

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**RICHMOND, VIRGINIA 23261**  
August 11, 2003

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555-0001

Serial No. 03-438  
SPS Lic/JSA R0  
Docket Nos. 50-280  
50-281  
License Nos. DPR-32  
DPR-37

Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**SURRY POWER STATION UNITS 1 AND 2**  
**MONTHLY OPERATING REPORT**

The Monthly Operating Report for Surry Power Station Units 1 and 2 for the month of July 2003 is provided in the attachment.

If you have any questions or require additional information, please contact us.

Very truly yours,



Richard H. Blount,  
Site Vice President  
Surry Power Station

Attachment

Commitments made by this letter: None


cc: United States Nuclear Regulatory Commission  
Region II  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW, Suite 23 T85  
Atlanta, Georgia 30303-8931

Mr. G. J. McCoy  
NRC Senior Resident Inspector  
Surry Power Station

IE24

**VIRGINIA ELECTRIC AND POWER COMPANY  
SURRY POWER STATION  
MONTHLY OPERATING REPORT  
REPORT NO. 03-07**

Approved:

  
Site Vice President

8/11/03  
Date

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OPERATING DATA REPORT

Docket No.: 50-280  
 Date: 08/04/03  
 Completed By: R. Stief  
 Telephone: (757) 365-2486

1. Unit Name: ..... Surry Unit 1
2. Reporting Period: ..... July 2003
3. Licensed Thermal Power (MWt): ..... 2546
4. Nameplate Rating (Gross MWe): ..... 847.5
5. Design Electrical Rating (Net MWe): ..... 788
6. Maximum Dependable Capacity (Gross MWe): ... 842
7. Maximum Dependable Capacity (Net MWe): ..... 810

8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:

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9. Power Level To Which Restricted, If Any (Net MWe): \_\_\_\_\_

10. Reasons For Restrictions, If Any: \_\_\_\_\_

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	<u>This Month</u>	<u>Year-To-Date</u>	<u>Cumulative</u>
11. Hours in Reporting Period	744.0	5087.0	268295.0
12. Hours Reactor Was Critical	744.0	3469.5	197991.1
13. Reactor Reserve Shutdown Hours	0.0	0.0	3774.5
14. Hours Generator On-Line	744.0	3347.2	195209.4
15. Unit Reserve Shutdown Hours	0.0	0.0	3736.2
16. Gross Thermal Energy Generated (MWH)	1894162.9	8358925.3	465865242.0
17. Gross Electrical Energy Generated (MWH)	630113.0	2787091.0	153292415.0
18. Net Electrical Energy Generated (MWH)	607545.0	2686342.0	146428663.0
19. Unit Service Factor	100.0%	65.8%	72.8%
20. Unit Availability Factor	100.0%	65.8%	74.2%
21. Unit Capacity Factor (Using MDC Net)	100.8%	65.2%	69.7%
22. Unit Capacity Factor (Using DER Net)	103.6%	67.0%	69.3%
23. Unit Forced Outage Rate	0.0%	9.3%	12.2%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):

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Type and duration of scheduled shutdowns are no longer provided.  
 [Reference: Letter S/N 00-069, dated February 7, 2000]

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25. If Shut Down at End of Report Period, Estimated Date of Start-up: Estimated start-up dates are no longer provided. [Reference: Letter S/N 00-069, dated February 7, 2000]

26. Unit In Test Status (Prior to Commercial Operation):

	<u>FORECAST</u>	<u>ACHIEVED</u>
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____

OPERATING DATA REPORT

Docket No.: 50-281  
Date: 08/04/03  
Completed By: R. Stief  
Telephone: (757) 365-2486

1. Unit Name: ..... Surry Unit 2
2. Reporting Period: ..... July 2003
3. Licensed Thermal Power (MWt): ..... 2546
4. Nameplate Rating (Gross MWe): ..... 847.5
5. Design Electrical Rating (Net MWe): ..... 788
6. Maximum Dependable Capacity (Gross MWe): ... 847
7. Maximum Dependable Capacity (Net MWe): ..... 815

