

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**RICHMOND, VIRGINIA 23261**

January 11, 2002

United States Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D. C. 20555

Serial No. 02-034  
NAPS/JHL  
Docket Nos. 50-338  
50-339  
License Nos. NPF-4  
NPF-7

Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**NORTH ANNA POWER STATION UNIT NOS. 1 AND 2**  
**MONTHLY OPERATING REPORT**

Enclosed is the December 2001 Monthly Operating Report for North Anna Power Station Units 1 and 2.

Very truly yours,



D. A. Heacock  
Site Vice President

Enclosure

Commitments made in this letter: None.

cc: U. S. Nuclear Regulatory Commission  
Region II  
Sam Nunn Atlanta Federal Center  
61 Forsyth St., SW, Suite 23T85  
Atlanta, Georgia 30303

Mr. M. J. Morgan  
NRC Senior Resident Inspector  
North Anna Power Station

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**VIRGINIA ELECTRIC AND POWER COMPANY  
NORTH ANNA POWER STATION  
MONTHLY OPERATING REPORT  
DECEMBER 2001**

Approved:

DALY

Site Vice President

1-11-02

Date

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## OPERATING DATA REPORT

Docket No.: 50-338  
 Date: 01/04/02  
 Contact: D. A. Heacock  
 Telephone: (540) 894-2101

1. Unit Name:..... North Anna Unit 1
2. Reporting Period:..... December 2001
3. Licensed Thermal Power (MWt): ..... 2,893
4. Nameplate Rating (Gross MWe):..... 979.74
5. Design Electrical Rating (Net MWe): ..... 907
6. Maximum Dependable Capacity (Gross MWe):.... 971
7. Maximum Dependable Capacity (Net MWe):..... 925

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

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

10. Reasons For Restrictions, If Any: N/A

|   | This Month  | Year-To-Date | Cumulative    |
|---|-------------|--------------|---------------|
| 11. Hours in Reporting Period               | 744.0       | 8,760.0      | 206,244.0     |
| 12. Hours Reactor Was Critical              | 744.0       | 8,028.4      | 166,295.8     |
| 13. Reactor Reserve Shutdown Hours          | 0.0         | 35.7         | 7,275.2       |
| 14. Hours Generator On-Line                 | 744.0       | 8,011.3      | 163,029.3     |
| 15. Unit Reserve Shutdown Hours             | 0.0         | 0.0          | 0.0           |
| 16. Gross Thermal Energy Generated (MWH)    | 2,151,009.2 | 22,108,164.3 | 443,430,006.9 |
| 17. Gross Electrical Energy Generated (MWH) | 732,129.0   | 7,490,515.0  | 183,355,231.0 |
| 18. Net Electrical Energy Generated (MWH)   | 697,125.0   | 7,120,790.0  | 138,819,567.0 |
| 19. Unit Service Factor                     | 100.0%      | 91.5%        | 79.0%         |
| 20. Unit Availability Factor                | 100.0%      | 91.5%        | 79.0%         |
| 21. Unit Capacity Factor (Using MDC Net)    | 101.3%      | 87.9%        | 75.2%         |
| 22. Unit Capacity Factor (Using DER Net)    | 103.3%      | 89.6%        | 74.2%         |
| 23. Unit Forced Outage Rate                 | 0.0%        | 0.0%         | 6.9%          |

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): N/A  
Type and duration of scheduled shutdowns are no longer provided.  
(Reference: Letter Serial No. 00-070, dated February 11, 2000)

25. If Shut Down at End of Report Period, Estimated Date of Start-up: N/A  
Estimated start-up dates are no longer provided.  
(Reference: Letter Serial No. 00-070, dated February 11, 2000)

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

|                      | FORECAST | ACHIEVED |
|----------------------|----------|----------|
| INITIAL CRITICALITY  |          |          |
| INITIAL ELECTRICITY  |          |          |
| COMMERCIAL OPERATION |          |          |

## AVERAGE DAILY UNIT POWER LEVEL

Docket No.: 50-338  
Unit Name: North Anna Unit 1  
Date: 01/04/02  
Contact: D. A. Heacock  
Telephone: (540) 894-2101

MONTH: December, 2001

| Day | Average Daily Power Level<br>(MWe - Net) | Day | Average Daily Power Level<br>(MWe - Net) |
|-----|--|-----|--|
| 1   | 939                                      | 17  | 938                                      |
| 2   | 938                                      | 18  | 938                                      |
| 3   | 938                                      | 19  | 939                                      |
| 4   | 937                                      | 20  | 938                                      |
| 5   | 937                                      | 21  | 937                                      |
| 6   | 936                                      | 22  | 937                                      |
| 7   | 937                                      | 23  | 937                                      |
| 8   | 937                                      | 24  | 930                                      |
| 9   | 938                                      | 25  | 937                                      |
| 10  | 939                                      | 26  | 936                                      |
| 11  | 937                                      | 27  | 937                                      |
| 12  | 937                                      | 28  | 936                                      |
| 13  | 937                                      | 29  | 936                                      |
| 14  | 936                                      | 30  | 936                                      |
| 15  | 937                                      | 31  | 936                                      |
| 16  | 937                                      |     |  |

