

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

March 15, 2005

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

Serial No. 05-134  
SPS Lic/JSA R0  
Docket Nos. 50-280  
50-281  
License Nos. DPR-32  
DPR-37

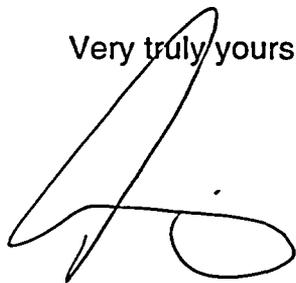
Gentlemen:

**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 February 2005 is provided in the attachment.

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

Very truly yours,



Donald E. Jernigan,  
Site Vice President  
Surry Power Station

Attachment

Commitments made by this letter: None

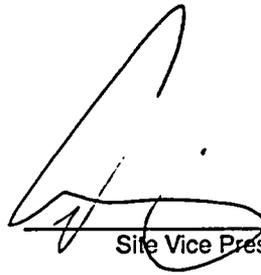
cc: United States Nuclear Regulatory Commission  
Region II  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW, Suite 23 T85  
Atlanta, Georgia 30303-8931

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. 05-02**

Approved:

A handwritten signature in black ink, consisting of a large, stylized initial 'A' followed by a surname that is partially obscured by a horizontal line.

Site Vice President

3/15/2005

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: 03/01/05  
 Completed By: R. Stief  
 Telephone: (757) 365-2486

- 1. Unit Name: ..... Surry Unit 1
- 2. Reporting Period:..... February 2005
- 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):.... 840
- 7. Maximum Dependable Capacity (Net MWe):..... 799

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	672.00	1416.00	282168.00
12. Hours Reactor Was Critical	580.53	1324.53	210725.93
13. Reactor Reserve Shutdown Hours	0.00	0.00	3774.50
14. Hours Generator On-Line	549.97	1293.97	207843.19
15. Unit Reserve Shutdown Hours	0.00	0.00	3736.20
16. Gross Thermal Energy Generated (MWH)	1382820.20	3276231.50	497760909.30
17. Gross Electrical Energy Generated (MWH)	458674.00	1092471.00	163937746.00
18. Net Electrical Energy Generated (MWH)	436838.00	1040700.00	155728099.00
19. Unit Service Factor	81.84%	91.38%	73.66%
20. Unit Availability Factor	81.84%	91.38%	74.98%
21. Unit Capacity Factor (Using MDC Net)	81.36%	91.98%	70.36%
22. Unit Capacity Factor (Using DER Net)	82.49%	93.27%	70.04%
23. Unit Forced Outage Rate	18.16%	8.62%	11.63%

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

---

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	_____	_____

OPERATING DATA REPORT

Docket No.: 50-281  
 Date: 03/01/05  
 Completed By: R. Stief  
 Telephone: (757) 365-2486

- 1. Unit Name: ..... Surry Unit 2
- 2. Reporting Period: ..... February 2005
- 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):.... 840
- 7. Maximum Dependable Capacity (Net MWe):..... 799

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	672.00	1416.00	279049.00
12. Hours Reactor Was Critical	672.00	1416.00	209007.82
13. Reactor Reserve Shutdown Hours	0.00	0.00	328.10
14. Hours Generator On-Line	672.00	1416.00	206469.17
15. Unit Reserve Shutdown Hours	0.00	0.00	0.00
16. Gross Thermal Energy Generated (MWH)	1710356.00	3603969.00	496106360.80
17. Gross Electrical Energy Generated (MWH)	574725.00	1212133.00	163504978.00
18. Net Electrical Energy Generated (MWH)	546837.00	1153430.00	155329875.00
19. Unit Service Factor	100.00%	100.00%	73.99%
20. Unit Availability Factor	100.00%	100.00%	73.99%
21. Unit Capacity Factor (Using MDC Net)	101.85%	101.95%	70.65%
22. Unit Capacity Factor (Using DER Net)	103.27%	103.37%	70.64%
23. Unit Forced Outage Rate	0.00%	0.00%	9.20%

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

April 2005

---

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: February 2005

Docket No.: 50-280  
 Unit Name: Surry Unit 1  
 Date: 03/01/05  
 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
02/04/05	F	122.03	B	1	N/A	SJ	HX	Unit taken offline for repair of Feedwater heaters

(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: February 2005

Docket No.: 50-281  
Unit Name: Surry Unit 2  
Date: 03/01/05  
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: 03/01/05  
 Completed by: R. Stief  
 Telephone: (757) 365-2486

MONTH: February 2005

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	812	17	813
2	811	18	813
3	711	19	812
4	0	20	812
5	0	21	813
6	0	22	813
7	0	23	811
8	0	24	813
9	427	25	813
10	810	26	813
11	813	27	813
12	813	28	813
13	814		
14	813		
15	814		
16	813		

**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: 03/01/05  
 Completed by: R. Stief  
 Telephone: (757) 365-2486

MONTH: February 2005

<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>	<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>
1	815	17	815
2	815	18	816
3	815	19	816
4	814	20	815
5	816	21	808
6	816	22	807
7	814	23	806
8	814	24	806
9	815	25	815
10	815	26	815
11	815	27	815
12	815	28	815
13	815		
14	814		
15	813		
16	814		

**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: February 2005**

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:**

02/01/05	0000	Unit started the month at 100% / 853 MWe.
02/03/05	1703	Commenced rampdown for FW heater repairs. Unit at 100% / 850 MWe.
02/03/05	1742	Hold ramp at 90% for swap to "Imp In". Unit at 90% / 760 MWe.
02/03/05	1743	Recommenced ramp. Unit at 90% / 760 MWe.
02/03/05	1750	Hold ramp for Delta T indication. Unit at 90% / 760 MWe.
02/03/05	1914	Recommenced ramp. Unit at 86% / 710 MWe.
02/03/05	2111	Hold ramp at 55% / 415 MWe for CERPI indication problems.
02/03/05	2136	Recommenced ramp. Unit at 54% / 377 MWe.
02/04/05	0001	Ramp down in progress. Unit at 16% / 80 MWe.
02/04/05	0218	Opened output breakers.
02/04/05	2331	Reactor tripped.
02/07/05	2002	Commenced reactor startup.
02/07/05	2023	Tripped reactor due to B-10 rod drop (rod misalignment).
02/08/05	1859	Reactor critical.
02/09/05	0420	Output breakers closed.
02/09/05	0640	Stopped ramp to place LP heater drain pumps in service. Unit at 44% / 333 MWe.
02/09/05	0822	Commenced ramp. Unit at 45% / 365 MWe.
02/09/05	0834	Stopped ramp. Unit at 52% / 392 MWe.
02/09/05	0843	Recommenced ramp.
02/09/05	0913	Stopped ramp. Unit at 58% / 434 MWe for adding oil to HP FW heater drain pumps and "B" feedwater pump.
02/09/05	1153	Recommenced ramp.
02/09/05	1237	Stopped ramp at 70% / 587 MWe for setpoint adjustment and calorimetric.
02/09/05	1829	Commenced ramp to 96%.
02/09/05	1910	Stopped ramp at 90% / 760 MWe to place the Turbine in "Imp Out".
02/09/05	1936	Stopped ramp at 96% / 823 MWe to perform alternate power verification.
02/10/05	0010	Recommenced ramp to 100%.
02/10/05	0133	Unit at 100% / 850 MWe.
02/28/05	2400	Unit finished the month at 100% / 854 MWe

**UNIT TWO:**

02/01/05	0000	Unit started the month at 100% / 856 MWe.
02/28/05	2400	Unit finished the month at 100% / 857 MWe.

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

**MONTH/YEAR: February 2005**

None during the Reporting Period.

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

**MONTH/YEAR: February 2005**

None during the Reporting Period.

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

**MONTH/YEAR: February 2005**

None during the Reporting Period

**CHEMISTRY REPORT**

MONTH/YEAR: February 2005

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, $\mu\text{Ci/ml}$	4.26E-1	5.69E-3	2.26E-1	2.48E-1	9.12E-2	1.97E-1
Suspended Solids, ppm	0.025	0.025	0.025	-	-	-
Gross Tritium, $\mu\text{Ci/ml}$	5.65E-1	3.98E-1	5.22E-1	8.90E-1	7.61E-1	8.39E-1
$^{131}\text{I}$ , $\mu\text{Ci/ml}$	2.75E-4	1.94E-5	1.15E-4	1.09E-4	3.38E-5	6.40E-5
$^{131}\text{I}/^{133}\text{I}$	0.11	0.06	0.08	0.24	0.15	0.19
Hydrogen, cc/kg	41.7	15.2	34.3	46.1	40.5	42.3
Lithium, ppm	3.81	2.93	3.49	2.2	1.88	2.08
Boron - 10, ppm*	377	252	299	70	51	61
Oxygen, (DO), ppm	$\leq 0.005$					
Chloride, ppm	0.017	0.003	0.013	0.003	0.001	0.002
pH @ 25 degree Celsius	6.70	6.05	6.48	7.34	7.04	7.2

\* Boron - 10 = Total Boron x 0.196

Comments:

Unit 1: Unit shutdown 2/3 to 2/9 for FW heater outage. Suspended solids performed for startup.

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

**FUEL HANDLING  
UNITS 1 & 2**

**MONTH/YEAR: February 2005**

<b>New Fuel Shipment or Cask No.</b>	<b>Date Stored or Received</b>	<b>Number of Assemblies per Shipment</b>	<b>Assembly Number</b>	<b>ANSI Number</b>	<b>Initial Enrichment</b>	<b>New or Spent Fuel Shipping Cask Activity</b>
--	------------------------------------	--	----------------------------	------------------------	-------------------------------	---

None during the Reporting Period

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

**MONTH/YEAR: February 2005**

None during the Reporting Period