

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

November 10, 2004

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

Serial No. 04-690  
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 October 2004 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

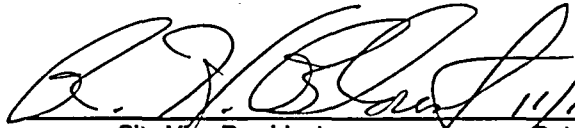
cc: United States Nuclear Regulatory Commission  
Region II  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW, Suite 23 T85  
Atlanta, Georgia 30303-8931

Mr. N. P. Garrett  
NRC Senior Resident Inspector  
Surry Power Station

*JE24*

**VIRGINIA ELECTRIC AND POWER COMPANY  
SURRY POWER STATION  
MONTHLY OPERATING REPORT  
REPORT NO. 04-10**

Approved:

  
Site Vice President

  
Date

**TABLE OF CONTENTS**

<b>Section</b>	<b>Page</b>
Operating Data Report - Unit No. 1 .....	3
Operating Data Report - Unit No. 2 .....	4
Unit Shutdowns and Power Reductions - Unit No. 1 .....	5
Unit Shutdowns and Power Reductions - Unit No. 2 .....	6
Average Daily Unit Power Level - Unit No. 1 .....	7
Average Daily Unit Power Level - Unit No. 2 .....	8
Summary of Operating Experience - Unit Nos. 1 and 2.....	9
Facility Changes That Did Not Require NRC Approval.....	10
Procedure or Method of Operation Changes That Did Not Require NRC Approval.....	11
Tests and Experiments That Did Not Require NRC Approval .....	12
Chemistry Report.....	13
Fuel Handling - Unit Nos. 1 and 2.....	14
Description of Periodic Test(s) Which Were Not Completed Within the Time Limits Specified in Technical Specifications.....	15

**OPERATING DATA REPORT**

Docket No.: 50-280  
Date: 11/02/04  
Completed By: R. Stief  
Telephone: (757) 365-2486

- 1. Unit Name: ..... Surry Unit 1
- 2. Reporting Period:..... October 2004
- 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: \_\_\_\_\_

		<u>This Month</u>	<u>Year-To-Date</u>	<u>Cumulative</u>
11.	Hours in Reporting Period	745.00	7320.00	279288.00
12.	Hours Reactor Was Critical	720.80	7295.80	208699.28
13.	Reactor Reserve Shutdown Hours	0.00	0.00	3774.50
14.	Hours Generator On-Line	720.35	7266.78	205871.55
15.	Unit Reserve Shutdown Hours	0.00	0.00	3736.20
16.	Gross Thermal Energy Generated (MWH)	1827302.10	18421462.00	492813385.60
17.	Gross Electrical Energy Generated (MWH)	611391.00	6149137.00	162288402.00
18.	Net Electrical Energy Generated (MWH)	589504.00	5927202.00	155089302.00
19.	Unit Service Factor	96.69%	99.27%	73.71%
20.	Unit Availability Factor	96.69%	99.27%	75.05%
21.	Unit Capacity Factor (Using MDC Net)	97.69%	99.97%	70.82%
22.	Unit Capacity Factor (Using DER Net)	100.42%	102.76%	70.47%
23.	Unit Forced Outage Rate	0.00%	0.39%	11.68%

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: 11/02/04  
Completed By: R. Stief  
Telephone: (757) 365-2486

- 1. Unit Name: ..... Surry Unit 2
- 2. Reporting Period:..... October 2004
- 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:

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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	745.00	7320.00	276169.00
12.	Hours Reactor Was Critical	745.00	7165.52	206127.82
13.	Reactor Reserve Shutdown Hours	0.00	0.00	328.10
14.	Hours Generator On-Line	745.00	7142.75	203589.17
15.	Unit Reserve Shutdown Hours	0.00	0.00	0.00
16.	Gross Thermal Energy Generated (MWH)	1887266.80	18129852.70	488776196.50
17.	Gross Electrical Energy Generated (MWH)	633484.00	6059736.00	161038050.00
18.	Net Electrical Energy Generated (MWH)	611144.00	5846660.00	153939496.00
19.	Unit Service Factor	100.00%	97.58%	73.72%
20.	Unit Availability Factor	100.00%	97.58%	73.72%
21.	Unit Capacity Factor (Using MDC Net)	100.65%	98.00%	70.77%
22.	Unit Capacity Factor (Using DER Net)	104.10%	101.36%	70.74%
23.	Unit Forced Outage Rate	0.00%	2.42%	9.32%

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

April 2005

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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: October 2004

Docket No.: 50-280  
 Unit Name: Surry Unit 1  
 Date: 11/01/04  
 Completed by: R. Stief  
 Telephone: (757) 365-2486

Date	(1) Type	Duration Hours	(2) Reason	(3) Method of Shutting Down Rx	LER No.	(4) System Code	(5) Component Code	Cause & Corrective Action to Prevent Recurrence
10/31/04	S	24.65	C	1	N/A	N/A	N/A	Unit offline for refueling

(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: October 2004

Docket No.: 50-281  
 Unit Name: Surry Unit 2  
 Date: 11/01/04  
 Completed by: R. Stief  
 Telephone: (757) 365-2486

