

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

November 10, 2003

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

Serial No. 03-568
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 October 2003 is provided in the attachment.

If you have any questions or require additional information, please contact us.

Very truly yours,



Richard H. Blount,
Site Vice President
Surry Power Station

Attachment

Commitments made by this letter: None

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

Mr. G. J. McCoy
NRC Senior Resident Inspector
Surry Power Station

IE24

**VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION
MONTHLY OPERATING REPORT
REPORT No. 03-10**

Approved:


Site Vice President

11/19/03
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.....	11
Tests and Experiments That Did Not Require NRC Approval	12
Chemistry Report.....	13
Fuel Handling - Unit Nos. 1 and 2.....	14
Description of Periodic Test(s) Which Were Not Completed Within the Time Limits Specified in Technical Specifications.....	15

OPERATING DATA REPORT

Docket No.: 50-280

Date: 11/04/03

Completed By: R. Stief

Telephone: (757) 365-2486

1. Unit Name: Surry Unit 1
2. Reporting Period:..... October 2003
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):... 842
7. Maximum Dependable Capacity (Net MWe):..... 810

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	745.0	7296.0	270504.0
12. Hours Reactor Was Critical	544.7	5417.9	199939.5
13. Reactor Reserve Shutdown Hours	0.0	0.0	3774.5
14. Hours Generator On-Line	537.1	5278.5	197140.7
15. Unit Reserve Shutdown Hours	0.0	0.0	3736.2
16. Gross Thermal Energy Generated (MWH)	1339959.0	13159387.2	470665703.9
17. Gross Electrical Energy Generated (MWH)	449791.0	4382112.0	154887436.0
18. Net Electrical Energy Generated (MWH)	432451.0	4221647.0	147963968.0
19. Unit Service Factor	72.1%	72.3%	72.9%
20. Unit Availability Factor	72.1%	72.3%	74.3%
21. Unit Capacity Factor (Using MDC Net)	71.7%	71.4%	69.8%
22. Unit Capacity Factor (Using DER Net)	73.7%	73.4%	69.4%
23. Unit Forced Outage Rate	0.0%	7.3%	12.1%

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: 11/04/03
Completed By: R. Stief
Telephone: (757) 365-2486

1. Unit Name: Surry Unit 2
2. Reporting Period:..... October 2003
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):... 847
7. Maximum Dependable Capacity (Net MWe): 815

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	745.0	7296.0	267385.0
12. Hours Reactor Was Critical	0.0	6193.6	198077.0
13. Reactor Reserve Shutdown Hours	0.0	0.0	328.1
14. Hours Generator On-Line	0.0	6168.8	195753.2
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	0.0	15688716.8	468915701.3
17. Gross Electrical Energy Generated (MWH)	0.0	5268222.0	154408755.0
18. Net Electrical Energy Generated (MWH)	0.0	5063321.0	147544038.0
19. Unit Service Factor	0.0%	84.6%	73.2%
20. Unit Availability Factor	0.0%	84.6%	73.2%
21. Unit Capacity Factor (Using MDC Net)	0.0%	85.2%	70.1%
22. Unit Capacity Factor (Using DER Net)	0.0%	88.1%	70.0%
23. Unit Forced Outage Rate	0.0%	2.3%	9.6%

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	_____	_____

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

REPORT MONTH: October 2003

Docket No.: 50-280
Unit Name: Surry Unit 1
Date: 11/01/03
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
10/12/03	S	207.83	B	1	N/A	EL	XFMR	Unit 1 shutdown for "A" Main Transformer repairs

(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)
H - Other (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: October 2003

Docket No.: 50-281
 Unit Name: Surry Unit 2
 Date: 11/01/03
 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
10/01/03	S	745	C	1	N/A	N/A	N/A	Unit 2 offline for Refueling Outage/Reactor Vessel Head 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)
 H - Other (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: 11/02/03
 Completed by: R. Stief
 Telephone: (757) 365-2486

MONTH: October 2003

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	820	17	0
2	822	18	0
3	821	19	0
4	821	20	0
5	821	21	339
6	820	22	818
7	821	23	825
8	824	24	824
9	821	25	824
10	821	26	857
11	821	27	822
12	309	28	826
13	0	29	822
14	0	30	820
15	0	31	825
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.

