

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261
March 10, 2000

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

Serial No. 00-118
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 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

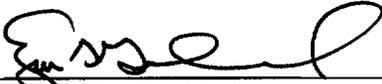
cc: United States Nuclear Regulatory Commission
Region II
Atlanta Federal Center
61 Forsyth Street, SW, Suite 23 T85
Atlanta, Georgia 30303-8931

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

JE24

**VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION
MONTHLY OPERATING REPORT
REPORT No. 00-02**

Approved:



Site Vice President

3/10/2000
Date

TABLE OF CONTENTS

Section	Page
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.....	12
Tests and Experiments That Did Not Require NRC Approval.....	13
Chemistry Report	14
Fuel Handling - Unit Nos. 1 and 2	15
Description of Periodic Test(s) Which Were Not Completed Within the Time Limits Specified in Technical Specifications.....	21

OPERATING DATA REPORT

Docket No.: 50-280
 Date: 03/02/00
 Completed By: R. Stief
 Telephone: (757) 365-2486

- 1. Unit Name: Surry Unit 1
- 2. Reporting Period: February 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	696.0	1440.0	238344.0
12. Hours Reactor Was Critical	696.0	1440.0	171516.5
13. Reactor Reserve Shutdown Hours	0.0	0.0	3774.5
14. Hours Generator On-Line	696.0	1440.0	168971.4
15. Unit Reserve Shutdown Hours	0.0	0.0	3736.2
16. Gross Thermal Energy Generated (MWH)	1740180.9	3633855.0	400074103.4
17. Gross Electrical Energy Generated (MWH)	577507.0	1208052.0	131353385.0
18. Net Electrical Energy Generated (MWH)	558105.0	1167889.0	125270692.0
19. Unit Service Factor	100.0%	100.0%	70.9%
20. Unit Availability Factor	100.0%	100.0%	72.5%
21. Unit Capacity Factor (Using MDC Net)	100.1%	101.3%	67.4%
22. Unit Capacity Factor (Using DER Net)	101.8%	102.9%	66.7%
23. Unit Forced Outage Rate	0.0%	0.0%	13.7%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
 April 2000

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: 03/02/00
 Completed By: R. Stief
 Telephone: (757) 365-2486

- 1. Unit Name: Surry Unit 2
- 2. Reporting Period: February 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: _____

	This Month	Year-To-Date	Cumulative
11. Hours in Reporting Period	696.0	1440.0	235225.0
12. Hours Reactor Was Critical	696.0	1440.0	168969.1
13. Reactor Reserve Shutdown Hours	0.0	0.0	328.1
14. Hours Generator On-Line	696.0	1440.0	166828.4
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1771649.4	3664529.2	395692522.4
17. Gross Electrical Energy Generated (MWH)	596430.0	1233905.0	129866803.0
18. Net Electrical Energy Generated (MWH)	576520.0	1192915.0	123889772.0
19. Unit Service Factor	100.0%	100.0%	70.9%
20. Unit Availability Factor	100.0%	100.0%	70.9%
21. Unit Capacity Factor (Using MDC Net)	103.4%	103.4%	67.2%
22. Unit Capacity Factor (Using DER Net)	105.1%	105.1%	66.8%
23. Unit Forced Outage Rate	0.0%	0.0%	10.9%

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):

	FORECAST	ACHIEVED
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____

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

REPORT MONTH: February 2000

Docket No.: 50-280
 Unit Name: Surry Unit 1
 Date: 03/02/00
 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
2/18/00	F	91H 20M	A	N/A	N/A	SN	P	HP HEATER DRAIN PUMP MOTOR REPLACEMENT

(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: February 2000

Docket No.: 50-281
Unit Name: Surry Unit 2
Date: 03/02/00
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: 03/02/00
 Completed by: R. Stief
 Telephone: (757) 365-2161

MONTH: February 2000

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	820	17	821
2	819	18	697
3	820	19	680
4	820	20	686
5	821	21	718
6	821	22	803
7	821	23	817
8	821	24	817
9	821	25	816
10	821	26	819
11	813	27	820
12	821	28	821
13	821	29	820
14	820	30	
15	822	31	
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.

