# VIRGINIA ELECTRIC AND POWER COMPANY Richmond, Virginia 23261

December 10, 2004

U. S. Nuclear Regulatory Commission Attention: Document Control Desk Washington, D.C. 20555-0001 Serial No. 04-741 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 November 2004 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. N. P. Garrett NRC Senior Resident Inspector Surry Power Station

VIRGINIA ELECTRIC AND POWER COMPANY SURRY POWER STATION **MONTHLY OPERATING REPORT** REPORT NO. 04-11

Approved:

2.

12/10/04 Site Vice

Date

....

# TABLE OF CONTENTS

• •

•

| Section Page   |
|--|
| Operating Data Report - Unit No. 1   |
| Operating Data Report - Unit No. 2 4   |
| Unit Shutdowns and Power Reductions - Unit No. 1   |
| Unit Shutdowns and Power Reductions - Unit No. 2   |
| Average Daily Unit Power Level - Unit No. 1  |
| Average Daily Unit Power Level - Unit No. 2  |
| Summary of Operating Experience - Unit Nos. 1 and 29   |
| Facility Changes That Did Not Require NRC Approval 10  |
| Procedure or Method of Operation Changes That Did Not Require NRC Approval   |
| Tests and Experiments That Did Not Require NRC Approval 12   |
| Chemistry Report   |
| Fuel Handling - Unit Nos. 1 and 2 14   |
| Description of Periodic Test(s) Which Were Not Completed Within the Time Limits<br>Specified in Technical Specifications |

.

.

Surry Monthly Operating Report No. 04-11 Page 3 of 15

### **OPERATING DATA REPORT**

788

842

810

Docket No.: 50-280 Date: 12/01/04 Completed By: R. Stief Telephone: (757) 365-2486

Unit Name:Surry Unit 1Reporting Period:November 2004Licensed Thermal Power (MWt):2546Nameplate Rating (Gross MWe):847.5

5. Design Electrical Rating (Net MWe): .....

6. Maximum Dependable Capacity (Gross MWe):...

7. Maximum Dependable Capacity (Net MWe):.....

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:

1.

2. 3.

4.

|     |   |            |              | <u> </u>          |
|-----|---|------------|--------------|-------------------|
|     |   | This Month | Year-To-Date | <b>Cumulative</b> |
| 11. | Hours in Reporting Period               | 720.00     | 8040.00      | 280008.00         |
| 12. | Hours Reactor Was Critical              | 0.00       | 7295.80      | 208699.28         |
| 13. | Reactor Reserve Shutdown Hours          | 0.00       | 0.00         | 3774.50           |
| 14. | Hours Generator On-Line                 | 0.00       | 7266.78      | 205871.55         |
| 15. | Unit Reserve Shutdown Hours             | 0.00       | 0.00         | 3736.20           |
| 16. | Gross Thermal Energy Generated (MWH)    | 0.00       | 18421462.00  | 492813385.60      |
| 17. | Gross Electrical Energy Generated (MWH) | 0.00       | 6149137.00   | 162288402.00      |
| 18. | Net Electrical Energy Generated (MWH)   | 0.00       | 5927202.00   | 155089302.00      |
| 19. | Unit Service Factor                     | 0.00%      | 90.38%       | 73.52%            |
| 20. | Unit Availability Factor                | 0.00%      | 90.38%       | 74.86%            |
| 21. | Unit Capacity Factor (Using MDC Net)    | 0.00%      | 91.01%       | 70.63%            |
| 22. | Unit Capacity Factor (Using DER Net)    | 0.00%      | 93.56%       | 70.29%            |
| 23. | Unit Forced Outage Rate                 | 0.00%      | 0.39%        | 11.68%            |

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

INITIAL CRITICALITY INITIAL ELECTRICITY COMMERCIAL OPERATION

| <br>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

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 |
|------------|----------|
|            |          |
| . <u> </u> |          |
|            | <b></b>  |
|            |          |

Surry Monthly Operating Report No. 04-11 Page 4 of 15

### **OPERATING DATA REPORT**

788

847

815

Docket No.: 50-281 Date: 12/01/04 Completed By: R. Stief Telephone: (757) 365-2486

Unit Name: ..... Surry Unit 2 1. Reporting Period: ..... November 2004 2. Licensed Thermal Power (MWt): ..... 2546 3. 847.5

4. Nameplate Rating (Gross MWe): .....

Design Electrical Rating (Net MWe): ..... 5.

Maximum Dependable Capacity (Gross MWe):... 6.

Maximum Dependable Capacity (Net MWe):..... 7.

If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons: 8.

Power Level To Which Restricted, If Any (Net MWe): 9.