AVERAGE DAILY UNIT POWER LEVEL

Docket No.: 50-281

Unit Name: Surry Unit 2

Date: 11/02/03

Completed by: R. Stief

Telephone: (757) 365-2486

MONTH: October 2003

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	0	17	0
2	0	18	0
3	0	19	0
4	0	20	0
5	0	21	0
6	0	22	0
7	0	23	0
8	0	24	0
9	0	25	0
10	0	26	0
11	0	27	0
12	0	28	0
13	0	29	0
14	0	30	0
15	0	31	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: October 2003

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:

10/01/03	0000	Unit started the month at 100% / 844 MWe.
10/12/03	1430	Unit offline for "A" Main Transformer Repairs.
10/12/03	1445	Tripped reactor.
10/20/03	2304	Reactor critical.
10/21/03	0620	Unit online.
10/21/03	0714	Stopped ramp at 30% for chemistry.
10/21/03	1116	Recommended ramp.
10/21/03	1615	Stopped ramp at 70% / 656MWe IAW 1-GOP-1.5.
10/21/03	1754	Recommended ramp.
10/22/03	0025	Unit at 100% / 855 MWe.
10/31/03	2400	Unit finished the month at 100% / 856 MWe.

UNIT Two:

10/01/03	0000	Unit started the month at 0% / 0 MWe. Unit offline for refueling/reactor vessel head replacement.
10/31/03	2400	Unit finished the month at 0% / 0 MWe.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: October 2003

DCP 02-054 FS 03-040	Design Change Package UFSAR Change Request (Regulatory Evaluation 03-008)	10/14/03
---------------------------------	--	-----------------

Design Change Package 02-054, "Reactor Vessel Head Replacement, SPS Unit 2" documents replacement of the original Reactor Vessel Closure Head and control rod drive mechanisms with new components from Mitsubishi Heavy Industries. UFSAR Change Request FS 03-040 changes the references to the computer codes and analysis methodology used for the calculation of thermal hydraulic forces imposed on the reactor vessel and internals identified in the licensing basis.

DCP 03-073 FS 03-049	Design Change Package UFSAR Change Request (Regulatory Evaluation 03-009)	10/21/03
---------------------------------	--	-----------------

Design Change Package 03-073, "Isolation of Flux Thimble Tubes 2-RC-TW-G7&J12/Surry/U2 " documents the removal from service and capping of two Flux Thimble Tube inner tubes due to wear of the inner tube walls. UFSAR Change Request FS 03-049 documents the two tubes removed from service.

DCP 03-048 FS 03-048	Design Change Package UFSAR Change Request (Regulatory Evaluation 03-010)	10/23/03
---------------------------------	--	-----------------

Design Change Package 03-048, "Replacement Vessel Head Assembly Upgrade Package/Surry/U2" modifies the control rod drive mechanism (CRDM) cooling system, provides a new CRDM missile shield, new CRDM and RPI cables, and a new permanent reactor head radiation shield. UFSAR Change Request FS 03-048 documents these changes.

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

MONTH/YEAR: October 2003

FS 03-044

UFSAR Change Request
(Regulatory Evaluation 03-011)

10/30/03

UFSAR Change Request FS 03-044 documents changes that result from the reanalysis of dose consequences from a Locked Rotor Accident using the Alternate Source Term and the methodologies described in Regulatory Guide 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors".

TESTS AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: October 2003

None during the Reporting Period

CHEMISTRY REPORT

MONTH/YEAR: October 2003

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, $\mu\text{Ci/ml}$	3.71E-1	1.09E-2	1.88E-1	1.25E-2	7.26E-5	2.62E-3
Suspended Solids, ppm	0.01	0.01	0.01	0.25	0.01	0.011
Gross Tritium, $\mu\text{Ci/ml}$	5.78E-1	3.76E-1	4.83E-1	-	-	-
I^{131} , $\mu\text{Ci/ml}$	4.05E-4	2.37E-5	1.13E-4	-	-	-
I^{131}/I^{133}	0.11	0.05	0.08	-	-	-
Hydrogen, cc/kg	35.2	23.5	33.2	-	-	-
Lithium, ppm	3.15	1.59	2.3	0.22	0.1	0.13
Boron - 10, ppm*	348	214	281	484	467	474
Oxygen, (DO), ppm	≤ 0.005	≤ 0.005	≤ 0.005	7	4	6
Chloride, ppm	0.01	0.004	0.006	0.008	0.001	0.002
pH @ 25 degree Celsius	6.55	5.95	6.4	5.05	4.73	4.88

* Boron - 10 = Total Boron x 0.196

Comments:

Unit 1: Shutdown for 8 day maintenance outage mid-month

Unit 2: Various sampling not taken due to Unit being in Refueling Shutdown for the entire month

FUEL HANDLING
UNITS 1 & 2

MONTH/YEAR: October 2003

<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>
--	------------------------------------	--	----------------------------	------------------------	-------------------------------	---

None during the Reporting Period

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

MONTH/YEAR: October 2003

None during the Reporting Period