8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. Power Level To Which Restricted, If Any (Net MWe): \_\_\_\_\_

10. Reasons For Restrictions, If Any: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

	<u>This Month</u>	<u>Year-To-Date</u>	<u>Cumulative</u>
11. Hours in Reporting Period	744.0	5087.0	265176.0
12. Hours Reactor Was Critical	744.0	5024.1	196907.5
13. Reactor Reserve Shutdown Hours	0.0	0.0	328.1
14. Hours Generator On-Line	744.0	4999.3	194583.7
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1893796.3	12712768.7	465939753.2
17. Gross Electrical Energy Generated (MWH)	630182.0	4277972.0	153418505.0
18. Net Electrical Energy Generated (MWH)	607230.0	4109354.0	146590071.0
19. Unit Service Factor	100.0%	98.3%	73.4%
20. Unit Availability Factor	100.0%	98.3%	73.4%
21. Unit Capacity Factor (Using MDC Net)	100.1%	99.1%	70.3%
22. Unit Capacity Factor (Using DER Net)	103.6%	102.5%	70.2%
23. Unit Forced Outage Rate	0.0%	1.7%	9.6%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):

September 2003

Type and duration of scheduled shutdowns are no longer provided.

[Reference: Letter S/N 00-069, dated February 7, 2000]

25. If Shut Down at End of Report Period, Estimated Date of Start-up: Estimated start-up dates are no longer provided. [Reference: Letter S/N 00-069, dated February 7, 2000]

26. Unit In Test Status (Prior to Commercial Operation):

	<u>FORECAST</u>	<u>ACHIEVED</u>
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____

**UNIT SHUTDOWN AND POWER REDUCTION  
(EQUAL TO OR GREATER THAN 20%)**

**REPORT MONTH: July 2003**

**Docket No.: 50-280**

**Unit Name: Surry Unit 1**

**Date: 08/04/03**

**Completed by: R. Stief**

**Telephone: (757) 365-2486**

**None during the Reporting Period**

(1)  
F: Forced  
S: Scheduled

(2)  
REASON:  
A - Equipment Failure (Explain)  
B - Maintenance or Test  
C - Refueling  
D - Regulatory Restriction  
E - Operator Training & Licensing 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 1 - Same Source

**UNIT SHUTDOWN AND POWER REDUCTION  
(EQUAL TO OR GREATER THAN 20%)**

**REPORT MONTH: July 2003**

Docket No.: 50-281  
Unit Name: Surry Unit 2  
Date: 08/04/03  
Completed by: R. Stief  
Telephone: (757) 365-2486

None during the Reporting Period

(1)  
F: Forced  
S: Scheduled

(2)  
REASON:  
A - Equipment Failure (Explain)  
B - Maintenance or Test  
C - Refueling  
D - Regulatory Restriction  
E - Operator Training & Licensing 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 1 - Same Source

**AVERAGE DAILY UNIT POWER LEVEL**

Docket No.: 50-280  
 Unit Name: Surry Unit 1  
 Date: 08/04/03  
 Completed by: R. Stief  
 Telephone: (757) 365-2486

MONTH: July 2003

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	819	17	817
2	820	18	815
3	821	19	818
4	819	20	818
5	817	21	817
6	818	22	816
7	817	23	816
8	818	24	816
9	817	25	815
10	817	26	804
11	816	27	814
12	817	28	814
13	817	29	816
14	818	30	817
15	818	31	817
16	818		

**INSTRUCTIONS**

On this format, list the average daily unit power level in MWe - Net for each day in the reporting month. Compute to the nearest whole megawatt.

**AVERAGE DAILY UNIT POWER LEVEL**

Docket No.: 50-281

Unit Name: Surry Unit 2

Date: 08/04/03

Completed by: R. Stief

Telephone: (757) 365-2486

MONTH: July 2003

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	817	17	816
2	819	18	816
3	820	19	817
4	819	20	816
5	818	21	815
6	815	22	814
7	816	23	814
8	816	24	817
9	815	25	815
10	814	26	816
11	816	27	816
12	815	28	816
13	816	29	816
14	817	30	818
15	816	31	817
16	817		

**INSTRUCTIONS**

On this format, list the average daily unit power level in MWe - Net for each day in the reporting month. Compute to the nearest whole megawatt.

