

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261  
August 11, 2000

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

Serial No. 00-412  
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 2000 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: United States Nuclear Regulatory Commission  
Region II  
Atlanta Federal Center  
61 Forsyth Street, SW, Suite 23 T85  
Atlanta, Georgia 30303-8931

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

IE24

**VIRGINIA ELECTRIC AND POWER COMPANY  
SURRY POWER STATION  
MONTHLY OPERATING REPORT  
REPORT No. 00-07**

Approved:

  
Site Vice President

8/11/2000

Date

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**OPERATING DATA REPORT**

Docket No.: 50-280  
 Date: 08/01/00  
 Completed By: R. Stief  
 Telephone: (757) 365-2486

- 1. Unit Name: ..... Surry Unit 1
- 2. Reporting Period: ..... July 2000
- 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: \_\_\_\_\_

	<u>This Month</u>	<u>Year-To-Date</u>	<u>Cumulative</u>
11. Hours in Reporting Period	744.0	5111.0	242015.0
12. Hours Reactor Was Critical	744.0	4574.0	174650.5
13. Reactor Reserve Shutdown Hours	0.0	0.0	3774.5
14. Hours Generator On-Line	744.0	4544.0	172075.4
15. Unit Reserve Shutdown Hours	0.0	0.0	3736.2
16. Gross Thermal Energy Generated (MWH)	1893466.4	11143451.0	407583699.4
17. Gross Electrical Energy Generated (MWH)	627952.0	3703106.0	133848439.0
18. Net Electrical Energy Generated (MWH)	605793.0	3571354.0	127674157.0
19. Unit Service Factor	100.0%	88.9%	71.1%
20. Unit Availability Factor	100.0%	88.9%	72.6%
21. Unit Capacity Factor (Using MDC Net)	101.7%	87.2%	67.6%
22. Unit Capacity Factor (Using DER Net)	103.3%	88.7%	66.9%
23. Unit Forced Outage Rate	0.0%	0.0%	13.5%

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: 08/01/00  
 Completed By: R. Stief  
 Telephone: (757) 365-2486

- 1. Unit Name: ..... Surry Unit 2
- 2. Reporting Period: ..... July 2000
- 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:

---



---

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	5111.0	238896.0
12. Hours Reactor Was Critical	744.0	5111.0	172640.1
13. Reactor Reserve Shutdown Hours	0.0	0.0	328.1
14. Hours Generator On-Line	744.0	5111.0	170499.4
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1893429.6	13009164.0	405037157.2
17. Gross Electrical Energy Generated (MWH)	630680.0	4368439.0	133001337.0
18. Net Electrical Energy Generated (MWH)	607836.0	4217484.0	126914341.0
19. Unit Service Factor	100.0%	100.0%	71.4%
20. Unit Availability Factor	100.0%	100.0%	71.4%
21. Unit Capacity Factor (Using MDC Net)	102.0%	103.0%	67.8%
22. Unit Capacity Factor (Using DER Net)	103.7%	104.7%	67.4%
23. Unit Forced Outage Rate	0.0%	0.0%	10.7%

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

October 2000

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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:** July 2000

Docket No.: 50-280  
Unit Name: Surry Unit 1  
Date: 08/01/00  
Completed by: R. Stief  
Telephone: (757) 365-2486

None during the Reporting Period

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(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:** July 2000

Docket No.: 50-281  
Unit Name: Surry Unit 2  
Date: 08/01/00  
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)

(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: 08/01/00  
 Completed by: R. Stief  
 Telephone: (757) 365-2486

MONTH: July 2000

<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>	<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>
1	813	17	814
2	814	18	813
3	814	19	813
4	814	20	814
5	813	21	814
6	813	22	810
7	815	23	815
8	815	24	818
9	815	25	817
10	814	26	817
11	813	27	815
12	813	28	816
13	815	29	815
14	814	30	813
15	815	31	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.

**AVERAGE DAILY UNIT POWER LEVEL**

Docket No.: 50-281

Unit Name: Surry Unit 2

Date: 08/01/00

Completed by: R. Stief

Telephone: (757) 365-2486

MONTH: July 2000

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	818	17	818
2	817	18	817
3	817	19	816
4	817	20	818
5	812	21	818
6	812	22	818
7	814	23	819
8	816	24	820
9	816	25	822
10	814	26	822
11	813	27	819
12	816	28	818
13	813	29	816
14	814	30	819
15	818	31	820
16	819		

**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 2000

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:**

07/01/00	0000	Unit started the month at 100% / 842 MWe.
07/31/00	2400	Unit finished the month at 100% / 844 MWe.

**UNIT TWO:**

07/01/00	0000	Unit started the month at 100% / 845 MWe.
07/31/00	2400	Unit finished the month at 100% / 845 MWe.