AVERAGE DAILY UNIT POWER LEVEL

Docket No.: 50-281

Unit Name: Surry Unit 2

Date: 03/02/00

Completed by: R. Stief

Telephone: (757) 365-2161

MONTH: February 2000

<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>	<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>
1	829	17	830
2	830	18	830
3	830	19	829
4	829	20	830
5	829	21	827
6	829	22	828
7	821	23	830
8	824	24	830
9	822	25	830
10	828	26	830
11	827	27	831
12	827	28	830
13	827	29	830
14	826	30	
15	829	31	
16	831		

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 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:

02/01/00	0000	Unit started the month at 100% / 847 MWe.
02/18/00	1015	Initiated ramp down to 65% for removal of high pressure heater drain pump from service.
02/18/00	1215	Unit at 65% / 549 MWe
02/18/00	1556	Commenced slow ramp up.
02/19/00	0629	Holding power at 88% due to Condensate Polishing pressure differential.
02/21/00	2033	Commenced ramp up to 100%. Unit at 88.5%, 750 MWe
02/21/00	2351	Initiated ramp down to 85% due to potential problem with a feedwater pump.
02/22/00	0027	Suspended ramp. Unit at 88% / 755 MWe
02/22/00	0244	Commenced ramp to 100%. Unit at 88% / 755 MWe
02/22/00	0535	Unit at 100%, 846 MWe
02/29/00	2400	Unit finished the month at 100% / 849 MWe.

UNIT TWO:

02/01/00	0000	Unit started the month at 100% / 855 MWe.
02/29/00	2400	Unit finished the month at 100% / 860 MWe.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: February 2000

- | | | |
|--|--|----------|
| FS 99-059 | UFSAR Change Request
(Safety Evaluation 00-012) | 02/03/00 |
| <p>As a result of the Integrated Configuration Management Project review, UFSAR Change Request FS 99-059 contains corrections and clarifications to the UFSAR sections that discuss Surry's Nuclear Control system. They include clarification of component activities, correct description of components, and more accurate reflection of current design. These changes are to enhance accuracy and do not affect any Nuclear Control system or structure, or any of its component's operation or performance.</p> | | |
| FS 99-047 | UFSAR Change Request
(Safety Evaluation 00-013) | 02/03/00 |
| <p>As a result of the Integrated Configuration Management Project review, UFSAR Change Request FS 99-047 contains corrections and clarifications to the UFSAR sections that discuss Surry's Sampling and Primary Vents and Drains systems. They include clarification of component activities, correct description of components, and more accurate reflection of current design. These changes are to enhance accuracy and do not affect any Sampling and Primary Vents and Drains systems or structures, or any of their component's operation or performance.</p> | | |
| TM S1-00-004
TM S2-00-001 | Temporary Modifications
(Safety Evaluation 00-014) | 02/04/00 |
| <p>Temporary Modifications S1-00-004 and S2-00-001 allowed the installation of electrical jumpers in the control switches of Units 1 and 2 fish screen drive motors to allow the fish screens to remain operable during maintenance activities.</p> | | |
| FS 99-031 | UFSAR Change Request
(Safety Evaluation 00-015) | 02/10/00 |
| <p>As a result of the Integrated Configuration Management Project review, UFSAR Change Request FS 99-031 contains corrections and clarifications to the UFSAR sections that discuss Surry's Boron Recovery and Waste Disposal systems. They include clarification of component activities, correct description of components, and more accurate reflection of current design. These changes are to enhance accuracy and do not affect any Boron Recovery and Waste Disposal systems or structures, or any of their component's operation or performance.</p> | | |
| FS 99-021 | UFSAR Change Request
(Safety Evaluation 00-016) | 02/10/00 |
| <p>UFSAR Change Request FS 99-021 adds historical and design basis for why the manual Halon system installed in the Emergency Switchgear Rooms meets the requirements of a fixed fire protection system as required by 10CFR50 Appendix R.</p> | | |