# **SUMMARY OF OPERATING EXPERIENCE**

**MONTH/YEAR: July 2003**

The following chronological sequence by unit is a summary of operating experiences for this month that required load reductions or resulted in significant non-load related incidents.

## **UNIT ONE:**

07/01/03	0000	Unit started the month at 100% / 848 MWe.
07/26/03	0243	"1A" waterbox removed from service in accordance with procedure 1-MOP-CW-001.
07/27/03	0115	"1A" returned to service.
07/31/03	2400	Unit finished the month at 100% / 846 MWe.

## **UNIT TWO:**

07/01/03	0000	Unit started the month at 100% / 847 MWe.
07/31/03	2400	Unit finished the month at 100% / 848 MWe.

**FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL**

**MONTH/YEAR: July 2003**

**DCP 97-037**

**Design Change Package**  
**(Safety Evaluation 98-089)**

**10/14/98**

Design Change Package 97-037, "CCHX SW Inlet Pipe Repair" installed an alternate service water (SW) flow path to the component cooling heat exchangers (CCHX) to allow planned cleaning, recoating and repair to the normal supply line.

**RE 03-004**

**Regulatory Evaluation 03-004**

**07/10/03**

Regulatory Evaluation 03-004 evaluates the effect of the replacement of the P-250 plant computer with the Westinghouse Ovation computer system. The new Ovation system will replace the power calorimetric program for the calculation of feedflow, steamflow and power that is functionally equivalent to the existing P-250 programming.

**PROCEDURE OR METHOD OF OPERATION CHANGES  
THAT DID NOT REQUIRE NRC APPROVAL**

**MONTH/YEAR: July 2003**

**None during the Reporting Period**

**TESTS AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL**

**MONTH/YEAR: July 2003**

**None during the Reporting Period**

**CHEMISTRY REPORT**

MONTH/YEAR: July 2003

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, $\mu\text{Ci/ml}$	3.46E-1	1.73E-1	2.67E-1	2.68E-1	1.10E-1	1.60E-1
Suspended Solids, ppm	-	-	-	-	-	-
Gross Tritium, $\mu\text{Ci/ml}$	4.67E-1	2.36E-1	3.46E-1	5.42E-1	4.76E-1	5.15E-1
$^{131}\text{I}$ , $\mu\text{Ci/ml}$	1.44E-4	6.47E-5	1.14E-4	1.35E-4	5.64E-5	9.10E-5
$^{131}\text{I}/^{133}\text{I}$	0.09	0.04	0.07	0.11	0.05	0.07
Hydrogen, cc/kg	32.5	29.9	31.6	34.8	34	34.5
Lithium, ppm	2.47	2.12	2.31	2.16	1.48	1.77
Boron - 10, ppm*	264	252	258	58.4	38	48.6
Oxygen, (DO), ppm	0.01	$\leq 0.005$	0.009	0.01	$\leq 0.005$	0.009
Chloride, ppm	0.006	0.001	0.004	0.003	0.001	0.001
pH @ 25 degree Celsius	6.35	6.21	6.28	7.38	7.1	7.23

\* Boron - 10 = Total Boron x 0.196

Comments: Suspended Solids reported quarterly. No samples for July.

