

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

June 12, 2000

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

Serial No. 00-293
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 May 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

NR-063

IE24

**VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION
MONTHLY OPERATING REPORT
REPORT No. 00-05**

Approved:


Site Vice President


Date

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OPERATING DATA REPORT

Docket No.: 50-280
Date: 06/02/00
Completed By: R. Stief
Telephone: (757) 365-2486

1. Unit Name: Surry Unit 1
2. Reporting Period: May 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	3647.0	240551.0
12. Hours Reactor Was Critical	566.0	3110.0	173186.5
13. Reactor Reserve Shutdown Hours	0.0	0.0	3774.5
14. Hours Generator On-Line	536.4	3080.0	170611.4
15. Unit Reserve Shutdown Hours	0.0	0.0	3736.2
16. Gross Thermal Energy Generated (MWH)	1304447.9	7417414.5	403857662.9
17. Gross Electrical Energy Generated (MWH)	433148.0	2466070.0	132611403.0
18. Net Electrical Energy Generated (MWH)	417283.0	2378352.0	126481155.0
19. Unit Service Factor	72.1%	84.5%	70.9%
20. Unit Availability Factor	72.1%	84.5%	72.5%
21. Unit Capacity Factor (Using MDC Net)	70.0%	81.4%	67.4%
22. Unit Capacity Factor (Using DER Net)	71.2%	82.8%	66.7%
23. Unit Forced Outage Rate	0.0%	0.0%	13.6%

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):

	<u>FORECAST</u>	<u>ACHIEVED</u>
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____

OPERATING DATA REPORT

Docket No.: 50-281

Date: 06/02/00

Completed By: R. Stief

Telephone: (757) 365-2486

1. Unit Name: Surry Unit 2
2. Reporting Period: May 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	3647.0	237432.0
12. Hours Reactor Was Critical	744.0	3647.0	171176.1
13. Reactor Reserve Shutdown Hours	0.0	0.0	328.1
14. Hours Generator On-Line	744.0	3647.0	169035.4
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1893613.0	9283592.0	401311585.2
17. Gross Electrical Energy Generated (MWH)	635720.0	3125779.0	131758677.0
18. Net Electrical Energy Generated (MWH)	613406.0	3019551.0	125716408.0
19. Unit Service Factor	100.0%	100.0%	71.2%
20. Unit Availability Factor	100.0%	100.0%	71.2%
21. Unit Capacity Factor (Using MDC Net)	102.9%	103.4%	67.6%
22. Unit Capacity Factor (Using DER Net)	104.6%	105.1%	67.2%
23. Unit Forced Outage Rate	0.0%	0.0%	10.8%

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

October 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		

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

REPORT MONTH: May 2000

Docket No.: 50-280
 Unit Name: Surry Unit 1
 Date: 06/01/00
 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
05/01/00	S	208H 24M	C	1	N/A	N/A	N/A	Refueling Outage

(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: May 2000

Docket No.: 50-281
Unit Name: Surry Unit 2
Date: 06/01/00
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: 06/02/00
 Completed by: R. Stief
 Telephone: (757) 365-2486

MONTH: May 2000

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	0	17	819
2	0	18	818
3	0	19	817
4	0	20	816
5	0	21	818
6	0	22	818
7	0	23	818
8	0	24	819
9	50	25	818
10	336	26	817
11	638	27	818
12	813	28	819
13	818	29	821
14	819	30	819
15	819	31	817
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: 06/02/00

Completed by: R. Stief

Telephone: (757) 365-2486

MONTH: May 2000

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	830	17	820
2	830	18	821
3	830	19	819
4	828	20	824
5	825	21	825
6	824	22	826
7	824	23	826
8	824	24	823
9	824	25	823
10	826	26	823
11	825	27	824
12	825	28	825
13	823	29	827
14	823	30	828
15	817	31	829
16	817		

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: May 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:

05/01/00	0000	Unit started the month at 0% / 0 MWe due to Spring Refueling Outage.
05/08/00	1002	Reactor critical.
05/09/00	1622	Unit on-line.
05/09/00	1730	Unit stable at 30% / 200 MWe. Holding for flux map.
05/10/00	0520	Commencing unit ramp. Unit at 30% / 200 MWe.
05/10/00	2130	Holding ramp for flux map. Unit at 68.5% power.
05/11/00	0310	Flux map complete.
05/11/00	0800	Flux map evaluation complete by RX Engineering. Start ramp.
05/11/00	2210	Stop ramp at 96% / 820 MWe for alternate power indication comparison.
05/12/00	0233	Commence unit ramp to 100% power. Unit at 96% / 820 MWe.
05/12/00	0503	Unit at 100% / 850 MWe.
05/31/00	2400	Unit finished the month at 100% / 851 MWe.