10. Reasons For Restrictions, If Any:

|     |   | This Month | Year-To-Date | <u>Cumulative</u> |
|-----|---|------------|--------------|-------------------|
| 11. | Hours in Reporting Period               | 720.00     | 8040.00      | 276889.00         |
| 12. | Hours Reactor Was Critical              | 720.00     | 7885.52      | 206847.82         |
| 13. | Reactor Reserve Shutdown Hours          | 0.00       | 0.00         | 328.10            |
| 14. | Hours Generator On-Line                 | 720.00     | 7862.75      | 204309.17         |
| 15. | Unit Reserve Shutdown Hours             | 0.00       | 0.00         | 0.00              |
| 16. | Gross Thermal Energy Generated (MWH)    | 1832625.10 | 19962477.80  | 490608821.60      |
| 17. | Gross Electrical Energy Generated (MWH) | 617150.00  | 6676886.00   | 161655200.00      |
| 18. | Net Electrical Energy Generated (MWH)   | 595974.00  | 6442634.00   | 154535470.00      |
| 19. | Unit Service Factor                     | 100.00%    | 97.80%       | 73.79%            |
| 20. | Unit Availability Factor                | 100.00%    | 97.80%       | 73.79%            |
| 21. | Unit Capacity Factor (Using MDC Net)    | 101.56%    | 98.32%       | 70.85%            |
| 22. | Unit Capacity Factor (Using DER Net)    | 105.04%    | 101.69%      | 70.83%            |
| 23. | Unit Forced Outage Rate                 | 0.00%      | 2.20%        | 9.29%             |

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

| April 2005  |   |
|---|---|
| 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<br>INITIAL ELECTRICITY<br>COMMERCIAL OPERATION |          |          |

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

**REPORT MONTH: November 2004** 

Docket No.: 50-280 Unit Name: Surry Unit 1 Date: 12/01/04 Completed by: R. Stief Telephone: (757) 365-2486

| Date     | (1)<br>Type | Duration<br>Hours | (2)<br>Reason | (3)<br>Method<br>of<br>Shutting<br>Down Rx | LER No. | (4)<br>System<br>Code | (5)<br>Component<br>Code | Cause & Corrective Action to<br>Prevent Recurrence |
|----------|-------------|-------------------|---------------|--|---------|-----------------------|--------------------------|--|
| 11/01/04 | S           | 720               | С             | 1  | N/A     | N/A                   | N/A                      | Unit offline for refueling                         |

(1) F: Forced

S: Scheduled

(2) REASON:

- Equipment Failure (Explain) Α-
- B -C -D -Maintenance or Test
  - Refueling

  - **Regulatory Restriction**
- Ε -**Operator Training & Licensing Examination** F
  - -Administrative
- G -Operational Error (Explain) Η
  - Other (Explain)

#### (3) METHOD:

- Manual 1 -
- 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

Surry Monthly Operating Report No. 04-11 Page 6 of 15

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

.

**REPORT MONTH:** November 2004

Docket No.: 50-281 Unit Name: Surry Unit 2 Date: 12/01/04 Completed by: R. Stief Telephone: (757) 365-2486

None during the Reporting Period

(1) (2) (3) F: Forced REASON: METHOD: S: Scheduled A - Equipment Failure (Explain) 1 -Manual Manual Scram B - Maintenance or Test 2 -3 - Automatic Scram4 - Other (Explain) C - Refueling D - Regulatory Restriction
E - Operator Training & Licensing Examination F - Administrative G -**Operational Error (Explain)** Н Other (Explain) (5) Exhibit 1 - Same Source (4) Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG 0161)

### AVERAGE DAILY UNIT POWER LEVEL

---- -- · · ·

| 50-280         |
|----------------|
| Surry Unit 1   |
| 12/01/04       |
| R. Stief       |
| (757) 365-2486 |
|                |

.

MONTH: November 2004

•

•

| Day | Average Daily Power Level<br>(MWe - Net) | Day | Average Daily Power Level<br>(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  | 00                                       | 26  | 0  |
| 11  | 0  | 27  | 0  |
| 12  | 0  | 28  | 0  |
| 13  | 0  | 29  | 0  |
| 14  | 0  | 30  | 0  |
| 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.

### AVERAGE DAILY UNIT POWER LEVEL

\_\_\_\_

| Docket No .:  | 50-281         |
|---------------|----------------|
| Unit Name:    | Surry Unit 2   |
| Date:         | 12/01/04       |
| Completed by: | R. Stief       |
| Telephone:    | (757) 365-2486 |

•

,

#### MONTH: November 2004

•

•

| Day | Average Daily Power Level<br>(MWe - Net) | Day      | Average Daily Power Level<br>(MWe - Net) |
|-----|--|----------|--|
| 1   | 827                                      | 17       | 829                                      |
| 2   | 827                                      | 18       | 829                                      |
| 3   | 827                                      | 19       | 829                                      |
| 4   |  | 20       | 829                                      |
| 5   | 827                                      | 21       | 830                                      |
| 6   | 826                                      | 22       | 829                                      |
| 7   | 827                                      | 23       | 829                                      |
| 8   | 825                                      | 24       | 829                                      |
| 9   | 826                                      | 25       | 829                                      |
| 10  | 827                                      | 26       | 826                                      |
| 11  | 827                                      | 27       |  |
| 12  | 827                                      | 28       | 829                                      |
| 13  | 827                                      | 29       | 828                                      |
| 14  | 827                                      | 30       | 825                                      |
| 15  | 828                                      |          |  |
| 16  | 830                                      | <b>.</b> |  |

### 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.

•

~

Surry Monthly Operating Report No. 04-11 Page 9 of 15

-----

# SUMMARY OF OPERATING EXPERIENCE

MONTH/YEAR: November 2004

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: |      |   |
|-----------|------|---|
| 11/01/04  | 0000 | Unit started the month at 0% / 0 MWe due to refueling outage. |
| 11/30/04  | 2400 | Unit finished the month at 0% / 0 MWe.                        |

## UNIT TWO:

.

