# VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

### July 12, 1994

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

Serial No. 94-403 NO/RPC:vlh 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

Enclosed is the Monthly Operating Report for Surry Power Station Units 1 and 2 for the month of June 1994.

Very truly yours,

9407180248 940630 PDR ADOCK 05

J. P. O'Hanlon Senior Vice President - Nuclear

Enclosure

U. S. Nuclear Regulatory Commission cc: **Region II** 101 Marietta Street, N. W. Suite 2900 Atlanta, Georgia 30323

> Mr. M. W. Branch NRC Senior Resident Inspector Surry Power Station

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VIRGINIA ELECTRIC AND POWER COMPANY SURRY POWER STATION MONTHLY OPERATING REPORT REPORT NO. 94-06

Approved: station Manager

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No.:

50-280

07-02-94

D. Mason (804) 365-2459

### **OPERATING DATA REPORT**

			Docket No.: Date:
			Completed By: Telephone:
1.	Unit Name:	Surry Unit 1	
2.	Reporting Period:	June, 1994	
3.	Licensed Thermal Power (MWt):	2441	
4.	Nameplate Rating (Gross MWe):	847.5	
5.	Design Electrical Rating (Net MWe):	788	
6.	Maximum Dependable Capacity (Gross MWe):	820	
7.	Maximum Dependable Capacity (Net MWe):	781	

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	YTD	Cumulative
11.	Hours In Reporting Period	720.0	4343.0	188663.0
12.	Number of Hours Reactor Was Critical	720.0	2841.7	126648.9
13.	Reactor Reserve Shutdown Hours	0	0	3774.5
14.	Hours Generator On-Line	720.0	2804.5	124483.5
15.	Unit Reserve Shutdown Hours	0	0	3736.2
16.	Gross Thermal Energy Generated (MWH)	1757461.4	6251602.5	289419347.6
17.	Gross Electrical Energy Generated (MWH)	584510.0	2091050.0	94630598.0
18.	Net Electrical Energy Generated (MWH)	561987.0	2009204.0	89836305.0
19.	Unit Service Factor	100.0%	64.6%	66.0%
20.	Unit Availability Factor	100.0%	64.6%	68.0%
21.	Unit Capacity Factor (Using MDC Net)	99.9%	59.2%	61.4%
22.	Unit Capacity Factor (Using DER Net)	99.1%	58.7%	60.4%
23.	Unit Forced Outage Rate	0.0%	0.9%	17.1%

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

None

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

26. Unit In Test Status (Prior to Commercial Operation):

	FORECAST	ACHIEVED
INITIAL CRITICALITY INITIAL ELECTRICITY COMMERCIAL OPERATION		

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# **OPERATING DATA REPORT**

			Docket No.: Date: Completed By: Telephone:	50-281 07-02-94 D. Mason (804) 365-2459
1.	Unit Name:	Surry Unit 2		
2.	Reporting Period:	June, 1994		
3.	Licensed Thermal Power (MWt):	2441		
4.	Nameplate Rating (Gross MWe):	847.5		
5.	Design Electrical Rating (Net MWe):	788		
6.	Maximum Dependable Capacity (Gross MWe):	820		
7.	Maximum Dependable Capacity (Net MWe):	781		

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	YTD	Cumulative
11.	Hours In Reporting Period	720.0	4343.0	185543.0
12.	Number of Hours Reactor Was Critical	221.2	3844.2	123920.5
13.	Reactor Reserve Shutdown Hours	0	0	328.1
14.	Hours Generator On-Line	211.5	3834.5	122050.1
15.	Unit Reserve Shutdown Hours	0	0	0
16.	Gross Thermal Energy Generated (MWH)	432133.2	8830556.5	284506298.9
17.	Gross Electrical Energy Generated (MWH)	140290.0	2952705.0	92898329.0
18.	Net Electrical Energy Generated (MWH)	134216.0	2843880.0	88175950.0
19.	Unit Service Factor	29.4%	88.3%	65.8%
20.	Unit Availability Factor	29.4%	88.3%	65.8%
21.	Unit Capacity Factor (Using MDC Net)	23.9%	83.8%	61.0%
22.	Unit Capacity Factor (Using DER Net)	23.7%	83.1%	60.3%
23.	Unit Forced Outage Rate	0%	0%	13.7%