UNIT TWO:

05/01/00	0000	Unit started the month at 100% / 860 MWe.
05/31/00	2400	Unit finished the month at 100% / 860 MWe.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: May 2000

TM S2-00-001	Temporary Modification (Safety Evaluation 00-051A)	04/15/00
<p>Temporary Modification S2-00-001 installs four voltmeters inside of the containment hydrogen analyzer alarm panel to monitor the circuitry and determine the source of spurious alarms.</p>		
TM S1-00-016 TM S1-00-017	Temporary Modifications (Safety Evaluation 00-065)	05/03/00
<p>Temporary Modifications S1-00-016 and 017 installed a power analyzer to monitor the power quality of the power supply to the Auxiliary Building Sump level indication system as part of an on-going effort to resolve repeated nuisance alarms in the main control room.</p>		
TM S1-00-019 TM S2-00-003	Temporary Modifications (Safety Evaluation 00-068)	05/05/00
<p>Temporary Modifications S1-00-019 and S2-00-003 allowed removal of all four corroded Unit 1 and Unit 2 Recirc Spray Heat Exchanger (RSHX) Service Water drain piping downstream of each RSHX bolted flange connection up to the first drain valve. A blank flange was installed at the flange connection to maintain integrity.</p>		
TM S1-00-020	Temporary Modification (Safety Evaluation 00-069)	05/06/00
<p>Temporary Modification S1-00-020 installed jumpers to replace failed relay FC-2XB, "Reactor Coolant Flow", in the Unit 1 train "B" reactor protection circuit.</p>		
TM S1-00-021	Temporary Modification (Safety Evaluation 00-071)	05/08/00
<p>Temporary Modification S1-00-021 temporarily plugs a leaking pipe nipple to a pressure gauge at the gland steam header.</p>		
FS 00-014	UFSAR Change Request (Safety Evaluation 00-073)	05/11/00
<p>As a result of the Integrated Configuration Management Project review, UFSAR Change Request FS 00-014 corrects the statements in the UFSAR that discuss Surry's fuel handling and storage systems. These changes are to enhance accuracy and do not affect any fuel handling and storage systems or any of its component's operation or performance.</p>		
FS 00-010	UFSAR Change Request (Safety Evaluation 00-074)	05/25/00
<p>UFSAR Change Request FS 00-010 changes the terminology from "waste oil" to "used oil" in order to comply with the new EPA regulation 40CFR279.22(c)(1).</p>		

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

MONTH/YEAR: May 2000

**0-OPT-VS-002
0-OPT-VS-006
1-IPM-VS-F-117A
1-IPM-VS-F-117B**

**Operations Periodic Test Procedures
Instrument Preventive Maintenance Procedures
(Safety Evaluation 00-056)**

04/22/00

Operations Periodic Test Procedures 0-OPT-VS-002, "Auxiliary Ventilation Filter Train Test", 0-OPT-VS-006, "Flow Switches FS-VS-117A and FS-VS-117B Test" and Instrument Preventive Maintenance Procedures 1-IPM-VS-F-117A & B, "1-VS-F-58A & B Flow Instrumentation Calibration" were changed to establish administrative controls of emergency ventilation fans to allow testing and adjustments to ensure the fans perform required functions following an accident.

SC-00-001

**Justification for Continued Operation
(Safety Evaluation 00-057)**

04/24/00

Justification for Continued Operation (JCO) SC-00-001, "Auxiliary Building Filtered Exhaust Fan Operation Following a DBA to Assure Filtration and Ventilation of Safeguards and Charging Pump Cubicles" changes applicable procedures and establishes administrative controls to ensure that, in the event of a DBA requiring filtered exhaust, the Auxiliary Building filtered exhaust total flow is 36,000 cfm.

**1-NPT-RX-008
2-NPT-RX-008**

**Engineering Periodic Test Procedures
(Safety Evaluation 00-064)**

05/02/00

Engineering Periodic Test Procedures 1 & 2-NPT-RX-008, "Startup Physics Testing", were revised to reduce reference bank movements during rod swap testing.

1-OP-SI-002

**Operating Procedure
(Safety Evaluation 00-066)**

05/03/00

Operating Procedure 1-OP-SI-002, "Safety Injection Accumulators", was changed during the refueling outage to allow filling of the Safety Injection Accumulators from the Spent Fuel Pit instead of the normal Refueling Water Storage Tank.

TESTS AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: May 2000

None during the Reporting Period

CHEMISTRY REPORT

MONTH/YEAR: May 2000

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, $\mu\text{Ci/ml}$	3.23E-1	7.37E-4	1.45E-1	1.86E-1	7.61E-2	1.32E-1
Suspended Solids, ppm	0.1	0.01	0.032	-	-	-
Gross Tritium, $\mu\text{Ci/ml}$	2.28E-1	2.23E-2	9.77E-2	7.98E-1	6.23E-1	7.12E-1
^{131}I , $\mu\text{Ci/ml}$	1.75E-4	$\leq 2.32\text{E-5}$	$\leq 1.14\text{E-4}$	$\leq 1.08\text{E-4}$	$\leq 6.40\text{E-5}$	$\leq 8.96\text{E-5}$
$^{131}\text{I}/^{133}\text{I}$	≤ 0.09	≤ 0.05	≤ 0.07	≤ 0.21	≤ 0.12	≤ 0.17
Hydrogen, cc/kg	36.5	12.8	28.4	34.7	33	33.7
Lithium, ppm	3.54	0.1	2.35	2.33	2.07	2.2
Boron - 10, ppm*	480.2	255.8	371.4	87.6	56	77.8
Oxygen, (DO), ppm	6	≤ 0.005	≤ 1.22	≤ 0.005	≤ 0.005	≤ 0.005
Chloride, ppm	0.039	≤ 0.001	≤ 0.017	0.003	0.002	0.003
pH @ 25 degree Celsius	6.86	4.72	5.98	7.55	7.09	7.16

* 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
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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: May 2000

None during the Reporting Period