# 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

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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

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

Approved:

Site Vice President Date

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# **OPERATING DATA REPORT**

		Co	Docket No.: Date: ompleted By: Telephone:	50-280 03/02/00 R. Stief (757) 369	5-2486
Unit Name:	Februa 25 8 7 ): 8	Jnit 1 ary 2000 46 47.5 88 40			
If Changes Occur in Capacity Ratings (Items N	Number 3 Th	rough 7) S	Since Last Rep	oort, Give R	easons:
Power Level To Which Restricted, If Any (Net Reasons For Restrictions, If Any:					
		This Mor		To-Date	Cumulative
Hours in Reporting Period		696		1440.0	238344.0
Hours Reactor Was Critical		696		1440.0	171516.5
Reactor Reserve Shutdown Hours			0.0	0.0	3774.5
Hours Generator On-Line		696		1440.0	168971.4
Unit Reserve Shutdown Hours			0.0	0.0	3736.2
Gross Thermal Energy Generated (MWH)		1740180		33855.0	400074103.4
Gross Electrical Energy Generated (MWH)		577507		08052.0	131353385.0
Net Electrical Energy Generated (MWH)	''	558109		67889.0	125270692.0
Unit Service Factor		100.0		100.0%	70.9%
Unit Availability Factor		100.0		100.0%	70.5% 72.5%
		100.0		100.0%	67.4%
Unit Capacity Factor (Using MDC Net)					66.7%
Unit Capacity Factor (Using DER Net) Unit Forced Outage Rate		101.8 0.0		102.9% 0.0%	13.7%
Shutdowns Scheduled Over Next 6 Months (T	April 20	nd Duratio	n of Each):		
Type and duration of scl [Reference: Letter					
If Shut Down at End of Report Period, Estimat		tart-up:	Estimated sta	rt-up dates ference: Le	are no longer tter S/N 00-069,
Unit In Test Status (Prior to Commercial Opera	ation):				
		FORE	CAST	ACHIE	VED
INITIAL CRIT	ICALITY				
INITIAL ELEC COMMERCIAL OPE	TRICITY				

# **OPERATING DATA REPORT**

	Complet	et No.: Date: ed By: ohone:	50-281 03/02/00 R. Stief (757) 365-2	486
	Surry Unit 2 February 2000 2546 847.5 788 840			
Maximum Dependable Capacity (Net MWe):  If Changes Occur in Capacity Ratings (Items Number)	801 er 3 Through 7) Since L	ast Repo	ort. Give Rea	sons:
Tonanges could in capacity realings (nemo rambe				
Power Level To Which Restricted, If Any (Net MWe)	:			
Reasons For Restrictions, If Any:				
	This Month	Year-	-To-Date	Cumulativ
Hours in Reporting Period	696.0		1440.0	235225
Hours Reactor Was Critical	696.0		1440.0	168969
Reactor Reserve Shutdown Hours	0.0		0.0	328
Hours Generator On-Line	696.0		1440.0	166828
Unit Reserve Shutdown Hours	0.0		0.0	0
Gross Thermal Energy Generated (MWH)	1771649.4	36	64529.2	395692522
Gross Electrical Energy Generated (MWH)	596430.0	12	233905.0	129866803
Net Electrical Energy Generated (MWH)	576520.0	11	92915.0	123889772
Unit Service Factor	100.0%		100.0%	70.9
Unit Availability Factor	100.0%		100.0%	70.9
Unit Capacity Factor (Using MDC Net)	103.4%		103.4%	67.2
Unit Capacity Factor (Using DER Net)	105.1%		105.1%	66.8
Unit Forced Outage Rate	0.0%		0.0%	10.9
Shutdowns Scheduled Over Next 6 Months (Type, D	Pate, and Duration of Ea	ach):		
Type and duration of schedule [Reference: Letter S/N 0			vided.	
If Shut Down at End of Report Period, Estimated Da	te of Start-up: Estima	ated star	t-up dates ar erence: Lette / 7, 2000]	e no longer r S/N 00-069,
Unit In Test Status (Prior to Commercial Operation):				
	FORECAST		ACHIEVE	D
INITIAL CRITICALI	ΓY			
INITIAL CHITICALI				
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

	(1)		(2)	(3) Method		(4)	(5)	
Date	Туре	Duration Hours	Reason	of Shutting Down Rx	LER No.	System Code	Component Code	Cause & Corrective Action to Prevent Recurrence
2/18/00	F	91H 20M	А	N/A	N/A	SN	Р	HP HEATER DRAIN PUMP MOTOR REPLACEMENT

(1) F: Forced

REASON:

(3) METHOD:

S: Scheduled

Equipment Failure (Explain)

Manual

В -Maintenance or Test Manual Scram

C -Refueling **Automatic Scram** 

D Regulatory Restriction Other (Explain)

Operator Training & Licensing Examination

E -Administrative

Operational Error (Explain)

(5) Exhibit 1 - Same Source

Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG 0161)

# 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

REASON:

A - Equipment Failure (Explain)

B - Maintenance or Test

C - Refueling

D - Regulatory RestrictionE - Operator Training & Licensing Examination

F - Administrative

G - Operational Error (Explain)

(3)

METHOD:

1 - Manual 2 - Manual Scram 3 - Automatic Scram

- 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

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
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:		
00/01/00	0000	Unit started the month at 1000/ / CEE RAM

<b>Unit Two:</b>		
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**

02/03/00

(Safety Evaluation 00-012)

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.

FS 99-047

#### **UFSAR Change Request**

02/03/00

(Safety Evaluation 00-013)

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.

TM S1-00-004 TM S2-00-001

# **Temporary Modifications**

02/04/00

(Safety Evaluation 00-014)

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.

FS 99-031

# **UFSAR Change Request**

02/10/00

(Safety Evaluation 00-015)

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.

FS 99-021

#### **UFSAR Change Request**

02/10/00

(Safety Evaluation 00-016)

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.

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

MONTH/YEAR: February 2000

FS 99-051

#### **UFSAR Change Request**

02/16/00

(Safety Evaluation 00-017)

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.

ET S-00-0022

#### **Engineering Transmittal**

02/17/00

(Safety Evaluation 00-019)

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.

FS 00-008

# UFSAR Change Request

02/18/00

(Safety Evaluation 00-020)

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 airborn 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.

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

MONTH/YEAR: February 2000

None during the Reporting Period

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# TESTS AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: February 2000

None during the Reporting Period

## CHEMISTRY REPORT

MONTH/YEAR: February 2000

		Unit No. 1		Unit No. 2		
Primary Coolant Analysis	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, μCi/ml	2.95E-1	1.85E-1	2.45E-1	2.02E-1	9.78E-2	1.53E-1
Suspended Solids, ppm	-	-	-	-	-	-
Gross Tritium, μCi/ml	2.13E-1	2.10E-1	1.11E-1	9.45E-1	9.05E-1	9.26E-1
   Ι <sup>131</sup> , μCi/ml	7.14E-4	3.89E-4	5.01E-4	≤ 1.00E-4	≤ 5.67 <b>E</b> -5	≤ 8.03E-5
<sub>1</sub> 131 <sub>/l</sub> 133	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

<sup>\*</sup> Boron - 10 = Total Boron x 0.196

Comments:

None

FUEL HANDLING UNITS 1 & 2

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	02/03/00	32	2G0	LM0MD3	3.7993	N/A
TN 32-15	02/03/00	32	200	LIVIOIVIDS	3.7333	
			2T9	LM0K93	3.7916	N/A
			3T4	LM0K97	3.7885	N/A
			2G1	LM0MD2	3.8011	N/A
			582	LMOESY	3.5961	N/A
			1D4	LM0AM4	3.5888	N/A
			3D6	LMOAML	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	LMOALT	3.5888	N/A
			2D6	LM0ALG	3.5888	N/A
			2F2	LM0JGD	3.5939	N/A
			1L0	LM06FJ	3.1260	N/A
			4T9	LMOK94	3.7926	N/A
			4T6	LM0K8Y	3.7981	N/A
			2D3	LM0ALK	3.5888	N/A

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
			<b>4</b> T7	LMOK93	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
Unit 1			2G2	LM0MD1	3.7958	N/A
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	

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	
Unit 1			43D	LM18X5	4.2548	
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	

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
			34D	LM18WW	4.2572	
Unit 1 Batch 19 Shipment #3			39D	LM18X1	4.2567	
	02/15/00	12	12D	LM18W8	4.0992	15.77 Ci
			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	
			56D	LM18XJ	4.2498	
Unit 1 Batch 19 Shipment #4			59D	LM18XM	4.2529	
	02/17/00	12	01D	LM18VX	4.0949	15.80 Ci
			03D	LM18VZ	4.1154	
			05D	LM18W1	4.1152	
			08D	LM18W4	4.1000	

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			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	
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	

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# FUEL HANDLING UNITS 1 & 2

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
			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