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

None

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

26. Unit In Test Status (Prior to Commercial Operation):

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	FORECAST	ACHIEVED
INITIAL CRITICALITY INITIAL ELECTRICITY COMMERCIAL OPERATION		



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

**REPORT MONTH: June, 1994** 

		,					Do U Com	ocket No.: Init Name: Date: pleted by: elephone:	50-280 Surry Unit 1 07-01-94 Craig Olsen (804) 365-2155
	(1)		(2)	(3) Method		(4)	(5)		
Date	Туре	Duration Hours	Reason	of Shutting Down Rx	LER No.	System Code	Component Code	Cause & Prevent F	Corrective Action to Recurrence

None During the Reporting Period.

(1) F: Forced S: Schedul	(2) REASON: led 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) on
(4) Exhibit G - Ir	nstructions for Preparation of Data Entry Sheets	(5) Exhibit 1 - Same Source.

(4) 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%)

							D l Con	ocket No.: Jnit Name: Date: pleted by: Felephone:	50-281 Surry Unit 2 07-01-94 Craig Olsen (804) 365-2155
	(1)		(2)	(3) Method		(4)	(5)		
Date	Туре	Duration Hours	Reason	of Shutting Down Rx	LER No.	System Code	Component Code	Cause & ( Prevent R	Corrective Action to lecurrence
940604	S	508.5	В	1	N/A	SJ	SG	Unit taken cleaning o secondar	off line for chemical of steam generator y sides.

	(1)	(2)			(3)
F: S:	Forced Scheduled	REASON: A - Equipment Failure (Explain) B - Maintenance or Test C - Refueling D - Regulatory Restriction E - Operator Training & Licensing Examination	M 1 2 3 4	ET) - - - -	(O) HOD: Manual Manual Scram. Automatic Scram. Other (Explain)
		G - Operational Error (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:	07-02-94
Completed by:	Pat Kessler
Telephone:	365-2790

MONTH: June, 1994

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	787	17	783
2	786	18	780
3	785	19	772
4	785	20	770
5	788	21	767
6	788	22	763
7	788	23	758
8	787	24	767
9	788	25	774
10	788	26	777
11	789	27	780
12	788	28	781
13	788	29	780
14	785	30	781
15	783		
16	782		

### INSTRUCTIONS

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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:	07-02-94
Completed by:	Pat Kessler
Telephone:	365-2790

MONTH: June, 1994

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
· 1	641	17	0
2	649	18	0
3	628	19	0
4	17	20	0
5	0	21	0
6	0	22	0
7	00	23	0
8	0	24	0
9	0	25	144
10	00	26	453
11	0	27	726
12	0	28	779
13	0	29	778
14	0	30	779
15	0		
16	0		

### 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: June, 1994

UNIT ONE:		
06/01/94	0000	The reporting period began with the Unit operating at 100% power, 820 MWe.
06/30/94	2400	The reporting period ended with the Unit operating at 100% power, 815 MWe.
<u>Unit Two:</u>		
06/01/94	0000	The reporting period began with the Unit operating at 86.5% power, 700 MWe, due to Steam Generator "C" level oscillations.
06/03/94	2100	Commence ramp down in preparation for U2 Steam Generator Chemical Cleaning (SGCC) outage.
06/04/94	0236	Unit taken off line, began SGCC outage
06/24/94	2125	Reactor made critical in preparation for startup.
06/25/94	0706	Unit placed on line, commence power escalation.
	0758	Stop ramp at 32%, 240 MWe, for chemistry hold & calorimetric calculation.
06/26/94	0037	Commence power escalation
	0612	Stop ramp at 67%, 515 MWe.
06/27/94	0048	Commence power escalation.
	0555	Stop ramp at 95%, 755 MWe.
	2230	Commence final power escalation.
	2300	Unit at full power, 815 MWe.
06/30/94	2400	The reporting period ended with the Unit operating at 100% power, 815 MWe.

# FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: June, 1994

SE 94-115	Safety Evaluation	06-01-94			
	Safety Evaluation 94-115 was performed to evaluate Corporation's Chemically Enhanced Pressure Pulse Cleanin deposits from the Unit 2 steam generators (SG).	the use of Westinghouse ng Method to remove mineral			
	The process is used when the unit is at cold shutdown. method were performed by Virginia Power and Westingl evaluations concluded that the integrity of the SGs is not cleaning. Therefore, an unreviewed safety question does not	Evaluations of the cleaning house Nuclear Safety. The t affected by pressure pulse ot exist.			
TM S2-94-07	Temporary Modification (Safety Evaluation No. 94-117)	06-02-94			
	Temporary Modification (TM) S2-94-07 mechanically fixed th compressor cooling tower dampers in the open position and of cooling water.	e Unit 2 condensate polishing provided an alternate source			
	The TM was implemented to permit continued cooling tower was being performed. The modification was made to nonsafe not affect accident analyses or the margin of safety a Specifications and Updated Final Safety Analysis Repo unreviewed safety question did not exist.	operation while maintenance ety-related equipment and did s defined by the Technical rt (UFSAR). Therefore, an			
TM S1-94-33	Temporary Modification (Safety Evaluation No. 94-118)	06-08-94			
	Temporary Modification (TM) S1-94-33 installed an electrica certain Unit 1 Reactor Protection (RP) System Train "B" circl relay AFP1-XB.	I jumper to maintain power to uits during the replacement of			
	The "B" reactor trip breaker was open, the "B" by-pass break driven auxiliary feedwater pumps were in "pull to lock" durin TM. The activity did not affect RP System Train "A". In installation/removal and post-maintenance testing were unreviewed safety question did not exist.	er was closed, and the motor- ng the implementation of this Double verification of jumper performed. Therefore, an			
TM S2-94-08	Temporary Modification (Safety Evaluation No. 94-119)	06-09-94			
	Temporary Modification (TM) S2-94-08 installed a one-inch diameter piping branch with a chemical injection quill to the discharge header of the Unit 2 condensate polishers.				
	The TM was implemented to permit the injection of ethanol control secondary system pH and corrosion. The modifica related equipment and did not affect accident analyses or th by the Technical Specifications and UFSAR. Therefore, an did not exist.	amine on a trial basis to help ation was made to nonsafety- le margin of safety as defined n unreviewed safety question			

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# FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

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MONTH/YEAR: June, 1994

TM S2-94-09 **Temporary Modification** 06-10-94 (Safety Evaluation No. 94-121) Temporary Modification (TM) S2-94-09 installed a temporary exhaust fan in the center of the missile shield of the Unit 2 Main Steam Valve House roof to help remove paint fumes while painting was being performed. The TM was installed while the unit was at cold shutdown and did not affect the crossconnect (to Unit 1) capability of the Unit 2 motor-driven auxiliary feedwater pumps or the operability of other plant equipment. The TM was removed before the unit left cold shutdown. Therefore, an unreviewed safety question did not exist. TM S2-94-10 **Temporary Modification** 06-16-94 (Safety Evaluation No. 94-125) Temporary Modification (TM) S2-94-10 installed electrical jumpers to maintain power to certain Unit 2 Safety Injection (SI) System Train "A" circuits during the replacement of relay SI-2A. The TM was implemented while Unit 1 was at cold shutdown when the SI System was not required to be operable. The TM was installed to prevent unwanted ESF actuations to maintain the Daisy Chain of wire continuity to adjacent relays. The TM did not affect SI System Train "B". Double verification of jumper installation/removal was performed. Therefore, an unreviewed safety question did not exist. FS 92-113 Updated Final Safety Analysis Report Change 06-28-94 (Safety Evaluation No. 94-127)

UFSAR Change 94-127 revised Section 9.14, "Decontamination Facility," to reflect the removal of decontamination equipment from the decontamination facility.