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: February 2000

- | | | |
|--|--|----------|
| FS 99-051 | UFSAR Change Request
(Safety Evaluation 00-017) | 02/16/00 |
| <p>As a result of the Integrated Configuration Management Project review, UFSAR Change Request FS 99-051 contains corrections and clarifications to the UFSAR sections that discuss Surry's Electrical system. They include clarification of component activities, correct description of components, and more accurate reflection of current design. These changes are to enhance accuracy and do not affect any Electrical system or structure, or any of its component's operation or performance.</p> | | |
| ET S-00-0022 | Engineering Transmittal
(Safety Evaluation 00-019) | 02/17/00 |
| <p>This safety evaluation was written to address a performance concern with a charging pump. The pump was performing below its original performance curve. The problem is believed to have been caused by irregularities in the volute region of the pump casing. The entrance area of the volute was increased by removing the irregularities and, along with the alignment of the volute openings between the upper and lower casing halves, will give the pump greater flow.</p> | | |
| FS 00-008 | UFSAR Change Request
(Safety Evaluation 00-020) | 02/18/00 |
| <p>This safety evaluation was written to address a concern identified with the lack of engineering documentation supporting the design and installation configuration of the existing exhaust hoods, used to ventilate the Charging Pump Cubicles during Engineered Core Cooling system recirculation, to adequately capture and exhaust airborne radioactivity generated from a leak in the Charging Pump cubicle. The UFSAR Change Request restricts the leakage rates from the Safety Injection and Charging systems.</p> | | |

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

MONTH/YEAR: February 2000

None during the Reporting Period

TESTS AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: February 2000

None during the Reporting Period

CHEMISTRY REPORT

MONTH/YEAR: February 2000

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, $\mu\text{Ci/ml}$	2.95E-1	1.85E-1	2.45E-1	2.02E-1	9.78E-2	1.53E-1
Suspended Solids, ppm	-	-	-	-	-	-
Gross Tritium, $\mu\text{Ci/ml}$	2.13E-1	2.10E-1	1.11E-1	9.45E-1	9.05E-1	9.26E-1
^{131}I , $\mu\text{Ci/ml}$	7.14E-4	3.89E-4	5.01E-4	$\leq 1.00\text{E-4}$	$\leq 5.67\text{E-5}$	$\leq 8.03\text{E-5}$
$^{131}\text{I}/^{133}\text{I}$	0.11	0.06	0.08	≤ 0.20	≤ 0.11	≤ 0.16
Hydrogen, cc/kg	39.4	29	36.4	36.6	33.6	34.9
Lithium, ppm	1.28	.63	.95	2.28	2.13	2.21
Boron - 10, ppm*	24.5	4.12	14	139.9	123.9	132.6
Oxygen, (DO), ppm	≤ 0.005	≤ 0.005	≤ 0.005	≤ 0.005	≤ 0.005	≤ 0.005
Chloride, ppm	0.003	0.001	0.002	0.006	0.001	0.004
pH @ 25 degree Celsius	7.66	7.09	7.39	6.9	6.53	6.78

* Boron - 10 = Total Boron x 0.196

Comments:

None

**FUEL HANDLING
 UNITS 1 & 2**

MONTH/YEAR: February 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
Dry Storage Cask TN 32-15	02/03/00	32	2G0	LM0MD3	3.7993	N/A
			2T9	LM0K93	3.7916	N/A
			3T4	LM0K97	3.7885	N/A
			2G1	LM0MD2	3.8011	N/A
			5S2	LM0ESY	3.5961	N/A
			1D4	LM0AM4	3.5888	N/A
			3D6	LM0AML	3.5888	N/A
			2F1	LM0JGB	3.3.6023	N/A
			0L7	LM06EY	3.1260	N/A
			4T8	LM0K9H	3.7988	N/A
			4T5	LM0K99	3.7985	N/A
			2D2	LM0ALT	3.5888	N/A
			2D6	LM0ALG	3.5888	N/A
			2F2	LM0JGD	3.5939	N/A
			1L0	LM06FJ	3.1260	N/A
			4T9	LM0K94	3.7926	N/A
4T6	LM0K8Y	3.7981	N/A			
2D3	LM0ALK	3.5888	N/A			

**FUEL HANDLING
 UNITS 1 & 2**

MONTH/YEAR: February 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
			1F5	LM0JG6	3.5970	N/A
			4F3	LM0JGW	3.7970	N/A
			1L1	LM06EW	3.1260	N/A
			5T0	LM0K9L	3.7969	N/A
			4T7	LM0K93	3.7977	N/A
			2D4	LM0AMG	3.5888	N/A
			1F6	LM0JGE	3.5958	N/A
			5F6	LM0JH8	3.7920	N/A
			1L2	LM06FL	3.1260	N/A
			5T1	LM0K90	3.7990	N/A
			3S7	LM0ESL	3.6019	N/A
			5T2	LM0K91	3.7869	N/A
			4S4	LM0ERK	3.5064	N/A
			2G2	LM0MD1	3.7958	N/A
Unit 1 Batch 19 Shipment #1	02/08/00	12	27D	LM18WP	4.2531	16.1 Ci
			28D	LM18WQ	4.2499	
			29D	LM18WR	4.2577	
			32D	LM18WU	4.2518	

**FUEL HANDLING
 UNITS 1 & 2**

MONTH/YEAR: February 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
			33D	LM18WV	4.2509	
			35D	LM18WX	4.2535	
			36D	LM18WY	4.2568	
			37D	LM18WZ	4.2557	
			38D	LM18X0	4.2572	
			40D	LM18X2	4.2550	
			41D	LM18X3	4.2536	
			43D	LM18X5	4.2548	
Unit 1 Batch 19 Shipment #2	02/10/00	12	02D	LM18VY	4.0978	15.80 Ci
			04D	LM18W0	4.1107	
			07D	LM18W3	4.1078	
			10D	LM18W6	4.0967	
			11D	LM18W7	4.0988	
			14D	LM18WA	4.1192	
			16D	LM18WC	4.1000	
			25D	LM18WM	4.2590	
			30D	LM18WS	4.2594	
			31D	LM18WT	4.2536	

**FUEL HANDLING
 UNITS 1 & 2**

MONTH/YEAR: February 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
Unit 1 Batch 19 Shipment #3	02/15/00	12	34D	LM18WW	4.2572	15.77 Ci
			39D	LM18X1	4.2567	
			12D	LM18W8	4.0992	
			13D	LM18W9	4.1050	
			17D	LM18WD	4.1100	
			19D	LM18WF	4.1120	
			20D	LM18WG	4.1193	
			22D	LM18WJ	4.1033	
			23D	LM18WK	4.1048	
			53D	LM18XF	4.2523	
			54D	LM18XG	4.2509	
			55D	LM18XH	4.2530	
Unit 1 Batch 19 Shipment #4	02/17/00	12	56D	LM18XJ	4.2498	15.80 Ci
			59D	LM18XM	4.2529	
			01D	LM18VX	4.0949	
			03D	LM18VZ	4.1154	
			05D	LM18W1	4.1152	
			08D	LM18W4	4.1000	

**FUEL HANDLING
 UNITS 1 & 2**

MONTH/YEAR: February 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
			18D	LM18WE	4.1131	
			24D	LM18WL	4.1072	
			26D	LM18WN	4.2503	
			47D	LM18X9	4.2514	
			48D	LM18XA	4.2568	
			57D	LM18XK	4.2580	
			58D	LM18XL	4.2499	
			60D	LM18XN	4.2504	
Unit 1 Batch 19 Shipment #5	02/22/00	12	06D	LM18W2	4.1075	15.91 Ci
			09D	LM18W5	4.0980	
			15D	LM18WB	4.1096	
			21D	LM18WH	4.1037	
			42D	LM18X4	4.2549	
			44D	LM18X6	4.2513	
			45D	LM18X7	4.2571	
			46D	LM18X8	4.2565	
			49D	LM18XB	4.2570	
			50D	LM18XC	4.2568	

**FUEL HANDLING
UNITS 1 & 2**

MONTH/YEAR: February 2000

<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>
			51D	LM18XD	4.2568	
			52D	LM18XE	4.2541	

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

MONTH/YEAR: February 2000

None during the Reporting Period