Date	(1) Type	Duration Hours	(2) Reason	(3) Method of Shutting Down Rx	LER No.	(4) System Code	(5) Component Code	Cause & Corrective Action to Prevent Recurrence
10/08/04	S	17.45	B	N/A	N/A	SD	LCV	Unit ramped to 75% to perform maintenance on HP FW Heater Level Control Valve

(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: 11/02/04  
 Completed by: R. Stief  
 Telephone: (757) 365-2486

MONTH: October 2004

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	821	17	824
2	820	18	824
3	821	19	823
4	817	20	823
5	822	21	823
6	823	22	824
7	818	23	824
8	820	24	824
9	821	25	825
10	822	26	824
11	817	27	824
12	822	28	824
13	823	29	825
14	819	30	718
15	823	31	0
16	824		

**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: 11/02/04  
 Completed by: R. Stief  
 Telephone: (757) 365-2486

MONTH: October 2004

<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>	<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>
1	822	17	825
2	823	18	825
3	823	19	825
4	823	20	825
5	823	21	825
6	823	22	825
7	824	23	825
8	697	24	826
9	824	25	826
10	824	26	825
11	825	27	826
12	825	28	826
13	824	29	826
14	824	30	825
15	824	31	859
16	825		

**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: October 2004**

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:**

10/01/04	0000	Unit started the month at 100% / 851 MWe.
10/30/04	1700	Initiated ramp for RFO. Unit at 100% / 850 Mwe.
10/30/04	1737	Hold ramp to swap to IMP IN. Unit at 90% / 770 Mwe.
10/30/04	1845	Stopped ramp for turnover. Unit at 78% / 664 Mwe.
10/30/04	1939	Stopped ramp for pre-ramp data. Unit at 77% / 660 Mwe.
10/31/04	0000	Unit at 6.5% / 40 Mwe.
10/31/04	0021	Unit Offline.
10/31/04	0048	Tripped reactor.
10/31/04	2400	Unit finished the month at 0% / 0 MWe.

**UNIT TWO:**

10/01/04	0000	Unit started the month at 100% / 854 MWe.
10/08/04	0103	Commenced ramp to perform 2-OSP-TM-001. Unit at 100% / 855 MWe.
10/08/04	0123	Stopped ramp for CERPI adjustment. Unit at 96% / 821 MWe.
10/08/04	0237	Stopped ramp for CERPI adjustment. Unit at 92% / 775 MWe.
10/08/04	0319	Ramp stopped. Unit at 87% / 714 MWe.
10/08/04	0402	Commenced ramp to 75% for HP FW Heater Level Control Valve maintenance.
10/08/04	0509	Secured ramp at 77%. Adjust turbine load to 75% reactor power to compensate for xenon.
10/08/04	0618	Unit at 75% / 635 MWe.
10/08/04	0700	Unit at 73% / 615 MWe.
10/08/04	1540	Commenced ramp to 95% power. Unit at 75% / 653 MWe.
10/08/04	1648	Stopped ramp at 95% / 805 MWe.
10/08/04	1830	Unit at 100% / 852 MWe.
10/31/04	2400	Unit finished the month at 100% / 856 MWe.

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

**MONTH/YEAR: October 2004**

**None during the Reporting Period.**

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

**MONTH/YEAR: October 2004**

**None during the Reporting Period**

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

**MONTH/YEAR: October 2004**

None during the Reporting Period

**CHEMISTRY REPORT**

MONTH/YEAR: October 2004

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, $\mu\text{Ci/ml}$	3.10E-1	7.53E-2	2.07E-1	2.27E-1	1.62E-1	1.92E-1
Suspended Solids, ppm	0.1	0.025	0.063	-	-	-
Gross Tritium, $\mu\text{Ci/ml}$	2.74E-1	1.62E-1	2.21E-1	1.41E+0	1.23E+0	1.33E+0
$^{131}\text{I}$ , $\mu\text{Ci/ml}$	2.59E-4	3.14E-5	1.78E-4	2.03E-4	2.16E-5	7.37E-5
$^{131}\text{I}/^{133}\text{I}$	0.09	0.05	0.07	0.31	0.16	0.20
Hydrogen, cc/kg	40.6	2.6	26.5	44.9	40.5	42.3
Lithium, ppm	1.23	0.27	0.89	2.29	2.11	2.2
Boron - 10, ppm*	366	5	92	151	129	138
Oxygen, (DO), ppm	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$
Chloride, ppm	0.003	0.001	0.001	0.009	0.004	0.004
pH @ 25 degree Celsius	7.97	5.52	7.3	6.94	6.7	6.83

\* Boron - 10 = Total Boron x 0.196

Comments:

Unit 1: Unit at 100% power until 10/30 shutdown for RFO.

Unit 2: Unit at 100% power. Quarterly Suspended Solids not required.

**FUEL HANDLING  
UNITS 1 & 2**

MONTH/YEAR: October 2004

<u>New Fuel Shipment or Cask No.</u>	<u>Date Stored or Received</u>	<u>Number of Assemblies per Shipment</u>	<u>Assembly Number</u>	<u>ANSI Number</u>	<u>Initial Enrichment</u>	<u>New or Spent Fuel Shipping Cask Activity</u>
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None during the Reporting Period

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

**MONTH/YEAR: October 2004**

None during the Reporting Period