•

| 11/01/04 | 0000 | Unit started the month at 100% / 856 MWe.  |
|----------|------|--|
| 11/30/04 | 2400 | Unit finished the month at 100% / 856 MWe. |

Surry Monthly Operating Report No. 04-11 Page 10 of 15

ς.

.

## FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

•

•

MONTH/YEAR: November 2004

None during the Reporting Period.

•

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

MONTH/YEAR: November 2004

SC-03-002, Rev. 4

#### **Justification for Continued Operation**

11/09/04

Justification for Continued Operation (JCO) SC-03-002, "Control of Auxiliary Feedwater to Steam Generators with One Emergency Bus De-energized" changes applicable procedures to maintain four of the six motor-operated valves (MOVs) to the steam generators (SGs) closed. With this configuration, in the event of a steam generator tube rupture, control room operators will be able to align the MOVs to isolate the ruptured SG. Revision 4 changed the JCO to be applicable to Unit 2 only. Design Change Package (DCP) 04-002, "Replace AFW Isolation Valves with Stop-Check Valves/Surry/Units 1 & 2" replaces the Auxiliary Feedwater (AFW) isolation valves downstream of each AFW MOV with stop-check valves and provide access for testing them. The DCP was installed for Unit 1 during its refueling outage. Unit 2 will be completed during its next refueling outage.

Surry Monthly Operating Report No. 04-11 Page 12 of 15

## TESTS AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL

.

MONTH/YEAR: November 2004

None during the Reporting Period

.

Surry Monthly Operating Report No. 04-11 Page 13 of 15

### **CHEMISTRY REPORT**

## MONTH/YEAR: November 2004

|                             | Unit No. 1 |         |         | Unit No. 2 |         |         |
|-----------------------------|------------|---------|---------|------------|---------|---------|
| Primary Coolant Analysis    | Max.       | Min.    | Avg.    | Max.       | Min.    | Avg.    |
| Gross Radioactivity, µCi/ml | 9.47E-1    | 9.01E-4 | 1.04E-1 | 2.51E-1    | 1.22E-1 | 1.77E-1 |
| Suspended Solids, ppm       | 0.5        | 0.01    | 0.07    | -          |         | -       |
| Gross Tritium, µCi/ml       | 8.21E-2    | 8.21E-2 | 8.21E-2 | 1.33E+0    | 9.58E-1 | 1.19E+0 |
| 1 <sup>131</sup> , μCi/ml   | -          | -       |         | 1.13E-4    | 2.43E-5 | 6.35E-5 |
| 1131/1133                   | -          |         | -       | 0.45       | 0.15    | 0.22    |
| Hydrogen, cc/kg             | 24.1       | 3.8     | 9.2     | 44.5       | 38.4    | 41.9    |
| Lithium, ppm                | 0.44       | 0.1     | 0.17    | 2.27       | 2.11    | 2.19    |
| Boron - 10, ppm*            | 489        | 381     | 475     | 129        | 111     | 121     |
| Oxygen, (DO), ppm           | 8.0        | ≤ 0.005 | 4.1     | ≤ 0.005    | ≤ 0.005 | ≤ 0.005 |
| Chloride, ppm               | 0.084      | 0.003   | 0.023   | 0.006      | 0.002   | 0.003   |
| pH @ 25 degree Celsius      | 5.67       | 4.56    | 4.94    | 6.97       | 6.77    | 6.88    |

•

\* Boron - 10 = Total Boron x 0.196

Comments:

.

•

Unit 1: Unit shutdown for RFO. Iodine-131 analysis not performed. Unit 2: Unit at 100% power. Quarterly Suspended Solids not required.

## FUEL HANDLING UNITS 1 & 2

.

•

---- · ·

-

### MONTH/YEAR: November 2004

| New Fuel    |             | Number of    |          |        |            | New or Spent  |
|-------------|-------------|--------------|----------|--------|------------|---------------|
| Shipment or | Date Stored | Assemblies   | Assembly | ANSI   | Initial    | Fuel Shipping |
| Cask No.    | or Received | per Shipment | Number   | Number | Enrichment | Cask Activity |

None during the Reporting Period

.

•

Surry Monthly Operating Report No. 04-11 Page 15 of 15

. ----

. ۳.

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

4

MONTH/YEAR: November 2004

None during the Reporting Period