The equipment was replaced by other decontamination components in the radwaste facility. Removal of the nonsafety-related equipment did not impact the operation of the plant. Therefore, an unreviewed safety question did not exist.





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

MONTH/YEAR: June, 1994

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0-OPT-VS-002	<b>Operations Periodic Test Procedure</b> (Safety Evaluation No. 94-117A)	06-08-94
	Operations Periodic Test Procedure, 0-OPT-VS-002, "An Test" was revised to minimize the required operator actions motor-operated dampers and returning them to service testing. The procedure revision also deleted the requirement for the damper fuses.	uxiliary Ventilation Filter Train for opening the charging pump when performing the subject ont to perform continuity checks
	The subject testing will be performed on each filter train controls will ensure that the required damper alignment w basis event. The fuse continuity checks were replace dampers stroke closed. Therefore, an unreviewed safety o	independently and procedural ill be obtained during a design d by steps to verify that the uestion does not exist.
SE 94-120	Safety Evaluation	06-10-94
	Safety Evaluation 94-120 assessed the resumption of Unit cycle 12 at the original Reactor Coolant System operating the replacement of the pressurizer safety values.	2 operation for the balance of pressure of 2235 psig following
	The evaluation concluded that this change is acceptable a RCS operating pressure specified in the Technical Spe	since 2235 psig is the nominal

ominal re, the design basis of the reactor and plant systems assume an RCS steady state pressure of 2235 psig. Therefore, an unreviewed safety question does not exist.

1/2-IPT-FT-RP-SI-001A 1/2-IPT-FT-RP-SI-001B **Instrument Periodic Test Procedures** (Safety Evaluation No. 94-123)

06-14-94

Instrument Periodic Test Procedures 1[2]-IPT-FT-RP-SI-0001A, "Train A Safeguards Actuation Logic Functional Test", and 1[2]-IPT-FT-RP-SI-0001B, "Train B Safeguards Actuation Logic Functional Test " were revised to delete the requirements to perform coil continuity checks for certain slave relays due to the high risk nature of the testing.

The subject relays are normally de-energized, do not have a history of failure, and are functionally tested each refueling outage. The testing circuitry was not configured to support slave relay testing or coil continuity measurement. Such testing is not required by Technical Specifications. Furthermore, this testing change is consistent with the recommendations of Generic Letter 93-05, "Line Item Technical Specification Improvements to Reduce Surveillance Requirements for Testing During Power Operation." Therefore, an unreviewed safety question does not exist.



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

MONTH/YEAR: June, 1994

1-GOP-1.3 2-GOP-1.3	General Operating Procedures (Safety Evaluation No. 94-124)	6-15-94
	Unit 1 Operating Procedures 1[2]-GOP-1.3, "Unit Startup, RCS Heatt HSD" were revised to provide instructions for installing a temporary more moves the seal-in function for the Safety Injection System accumulat when the Reactor Coolant System pressure is $\leq$ 1000 psig. This TM re- relay which allows the stroke of the subject motor-operated valves to be controlled opening of the Safety Injection System accumulator isolation the potential for pressure transients when returning the accumulators startup activities.	up From 345° F to dification (TM) that tor isolation valves emoves the seal in be controlled. The n valves minimizes is to service during
	These procedurally controlled TMs do not affect the integrity of the vation be opened or closed. The accumulators are not required to be operapressure is $\leq$ 1000 psig. Therefore, an unreviewed safety question doe	lves or their ability able when the RCS is not exist.
DR S-94-1243 DR S-94-1293	Devlation Report (Safety Evaluation No. 94-126)	06-21-94
	Safety Evaluation 94-126 assessed the condition reported by Deviat 1243 and S-94-1293 concerning the continued operation of Unit 2 with riser barrel of the "B" and "C" steam generators (SG).	tion Reports S-94- a small hole in the
. ·	An evaluation of the hole in the "C" SG was performed by Westinghouse which is also applicable to the hole in the "B" SG, concluded that continue operation for the remainder of the fuel cycle since the holes thermal performance of the SGs or increase the internal loading on the Therefore, an unreviewed safety question does not exist.	e. This evaluation, it is acceptable to will not affect the SG components.
1[2]-EPT-0902-01 1[2]-EPT-0902-02 0-EPM-0902-01	Electrical Periodic Test Procedures Electrical Preventive Maintenance Procedure (Safety Evaluation No. 94-045, Revision 1)	06-28- <del>9</del> 4
	Electrical Periodic Test Procedures 1[2]-EPT-0902-01, "Fire Protection System Puff Test," and 1[2]-EPT-0902-02, "Fire Protection Low Press Equipment Test," were revised to provide instructions for administrative low pressure carbon dioxide tank manual isolation valves to facilitate to Technical Specification required surveillance flow testing. Elect Maintenance Procedure 0-EPM-0902-01, "Fire Protection Low Press Turbine Generator Enclosure Protection Tests," was developed to prov performing similar testing of the turbine generator low pressure CO2 system	Low Pressure CO2 ssure CO2 System vely controlling the the performance of ctrical Preventive sure CO2 System vide instructions for stem.

