

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261
October 13, 2003

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

Serial No. 03-511
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 September 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. 03-09**

Approved:


Site Vice President

10/13/03
Date

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OPERATING DATA REPORT

Docket No.: 50-280
Date: 10/02/03
Completed By: R. Stief
Telephone: (757) 365-2486

- 1. Unit Name: Surry Unit 1
- 2. Reporting Period:..... September 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	720.0	6551.0	269759.0
12.	Hours Reactor Was Critical	659.7	4873.2	199394.8
13.	Reactor Reserve Shutdown Hours	0.0	0.0	3774.5
14.	Hours Generator On-Line	650.2	4741.4	196603.6
15.	Unit Reserve Shutdown Hours	0.0	0.0	3736.2
16.	Gross Thermal Energy Generated (MWH)	1571533.8	11819428.2	469325744.9
17.	Gross Electrical Energy Generated (MWH)	518045.0	3932321.0	154437645.0
18.	Net Electrical Energy Generated (MWH)	498085.0	3789196.0	147531517.0
19.	Unit Service Factor	90.3%	72.4%	72.9%
20.	Unit Availability Factor	90.3%	72.4%	74.3%
21.	Unit Capacity Factor (Using MDC Net)	85.4%	71.4%	69.8%
22.	Unit Capacity Factor (Using DER Net)	87.8%	73.4%	69.4%
23.	Unit Forced Outage Rate	9.7%	8.0%	12.2%

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: 10/02/03
 Completed By: R. Stief
 Telephone: (757) 365-2486

- 1. Unit Name: Surry Unit 2
- 2. Reporting Period:..... September 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	720.0	6551.0	266640.0
12. Hours Reactor Was Critical	425.5	6193.6	198077.0
13. Reactor Reserve Shutdown Hours	0.0	0.0	328.1
14. Hours Generator On-Line	425.5	6168.8	195753.2
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1081785.2	15688716.8	468915701.3
17. Gross Electrical Energy Generated (MWH)	360694.0	5268222.0	154408755.0
18. Net Electrical Energy Generated (MWH)	347509.0	5063321.0	147544038.0
19. Unit Service Factor	59.1%	94.2%	73.4%
20. Unit Availability Factor	59.1%	94.2%	73.4%
21. Unit Capacity Factor (Using MDC Net)	59.2%	94.8%	70.3%
22. Unit Capacity Factor (Using DER Net)	61.3%	98.1%	70.2%
23. Unit Forced Outage Rate	11.5%	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):

	FORECAST	ACHIEVED
INITIAL CRITICALITY		
INITIAL ELECTRICITY		
COMMERCIAL OPERATION		

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

REPORT MONTH: September 2003

Docket No.: 50-280
 Unit Name: Surry Unit 1
 Date: 10/02/03
 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
09/05/03	S	45.8	B	N/A	N/A	SJ	P	Unit 1 ramped to 50% for feedwater pump repairs
09/18/03	F	69.78	A	2	Report Under Review	KE	N/A	Unit 1 forced offline for loss of power to all CW Pumps during Hurricane Isabel

(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: September 2003

Docket No.: 50-281
 Unit Name: Surry Unit 2
 Date: 10/02/03
 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
09/18/03	F	55.47	A	2	Report Under Review	KE	P	Unit 2 forced offline for loss of power to all CW Pumps during Hurricane Isabel
09/21/03	S	239	C	2	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: 10/02/03
 Completed by: R. Stief
 Telephone: (757) 365-2486

MONTH: September 2003

<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>	<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>
1	813	17	819
2	814	18	590
3	813	19	0
4	815	20	0
5	805	21	97
6	354	22	656
7	373	23	808
8	862	24	811
9	816	25	811
10	818	26	813
11	799	27	818
12	818	28	817
13	819	29	819
14	819	30	820
15	819		
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: 10/02/03

Completed by: R. Stief

Telephone: (757) 365-2486

MONTH: September 2003

<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>	<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>
1	816	17	819
2	808	18	599
3	816	19	0
4	808	20	0
5	816	21	0
6	819	22	0
7	818	23	0
8	819	24	0
9	814	25	0
10	821	26	0
11	816	27	0
12	816	28	0
13	820	29	0
14	819	30	0
15	819		
16	818		

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: September 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:

09/01/03	0000	Unit started the month at 100% / 844 MWe.
09/05/03	2207	Commenced unit ramp for 1-FW-P-1B repairs. Unit at 100% / 844 MWe.
09/06/03	0115	Ramp stopped for CERPI adjustment. Unit at 58% / 455 MWe.
09/06/03	0209	Stopped ramp at 50% / 350 MWe.
09/07/03	1931	1-FW-P-1B returned to service.
09/07/03	1955	Commenced unit ramp. Unit at 49.9% / 349 MWe.
09/07/03	2200	Stopped ramp for calorimetric at 68.4% / 576 MWe.
09/08/03	1724	Unit at 100% / 842 MWe.
09/11/03	0422	Commenced 255 MWe/hr ramp due to noted boric acid flow.
09/11/03	0435	Stopped ramp at 91.6% / 775 MWe. Found 1-CH-228 could not be fully closed due to a label tag wire restraining the valve.
09/11/03	1128	Commenced ramp. Unit at 92.5% / 789 MWe.
09/11/03	1201	Unit at 100% / 846 MWe.
09/18/03	1600	Commenced 200 MWe unit ramp IAW 1-OP-TM-005, as directed by the system operator, due to potential grid instability caused by Hurricane Isabel. Unit at 100% / 850 MWe.
09/18/03	1728	Manually tripped reactor due to a complete loss of CW pumps.
09/21/03	0547	Reactor Critical.
09/21/03	1513	Unit on Line.
09/21/03	1621	Stopped ramp for Chemistry. Unit at 30% / 200 MWe.
09/21/03	1710	Commenced ramp.
09/21/03	1810	Stopped for feed pump swaps. Unit at 45% / 332 MWe.
09/22/03	0008	Unit at 46% hold for repairs to 1-FW-P-1A oil pressure switch.
09/22/03	0313	Recommended ramp. Unit at 46% / 338 MWe.
09/22/03	0403	Stopped ramp due to high CP Building D/P and HP Heater recirc valve not opening.
09/22/03	0439	Recommended ramp. Unit at 62% / 480 MWe.
09/22/03	0511	Stopped ramp for calorimetric. Unit at 70% / 575 MWe.
09/22/03	1512	Unit at 100% / 838 MWe.
09/30/03	0000	Unit finished the month at 100% / 844 MWe.

SUMMARY OF OPERATING EXPERIENCE

MONTH/YEAR: September 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 TWO:

09/01/03	0000	Unit started the month at 100% / 846 MWe.
09/18/03	1732	Unit manually tripped due to complete loss of CW pumps. Unit remained offline for Refueling Outage/Reactor Vessel Head Replacement.
09/30/03	2400	Unit finished the month at 0% / 0 MWe.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: September 2003

None during the Reporting Period

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

MONTH/YEAR: September 2003

RE 03-005
RE 03-006
RE 03-007

Regulatory Evaluations 03-005, 03-006, 03-007

09/23/03

Regulatory Evaluations 03-005, 03-006 and 03-007 document the implementation of the NRC approved use of the Studsvik Core Management System in the core reload design methodology. This new methodology replaces the NOMAD computer code and model, PDQ two-zone model and TIP/CECOR computer code package used to design and analyze the core and core components. Appropriate updates to the Topical Report, UFSAR and Technical Specifications to reflect this new system have been completed.

TESTS AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: September 2003

None during the Reporting Period

CHEMISTRY REPORT

MONTH/YEAR: September 2003

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, $\mu\text{Ci/ml}$	8.30E-1	1.52E-2	2.67E-1	9.19E-1	3.78E-3	1.66E-1
Suspended Solids, ppm	0.025	0.01	0.018	0.25	0.01	0.031
Gross Tritium, $\mu\text{Ci/ml}$	7.02E-1	5.53E-1	6.44E-1	2.09E-1	1.58E-1	1.80E-1
^{131}I , $\mu\text{Ci/ml}$	3.97E-4	6.03E-5	1.27E-4	5.19E-4	5.28E-5	1.71E-4
$^{131}\text{I}/^{133}\text{I}$	0.08	0.06	0.07	0.13	0.04	0.08
Hydrogen, cc/kg	36.5	30.9	33.7	37.5	2.05	26.4
Lithium, ppm	3.36	2.1	2.42	1.15	0.24	0.74
Boron - 10, ppm*	338	226	265	488	4.5	299
Oxygen, (DO), ppm	≤ 0.005	≤ 0.005	≤ 0.005	6	≤ 0.005	3
Chloride, ppm	0.007	0.004	0.006	0.004	0.001	0.001
pH @ 25 degree Celsius	6.49	6.24	6.4	7.99	4.98	5.92

* Boron - 10 = Total Boron x 0.196

Comments: None

**FUEL HANDLING
UNITS 1 & 2**

MONTH/YEAR: September 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>
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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: September 2003

None during the Reporting Period