### 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.

Docket No.: 50-338  
Unit Name: North Anna Unit 1  
Date: 01/04/02  
Contact: D. A. Heacock  
Telephone: (540) 894-2101

**NORTH ANNA POWER STATION**

**UNIT NO.: 1**  
**MONTH: December, 2001**

**SUMMARY OF OPERATING EXPERIENCE**

Page 1 of 1

Listed below in chronological sequence is a summary of operating experiences for this month which required load reductions or resulted in significant non-load related incidents.

| <u>Date</u>       | <u>Time</u> | <u>Data</u>  |
|-------------------|-------------|--|
| December 1, 2001  | 0000        | Began the month in Mode 1, 100% power, 986 MW <sub>e</sub> . |
| December 31, 2001 | 2400        | Ended the month in Mode 1, 100% power, 982 MW <sub>e</sub> . |

Docket No.: 50-338  
 Unit Name: North Anna Unit 1  
 Date: 01/04/02  
 Contact: D. A. Heacock  
 Telephone: (540) 894-2101

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

REPORT MONTH: December, 2001

| Report No. | Date | (1)<br>Type | Duration<br>Hours | (2)<br>Reason | (3)<br>Method<br>of<br>Shutting<br>Down<br>Reactor | LER No. | (4)<br>System<br>Code | (5)<br>Component<br>Code | Cause &<br>Corrective Action<br>to Prevent<br>Recurrence |
|------------|------|-------------|-------------------|---------------|--|---------|-----------------------|--------------------------|--|
|            |      |             |                   |               |  |         |                       |                          |  |

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  
 H - Other (Explain)

(3)  
 METHOD:  
 1 - Manual  
 2 - Manual Scram  
 3 - Automatic Scram  
 4 - Continuations  
 5 - Load Reduction  
 9 - Other

(4)  
 Exhibit G - Instructions for Preparation of Data Entry Sheets  
 for Licensee Event Report (LER) File (NUREG 0161)

(5)  
 Exhibit H - Same Source

## OPERATING DATA REPORT

Docket No.: 50-339  
 Date: 01/04/02  
 Contact: D. A. Heacock  
 Telephone: (540) 894-2101

1. Unit Name:..... North Anna Unit 2
2. Reporting Period:..... December, 2001
3. Licensed Thermal Power (MWt): ..... 2,893
4. Nameplate Rating (Gross MWe):..... 979
5. Design Electrical Rating (Net MWe): ..... 907
6. Maximum Dependable Capacity (Gross MWe):.... 963
7. Maximum Dependable Capacity (Net MWe):..... 917

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

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

10. Reasons For Restrictions, If Any: N/A

|   | <u>This Month</u> | <u>Year-To-Date</u> | <u>Cumulative</u> |
|---|-------------------|---------------------|-------------------|
| 11. Hours in Reporting Period               | 744.0             | 8,760.0             | 184,512.0         |
| 12. Hours Reactor Was Critical              | 367.3             | 6,830.7             | 157,450.0         |
| 13. Reactor Reserve Shutdown Hours          | 67.8              | 151.1               | 7,489.7           |
| 14. Hours Generator On-Line                 | 349.1             | 6,778.6             | 156,116.4         |
| 15. Unit Reserve Shutdown Hours             | 0.0               | 0.0                 | 0.0               |
| 16. Gross Thermal Energy Generated (MWH)    | 982,913.9         | 18,844,060.8        | 430,513,024.0     |
| 17. Gross Electrical Energy Generated (MWH) | 327,915.0         | 6,289,873.0         | 141,218,141.0     |
| 18. Net Electrical Energy Generated (MWH)   | 311,717.0         | 5,975,803.0         | 134,793,874.0     |
| 19. Unit Service Factor                     | 46.9%             | 77.4%               | 84.6%             |
| 20. Unit Availability Factor                | 46.9%             | 77.4%               | 84.6%             |
| 21. Unit Capacity Factor (Using MDC Net)    | 45.7%             | 74.4%               | 81.2%             |
| 22. Unit Capacity Factor (Using DER Net)    | 46.2%             | 75.2%               | 80.5%             |
| 23. Unit Forced Outage Rate                 | 12.8%             | 1.2%                | 4.2%              |

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): N/A  
 Type and duration of scheduled shutdowns are no longer provided.  
 (Reference: Letter Serial No. 00-070, dated February 11, 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 Serial No. 00-070, dated February 11, 2000)

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

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

## AVERAGE DAILY UNIT POWER LEVEL

Docket No.: 50-339  
Unit Name: North Anna Unit 2  
Date: 01/04/02  
Contact: D. A. Heacock  
Telephone: (540) 894-2101

MONTH: December, 2001

| Day | Average Daily Power Level<br>(MWe - Net) | Day | Average Daily Power Level<br>(MWe - Net) |
|-----|--|-----|--|
| 1   | 000                                      | 17  | 923                                      |
| 2   | 000                                      | 18  | 925                                      |
| 3   | 000                                      | 19  | 925                                      |
| 4   | 000                                      | 20  | 925                                      |
| 5   | 000                                      | 21  | 925                                      |
| 6   | 000                                      | 22  | 578                                      |
| 7   | 000                                      | 23  | 000                                      |
| 8   | 000                                      | 24  | 081                                      |
| 9   | 000                                      | 25  | 866                                      |
| 10  | 000                                      | 26  | 925                                      |
| 11  | 000                                      | 27  | 924                                      |
| 12  | 000                                      | 28  | 924                                      |
| 13  | 000                                      | 29  | 923                                      |
| 14  | 000                                      | 30  | 924                                      |
| 15  | 381                                      | 31  | 923                                      |
| 16  | 917                                      |     |  |

### 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.



Docket No.: 50-339  
Unit Name: North Anna Unit 2  
Date: 01/04/02  
Contact: D. A. Heacock  
Telephone: (540) 894-2101

### NORTH ANNA POWER STATION

UNIT NO.: 2  
MONTH: December, 2001

### SUMMARY OF OPERATING EXPERIENCE

Page 1 of 1

Listed below in chronological sequence is a summary of operating experiences for the month which required load reductions or resulted in significant non-load related incidents.

| <u>Date</u>       | <u>Time</u> | <u>Data</u>  |
|-------------------|-------------|--|
| December 1, 2001  | 0000        | Began the month in Mode 6  |
| December 9, 2001  | 0252        | Entered Mode 5.  |
| December 13, 2001 | 2001        | Entered Mode 4.  |
| December 14, 2001 | 0600        | Entered Mode 3.  |
| December 15, 2001 | 0351        | Commenced reactor startup.   |
| December 15, 2001 | 0358        | The Unit 2 reactor is critical.  |
| December 15, 2001 | 0507        | Entered Mode 1.  |
| December 15, 2001 | 0749        | The main generator was placed on-line.   |
| December 15, 2001 | 0910        | Unit 2 is at 30% power, 225 MWe.   |
| December 16, 2001 | 0405        | Unit 2 is at 100% power, 962 MWe.  |
| December 22, 2001 | 1542        | Automatic reactor trip from 100% power due to EHC power supply failure. The pressurizer PORVs lifted momentarily and immediately reseated during the transient which is not unexpected for a loss of load event. |
| December 24, 2001 | 0315        | Commenced reactor startup.   |
| December 24, 2001 | 0331        | Entered Mode 2.  |
| December 24, 2001 | 0402        | The Unit 2 reactor is critical.  |
| December 24, 2001 | 0508        | Entered Mode 1.  |
| December 24, 2001 | 1849        | The main generator was placed on-line.   |
| December 24, 2001 | 1953        | Unit 2 is at 30% power, 240 MWe.   |
| December 25, 2001 | 0740        | Unit 2 is at 100% power, 965 MWe.  |
| December 31, 2001 | 2400        | Ended the month in Mode 1, 100% power, 967 MWe.  |

Docket No.: 50-339  
 Unit Name: North Anna Unit 2  
 Date: 01/04/02  
 Contact: D. A. Heacock  
 Telephone: (540) 894-2101

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

**REPORT MONTH: December, 2001**

| Report No   | Date     | (1)<br>Type | Duration Hours | (2)<br>Reason | (3)<br>Method of Shutting Down Reactor | LER No. | (4)<br>System Code | (5)<br>Component Code | Cause & Corrective Action to Prevent Recurrence  |
|-------------|----------|-------------|----------------|---------------|--|---------|--------------------|-----------------------|--|
| N2-2001-005 |          | S           | 343.8          | H             | 1                                      |         |                    |                       | Continuation of scheduled shutdown to inspect the reactor head.  |
| N2-2001-006 | 12/22/01 | F           | 51.1           | A             | 3                                      | 01-005  | TG                 | RECT/IS               | Automatic reactor trip due to EHC power supply failure. The diode and switch that caused the reactor trip were replaced. |

(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  
 H - Other (explain)

(3)  
 METHOD:  
 1 - Manual  
 2 - Manual Scram  
 3 - Automatic Scram  
 4 - Continuations  
 5 - Load Reduction  
 9 - Other

(4)  
 Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG 0161)

(5)  
 Exhibit H - Same Source