>			
17. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: <u>N/A</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 =  $\frac{\text{NET ELECTRICAL POWER GENERATED}}{\text{MAX. DEPENDABLE CAPACITY (MWe-NET)} \times \text{HOURS IN REPORTING PERIOD}}$   
(4) UNIT FORCED OUTAGE RATE =  $\frac{\text{FORCED OUTAGE HOURS}}{\text{HOURS GENERATOR ON LINE} + \text{FORCED OUTAGE HOURS}} \times 100$

DOCKET NO. 50-281UNIT Surry Unit 2DATE August 1, 1977COMPLETED BY E. P. DeWandel

## AVERAGE DAILY UNIT POWER LEVEL

MONTH July 1977

AVERAGE DAILY POWER LEVEL (MWe-net)		AVERAGE DAILY POWER LEVEL (MWe-net)	
DAY		DAY	
1	751.3	17	0
2	751.2	18	0
3	750.0	19	0
4	750.1	20	0
5	746.5	21	0
6	745.5	22	0
7	745.0	23	0
8	747.4	24	222.3
9	721.6	25	753.3
10	702.3	26	740.1
11	600.5	27	753.0
12	0	28	753.0
13	0	29	751.0
14	0	30	742.5
15	0	31	752.5
16	0		

## 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. 50-281

UNIT NAME Surry Unit 2

DATE August 1, 1977

COMPLETED BY E. P. DeWandel

REPORT MONTH July 1977

NO.	DATE	TYPE F-FORCED S-SCHEDULED	DURATION (HOURS)	REASON (1)	METHOD OF SHUTTING DOWN THE REACTOR (2)	CORRECTIVE ACTIONS/COMMENTS
77-04	7-11-77	F	302.6	A	1	Primary to Secondary Steam Generator tube leaks. Plugged leaking tubes.  (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: