

VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

October 12, 1998

United States Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555

Serial No. 98-610  
SPS Lic/JCS R0  
Docket Nos. 50-280  
50-281  
License Nos. DPR-32  
DPR-37

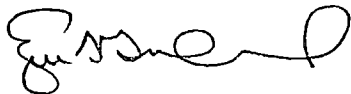
Gentlemen:

**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 September 1998, is provided in the attachment.

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

Very truly yours,



E. S. Grecheck, Site Vice President  
Surry Power Station

Attachment

Commitments made by this letter: None

cc: U. S. Nuclear Regulatory Commission  
Region II  
Atlanta Federal Center  
61 Forsyth Street, S. W.  
Suite 23T85  
Atlanta, Georgia 30303

100023

Mr. R. A. Musser  
NRC Senior Resident Inspector  
Surry Power Station

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**VIRGINIA ELECTRIC AND POWER COMPANY  
SURRY POWER STATION  
MONTHLY OPERATING REPORT  
REPORT NO. 98-09**

Approved:

  
Site Vice President

10/12/98  
Date

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**OPERATING DATA REPORT**

Docket No.: 50-280  
 Date: 10/03/98  
 Completed By: D. L. Slade  
 Telephone: (757) 365-2246

- 1. Unit Name:..... Surry Unit 1
- 2. Reporting Period:..... September, 1998
- 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):..... 801

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	720.0	6551.0	225935.0
12. Hours Reactor Was Critical	720.0	5880.6	159906.4
13. Reactor Reserve Shutdown Hours	0.0	0.0	3774.5
14. Hours Generator On-Line	720.0	5847.9	157447.4
15. Unit Reserve Shutdown Hours	0.0	0.0	3736.2
16. Gross Thermal Energy Generated (MWH)	1825970.8	14821516.8	371066532.4
17. Gross Electrical Energy Generated (MWH)	600803.0	4921551.0	121737305.0
18. Net Electrical Energy Generated (MWH)	581033.0	4756497.0	115990718.0
19. Unit Service Factor	100.0%	89.3%	69.7%
20. Unit Availability Factor	100.0%	89.3%	71.3%
21. Unit Capacity Factor (Using MDC Net)	100.7%	90.6%	65.9%
22. Unit Capacity Factor (Using DER Net)	102.4%	92.1%	65.1%
23. Unit Forced Outage Rate	0.0%	7.0%	14.5%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):  
 Refueling, October 19, 1998, 35 Days

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25. If Shut Down at End of Report Period, Estimated Date of Start-up: \_\_\_\_\_

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: 10/02/98  
 Completed By: D. L. Slade  
 Telephone: (757) 365-2246

- 1. Unit Name:..... Surry Unit 2
- 2. Reporting Period:..... September, 1998
- 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):..... 801

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	720.0	6551.0	222816.0
12. Hours Reactor Was Critical	720.0	6551.0	157701.3
13. Reactor Reserve Shutdown Hours	0.0	0.0	328.1
14. Hours Generator On-Line	720.0	6551.0	155684.5
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1829209.4	16654649.0	368188216.3
17. Gross Electrical Energy Generated (MWH)	605630.0	5543410.0	120669018.0
18. Net Electrical Energy Generated (MWH)	585785.0	5360681.0	115003832.0
19. Unit Service Factor	100.0%	100.0%	69.9%
20. Unit Availability Factor	100.0%	100.0%	69.9%
21. Unit Capacity Factor (Using MDC Net)	101.6%	102.2%	66.0%
22. Unit Capacity Factor (Using DER Net)	103.2%	103.8%	65.5%
23. Unit Forced Outage Rate	0.0%	0.0%	11.5%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):  
 None

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25. If Shut Down at End of Report Period, Estimated Date of Start-up: \_\_\_\_\_

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: September, 1998

Docket No.: 50-280  
 Unit Name: Surry Unit 1  
 Date: 10/01/98  
 Completed by: J. R. Pincus  
 Telephone: (757) 365-2863

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

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)

(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: September, 1998

Docket No.: 50-281  
 Unit Name: Surry Unit 2  
 Date: 10/01/98  
 Completed by: J. R. Pincus  
 Telephone: (757) 365-2863

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
09/02/98	S	4.1	B	N/A	N/A	SB	V	Power reduced to perform 2-OSP-TM-001, Turbine Inlet Valve Freedom Test

(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)

(3)  
 METHOD:  
 1 - Manual  
 2 - Manual Scram  
 3 - Automatic Scram  
 4 - Other (Explain)

(4)  
 Exhibit G - Instructions for Preparation of Data Entry Sheets  
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(5)  
 Exhibit 1 - Same Source

**AVERAGE DAILY UNIT POWER LEVEL**

Docket No.: 50-280  
Unit Name: Surry Unit 1  
Date: 10/03/98  
Completed by: J C. Steinert  
Telephone: (757) 365-2837

MONTH: September, 1998

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (Mwe - Net)
1	807	17	811
2	808	18	812
3	808	19	812
4	756	20	812
5	810	21	812
6	809	22	811
7	807	23	813
8	809	24	814
9	812	25	814
10	814	26	812
11	806	27	811
12	802	28	805
13	802	29	796
14	806	30	794
15	812	31	
16	812		

**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: 10/03/98  
Completed by: J. C. Steinert  
Telephone: (757) 365-2837

MONTH: September, 1998

Day	Average Daily Power Level (Mwe - Net)	Day	Average Daily Power Level (Mwe - Net)
1	818	17	812
2	769	18	813
3	819	19	813
4	820	20	813
5	819	21	813
6	819	22	810
7	816	23	813
8	819	24	813
9	822	25	814
10	824	26	811
11	822	27	809
12	812	28	806
13	822	29	806
14	819	30	807
15	814	31	
16	812		

**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:** September, 1998

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

**UNIT ONE:**

09/01/98	0000	Unit operating at 100% power, 840 MWe.
09/28/98	0042	Began cycle coast-down.
09/30/98	2400	Unit operating at 97.2% power, 820 MWe.

**UNIT TWO:**

09/01/98	0000	Unit operating at 100% power, 845 MWe.
09/02/98	0608	Power reduced to 71%, 620 MWe, to perform 2-OSP-TM-001, Turbine Inlet Valve Freedom Test.
	1600	Unit operating at 100% power, 845 MWe.
09/30/98	2400	Unit operating at 100% power, 842 MWe.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: September, 1998

TM S2-98-004

**Temporary Modification**  
(Safety Evaluation 98-078 Rev. 1)

09/10/98

Temporary Modification S2-98-004 was used to lift a lead and install a temporary cooling fan on the pressurizer proportional heater panel located in the upper cable vault. The temporary modification will be used to ensure that pressurizer proportional heaters do not reduce to a minimum output insufficient to maintain RCS pressure due to failure of one or both internal panel fans. Revision 1 will mechanically block the failed fan's flow switch, clear the locked-in Main control Room annunciator, and restore the alarm function from the running fan.

FS 98-014

**UFSAR Change Request**  
(Safety Evaluation 98-091)

09/03/98

UFSAR Change Request FS 98-014 contains a list of several items that needed to be corrected or enhanced in the UFSAR sections that discuss Surry's Service Water System. These changes were needed as a result of the Integrated Configuration Management Project and consist of editorial and technical changes/corrections.

TM S1-98-016

**Temporary Modification**  
(Safety Evaluation 98-092)

09/10/98

Temporary Modification S1-98-016 will be used to inject well water in the Emergency Service Water Pump discharge pipe in an effort to establish low salinity levels at the pump impeller. A salinity meter will be placed in the pump suction near the impeller. This activity will be accomplished while the pump is out of service for scheduled cleaning while in a Technical Specification seven day clock.

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

**MONTH/YEAR:** September, 1998

None During the Reporting Period

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

**MONTH/YEAR:** September, 1998

None During the Reporting Period

CHEMISTRY REPORT

MONTH/YEAR: September, 1998

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, $\mu\text{Ci/ml}$	4.23E-1	3.36E-1	3.82E-1	2.00E-1	1.26E-1	1.68E-1
Suspended Solids, ppm	$\leq 0.010$	$\leq 0.010$	$\leq 0.010$	0.025	0.025	0.025
Gross Tritium, $\mu\text{Ci/ml}$	4.56E-2	2.18E-2	3.22E-2	6.73E-1	6.46E-1	6.65E-1
$^{131}\text{I}$ , $\mu\text{Ci/ml}$	2.40E-2	1.70E-3	5.40E-3	1.44E-4	4.88E-5	8.68E-5
$^{131}\text{I}/^{133}\text{I}$	0.34	0.14	0.23	0.22	0.01	0.11
Hydrogen, cc/kg	37.0	33.7	36.0	38.1	36.8	37.3
Lithium, ppm	1.12	0.59	0.87	2.34	2.06	2.19
Boron - 10, ppm*	17.4	0.4	8.6	118.8	97.6	107.4
Oxygen, (DO), ppm	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$
Chloride, ppm	0.002	$\leq 0.001$	$\leq 0.001$	0.003	$\leq 0.001$	0.002
pH at 25 degree Celsius	9.78	7.47	8.21	7.01	6.74	6.84

\* Boron - 10 = Total Boron x 0.196

Comments:

None

**FUEL HANDLING  
UNITS 1 & 2**

**MONTH/YEAR: September, 1998**

<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:** September, 1998

None During the Reporting Period