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

MONTH/YEAR: July 2000

DCP 99-092 FS 99-064	<p><b>Design Change Package UFSAR Change Request</b> (Safety Evaluation 99-123)</p> <p>Design Change Package 99-092, "Chemical Injection of the Circulating Water (CW) System", chemically treats Units 1 and 2 CW system with Calgon H-940 (sodium bromide at 40%) mixed with 15% solution of sodium hypochlorite to control biofouling of the Unit 1 and 2 condensers.</p>	12/23/99
TM S2-00-005	<p><b>Temporary Modification</b> (Safety Evaluation 00-083)</p> <p>Temporary Modification S2-00-005 installed recorders to the Unit 2 Inadequate Core Cooling Monitors, Trains A and B alarm circuitry, to assist in troubleshooting recent spurious alarms.</p>	07/07/00
FS 00-016	<p><b>UFSAR Change Request</b> (Safety Evaluation 00-084)</p> <p>As a result of the Integrated Configuration Management Project review, UFSAR Change Request FS 00-016 corrects the statements in the UFSAR that discuss Surry's Plant Safety Analysis. These changes are to enhance clarity and do not alter the technical basis of the UFSAR description.</p>	07/12/00
TM S1-00-027	<p><b>Temporary Modification</b> (Safety Evaluation 00-085)</p> <p>Temporary Modification S1-00-027 installed a jumper hose from the Unit 2 Fish Spray system to the Low Level Intake Structure (LLIS) Vacuum Priming System to maintain makeup capability while the "A" well pump, at the LLIS, is inoperable.</p>	07/13/00
SE 00-087	<p><b>Safety Evaluation</b></p> <p>Safety Evaluation 00-087 provides documentation that evaluates contamination of the storm drain systems in accordance with IE Bulletin 80-10.</p>	07/27/00
TM S2-00-007	<p><b>Temporary Modification</b> (Safety Evaluation 00-089)</p> <p>Temporary Modification S2-00-007 installs spool pieces in place of Flow Control Valves 1-CP-FCV-100 and 2-CP-FCV-200 to allow the Condensate Polishing Building Water Neutralization sumps to be neutralized using NaOH prior to discharge to the Settling Pond or Discharge Canal. It is believed the Flow Control Valves are creating a flow restriction causing an unacceptable injection time for sump neutralization.</p>	07/27/00

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

**MONTH/YEAR:** July 2000

TM S1-00-022

**Temporary Modification**  
(Safety Evaluation 00-090)

07/27/00

Temporary Modification S1-00-022 installs two pieces of flex ductwork to the existing Unit 1 Control Room ventilation system that runs through and discharges to the Unit 1 P-250 computer room to provide additional cooling for the computer.

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

**MONTH/YEAR:** July 2000

1/2-OP-CS-003  
1/2-OP-CS-005

**Operating Procedures**  
(Safety Evaluation 00-091)

07/27/00

Operating Procedures 1/2-OP-CS-003, "Refueling Water Storage Tank Temperature Control" and 1/2-OP-CS-005, "Purifying Unit 1/2 RWST", were changed to establish a contingency seismic isolation for the Refueling Water Storage Tank lower suction line in case the normal valve 1/2-CS-27 cannot be closed.

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

**MONTH/YEAR:** July 2000

None during the Reporting Period

**CHEMISTRY REPORT**

MONTH/YEAR: July 2000

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, $\mu\text{Ci/ml}$	3.25E-1	2.16E-1	2.68E-1	1.64E-1	1.02E-1	1.27E-1
Suspended Solids, ppm	-	-	-	-	-	-
Gross Tritium, $\mu\text{Ci/ml}$	8.27E-1	5.76E-1	7.14E-1	4.35E-1	9.18E-2	2.53E-1
$^{131}\text{I}$ , $\mu\text{Ci/ml}$	2.18E-4	1.28E-4	1.65E-4	$\leq 1.00\text{E-4}$	$\leq 6.98\text{E-5}$	$\leq 8.41\text{E-5}$
$^{131}\text{I}/^{133}\text{I}$	0.1	0.06	0.07	$\leq 0.19$	$\leq 0.11$	$\leq 0.15$
Hydrogen, cc/kg	39.8	36.9	38.2	41	36.8	38.5
Lithium, ppm	2.39	2.15	2.29	1.79	1.35	1.59
Boron - 10, ppm*	253	241.5	247.4	48.8	28.6	39
Oxygen, (DO), ppm	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$
Chloride, ppm	0.023	0.014	0.018	0.002	$\leq 0.001$	$\leq 0.001$
pH @ 25 degree Celsius	6.92	6.3	6.46	7.45	7.23	7.32

\* Boron - 10 = Total Boron x 0.196

Comments:

None

**FUEL HANDLING  
 UNITS 1 & 2**

MONTH/YEAR: May 2000

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-32-01	07/11/00	32	N40	NOANSI	2.5560	Fuel on-load from spent fuel pool after cask maintenance
			6P2	LM05YN	3.6070	
			N44	NOANSI	2.5560	
			N46	NOANSI	2.5560	
			N33	NOANSI	2.5560	
			D02	LM007P	3.3250	
			D25	LM007D	3.3250	
			D39	LM0075	3.3250	
			2E8	LM0DEP	2.5933	
			N34	NOANSI	2.5560	
			D31	LM0084	3.3250	
			5S4	LM0ERU	3.6005	
			D14	LM007U	3.3250	
			D41	LM00CA	3.3250	
			D50	LM0073	3.3250	
			N42	NOANSI	2.5560	
			N38	NOANSI	2.5590	

**FUEL HANDLING  
UNITS 1 & 2**

MONTH/YEAR: May 2000

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
			D06	LM008F	3.3250	
			D49	LM007G	3.3250	
			D43	LM007J	3.3250	
			V17	LM041K	2.9060	
			6P4	LM05YR	3.6070	
			N39	NOANSI	2.5560	
			2E7	LM0DFH	3.6028	
			D33	LM008K	3.3250	
			D46	LM00CD	3.3250	
			V19	LM042H	2.9060	
			N45	NOANSI	2.5560	
			N41	NOANSI	2.5560	
			N43	NOANSI	2.5560	
			6P8	LM009PA	3.6070	
			N47	NOANSI	2.5580	

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

**MONTH/YEAR:** July 2000

None during the Reporting Period