None

**FUEL HANDLING  
UNITS 1 & 2**

MONTH/YEAR: July 2003

New Fuel Shipment or Cask No.	Date Stored or Received	Number of Assemblies per Shipment	Assembly Number	ANSI Number	Initial Enrichment	New or Spent Fuel Shipping Cask Activity
Spent Fuel Cask TN-32-34	07/16/03	32	0R1	LM0C1L	3.5930	N/A
			0R2	LM0C2K	3.5932	
			0V3	LM0TST	3.8093	
			0V8	LM0TSY	3.8091	
			1R8	LM0C26	3.5826	
			1R9	LM0C19	3.5908	
			1V2	LM0TT2	3.8151	
			1V3	LM0TT3	3.8081	
			1V6	LM0TT6	3.8158	
			1V7	LM0TT7	3.8061	
			1V8	LM0TT8	3.8091	
			2R9	LM0C1H	3.5763	
			2V0	LM0TTA	3.8041	
			2V3	LM0TTD	3.8041	
			2V4	LM0TTE	3.8008	
			3R1	LM0C1C	3.5999	
			3R4	LM0C1G	3.6025	
			3R8	LM0C2E	3.5805	

**FUEL HANDLING  
UNITS 1 & 2**

MONTH/YEAR: July 2003

New Fuel Shipment or Cask No.	Date Stored or Received	Number of Assemblies per Shipment	Assembly Number	ANSI Number	Initial Enrichment	New or Spent Fuel Shipping Cask Activity
			3V1	LM0TTM	3.8103	
			3V2	LM0TTN	3.8077	
			3W6	LM0X3B	3.9995	
			4R2	LM0C2A	3.5973	
			4R4	LM0C2Y	3.5891	
			4R6	LM0C2N	3.6034	
			4W1	LM0X3G	4.0039	
			4W3	LM0X3J	4.0049	
			4W9	LM0X3Q	4.0057	
			5R0	LM0C2M	3.5919	
			5R3	LM0C1Y	3.5832	
			5R5	LM0C31	3.6049	
			W36	LM041J	3.2030	
			W42	LM041N	3.2030	
Spent Fuel Cask TN-32-35	07/29/03	32	0J4	LM0UYA	3.8066	N/A
			0P1	LM05Y5	3.6070	
			0W2	LM0X2F	3.8094	
			0W3	LM0X2G	3.7963	

**FUEL HANDLING  
UNITS 1 & 2**

MONTH/YEAR: July 2003

New Fuel Shipment or Cask No.	Date Stored or Received	Number of Assemblies per Shipment	Assembly Number	ANSI Number	Initial Enrichment	New or Spent Fuel Shipping Cask Activity
			0W4	LM0X2H	3.7972	
			0W5	LM0X2J	3.8053	
			0W6	LM0X2K	3.8139	
			0W7	LM0X2L	3.8100	
			1D5	LM0ALL	3.5888	
			1J2	LM0UYJ	3.8061	
			1J6	LM0UYN	3.8052	
			1N2	LM06G5	3.4060	
			1V5	LM0TT5	3.8041	
			2J1	LM0UYT	3.8057	
			3A0	LM04US	3.3930	
			3H6	LM0RNW	4.0081	
			3H9	LM0RNZ	4.0103	
			3J0	LM0UZ2	3.8161	
			3J2	LM0UZ4	3.8127	
			3J3	LM0UZ5	3.8122	
			3J4	LM0UZ6	3.8171	
			3J5	LM0UZ7	3.8121	

**FUEL HANDLING  
UNITS 1 & 2**

MONTH/YEAR: July 2003

New Fuel Shipment or Cask No.	Date Stored or Received	Number of Assemblies per Shipment	Assembly Number	ANSI Number	Initial Enrichment	New or Spent Fuel Shipping Cask Activity
			4H1	LM0RP1	4.0106	
			4H4	LM0RP4	4.0105	
			4N0	LM06F8	3.4060	
			4P4	LM05YM	3.6070	
			5N0	LM06G1	3.4060	
			5P2	LM05Y9	3.6070	
			5P4	LM09PH	3.6070	
			5P5	LM05XM	3.6070	
			6P5	LM09PG	3.6070	
			6P7	LM05YJ	3.6070	

**DESCRIPTION OF PERIODIC TEST(S) WHICH WERE NOT COMPLETED  
WITHIN THE TIME LIMITS SPECIFIED IN TECHNICAL SPECIFICATIONS**

**MONTH/YEAR: July 2003**

**None during the Reporting Period**