Appropriate administrative controls are provided in the procedures to ensure that the Low Pressure Carbon Dioxide fire suppression systems remain capable of performing their design function during testing. Therefore, an unreviewed safety question does not exist.





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

MONTH/YEAR: June, 1994

1-FP-VPA-FI1

Vendor Procedure (Safety Evaluation No. 94-132) 6-30-94

Vendor Procedure 1-FP-VPA-FI1, "Fuel Inspection for Surry Unit 1" was developed to delineate the tasks and evolutions required to perform fuel inspections of some fuel assemblies discharged from Surry Unit 1 Cycle 12.

Implementation of this procedure will not alter the handling or storage characteristics of any fuel assemblies. The assumptions used in the analysis for the fuel handling accident in the Fuel Building remain bounding for the handling and inspection of irradiated fuel. Therefore, an unreviewed safety question does not exist.





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

MONTH/YEAR: June, 1994

None During the Reporting Period



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## CHEMISTRY REPORT

MONTH/YEAR: June, 1994

	Unit No. 1			Unit No. 2		
Primary Coolant Analysis	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, µCi/ml	3.56E-1	1.78E-1	2.59E-1	2.95E-1	6.20E-4	8.31E-2
Suspended Solids, ppm	<u>&lt;</u> 0.1	<u>≤</u> 0.1	<u>≤</u> 0.1	<u>≤</u> 0.1	<u>≤</u> 0.1	<u>≤</u> 0.1
Gross Tritium, μCi/ml	3.08E-1	2.82E-1	2.91E-1	4.12E-2	4.12E-2	4.12E-2
1 <sup>131</sup> . μCi/ml	4.12E-4	2.63E-4	3.37E-4	2.74E-4	3.68E-5	7.52E-5
131 <sub>/1</sub> 133	0.08	0.06	0.07	0.08	0.06	0.07
Hydrogen, cc/kg	42.9	33.4	37.9	41.1	2.2	14.6
Lithium, ppm	2.30	2.09	2.18	2.34	0.51	1.41
Boron - 10, ppm*	209.9	198.4	204.2	328.3	119.2	252.0
Oxygen, (DO), ppm	<u>≤</u> 0.005	<u>≤</u> 0.005	<u>≤</u> 0.005	6.0	<u>≤</u> 0.005	0.47
Chloride, ppm		0.003	0.014	<u>≤</u> 0.050	0.003	0.014
pH at 25 degree Celsius	6.89	6.50	6.62	6.95	5.81	6.24

\* Boron - 10 = Total Boron x 0.196

Comments:

None



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### FUEL HANDLING UNITS 1 & 2

# MONTH/YEAR: June, 1994

New or Spent Fuel Shipment Number	Date Stored or Received	Number of Assemblies per Shipment	Assembly Number	ANSI Number	Initial Enrichment	New or Spent Fuel Shipping Cask Activity

No Fuel Received or Stored During the Reporting Period.





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

MONTH/YEAR: June, 1994

None During the Reporting Period.