VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

December 11, 1992

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

Serial No. 92-780
NO/RPC:vlh
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

Enclosed is the Monthly Operating Report for Surry Power Station Units 1 and 2 for the month of November 1992.

Very truly yours,

M. L. Bowling, Manager
Nuclear Licensing & Programs

Enclosure

cc: U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N. W.
Suite 2900
Atlanta, Georgia 30323

Mr. M. W. Branch
NRC Senior Resident Inspector
Surry Power Station

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION
MONTHLY OPERATING REPORT
REPORT NO. 92-11

Approved:

Station Manager

12/8/92
Date

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OPERATING DATA REPORT

Docket No.: 50-280
Date: 12-07-92
Completed By: D. Mason
Telephone: (804) 365-2459

1. Unit Name:..... Surry Unit 1
2. Reporting Period:..... November 1992
3. Licensed Thermal Power (MWt):..... 2441
4. Nameplate Rating (Gross MWe):..... 847.5
5. Design Electrical Rating (Net MWe):..... 788
6. Maximum Dependable Capacity (Gross MWe):.... 820
7. Maximum Dependable Capacity (Net MWe):..... 781

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:

		This Month	YTD	Cumulative
11.	Hours In Reporting Period	720.0	8040.0	174816.0
12.	Number of Hours Reactor Was Critical	720.0	6396.8	114631.0
13.	Reactor Reserve Shutdown Hours	0.0	0.0	3774.5
14.	Hours Generator On-Line	720.0	6291.2	112531.4
15.	Unit Reserve Shutdown Hours	0.0	0.0	3736.2
16.	Gross Thermal Energy Generated (MWH)	1757402.8	14697863.7	261814540.4
17.	Gross Electrical Energy Generated (MWH)	592010.0	4892690.0	85407878.0
18.	Net Electrical Energy Generated (MWH)	563146.0	4643135.0	81017201.0
19.	Unit Service Factor	100.0%	78.2%	64.4%
20.	Unit Availability Factor	100.0%	78.2%	66.5%
21.	Unit Capacity Factor (Using MDC Net)	100.1%	73.9%	59.8%
22.	Unit Capacity Factor (Using DER Net)	99.3%	73.3%	58.8%
23.	Unit Forced Outage Rate	0.0%	3.5%	18.5%

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

25. If Shut Down at End of Report Period Estimated Date of Start-up:

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

	FORECAST	ACHIEVED
INITIAL CRITICALITY		
INITIAL ELECTRICITY		
COMMERCIAL OPERATION		

OPERATING DATA REPORT

Docket No.: 50-281
Date: 12-07-92
Completed By: D. Mason
Telephone: (804) 365-2459

1. Unit Name:..... Surry Unit 2
2. Reporting Period:..... November 1992
3. Licensed Thermal Power (MWt):..... 2441
4. Nameplate Rating (Gross MWe):..... 847.5
5. Design Electrical Rating (Net MWe):..... 788
6. Maximum Dependable Capacity (Gross MWe):.... 820
7. Maximum Dependable Capacity (Net MWe):..... 781

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:

		This Month	YTD	Cumulative
11.	Hours In Reporting Period	720.0	8040.0	171696.0
12.	Number of Hours Reactor Was Critical	720.0	7734.8	112942.9
13.	Reactor Reserve Shutdown Hours	0.0	0.0	328.1
14.	Hours Generator On-Line	720.0	7726.1	111187.0
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	1757520.0	18647125.7	259525807.8
17.	Gross Electrical Energy Generated (MWH)	585370.0	6159480.0	84593329.0
18.	Net Electrical Energy Generated (MWH)	556730.0	5853456.0	80217394.0
19.	Unit Service Factor	100.0%	96.1%	64.8%
20.	Unit Availability Factor	100.0%	96.1%	64.8%
21.	Unit Capacity Factor (Using MDC Net)	99.0%	93.2%	59.9%
22.	Unit Capacity Factor (Using DER Net)	98.1%	92.4%	59.3%
23.	Unit Forced Outage Rate	0.0%	0.0%	14.4%

24. Shutdowns Schedule Over Next 6 Months (Type, Date, and Duration of Each):
Refueling, March 6, 1993 -- 60 days.

25. If Shut Down at End of Report Period Estimated Date of Start-up:

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: November 1992

Docket No.: 50-280
Unit Name: Surry Unit 1
Date: 12-07-92
Completed by: Anthony Xenakis
Telephone: (804) 365-2145

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

No entries for this 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.

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

REPORT MONTH: November 1992

Docket No.: 50-281
Unit Name: Surry Unit 2
Date: 12-07-92
Completed by: Anthony Xenakis
Telephone: (804) 365-2145

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

No entries for this 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: 12-07-92
Completed by: M. A. Negron
Telephone: (804) 365-2795

Month: November 1992

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	782	17	785
2	783	18	784
3	781	19	784
4	781	20	784
5	779	21	783
6	780	22	782
7	782	23	782
8	783	24	782
9	784	25	779
10	783	26	782
11	782	27	783
12	782	28	780
13	780	29	785
14	776	30	785
15	784	31	
16	784		

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: 12-07-92
Completed by: M. A. Negron
Telephone: (804) 365-2795

Month: November 1992

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	773	17	774
2	773	18	774
3	769	19	774
4	764	20	775
5	772	21	773
6	773	22	774
7	774	23	773
8	774	24	773
9	774	25	774
10	774	26	774
11	774	27	774
12	774	28	773
13	774	29	774
14	774	30	774
15	774	31	
16	774		

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: November 1992

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

UNIT ONE

11-01-92	0000	This reporting period began with the Unit operating at 100% power, 820 MWe.
11-30-92	2400	This reporting period ended with the Unit operating at 100% power, 825 MWe.

UNIT TWO

11-01-92	0000	This reporting period began with the Unit operating at 100% power, 820 MWe.
11-30-92	2400	This reporting period ended with the Unit operating at 100% power, 825 MWe.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: November 1992

SE 92-218 **Safety Evaluation** 10-20-92

This Safety Evaluation was performed to evaluate a change in the bearing cooling (BC) system line-up to the instrument air (IA) compressors and after coolers. The modified line-up maintains the BC system solenoid operated valves, 1-BC-SOV-102 and 2-BC-SOV-201, open to allow a continuous flow through the IA compressors and aftercoolers. This configuration removes residual heat following the shutdown of the IA compressors preventing a high discharge temperature lockout.

This alignment change will not affect the operation of the BC system temperature control valves in maintaining proper IA compressor operating temperature. Operation of the BC and IA systems is not affected by this change. Therefore, an unreviewed safety question is not created.

DCP 85-06-3 **Design Change Package** 11-03-92

This Design Change Package (DCP) installed a comprehensive on-line steam generator secondary side water chemistry monitoring system on Units 1 and 2. The information gathered by the system is used as a basis for implementing actions to reduce the frequency and duration of outages caused by out-of-specification steam generator steam purity and water chemistry.

The modification did not affect the operation or the ability of equipment important to safety to perform its safety function. Therefore, an unreviewed safety question was not created.

TM S1-92-38 **Temporary Modification** 11-03-92
(Safety Evaluation No. 92-225)

This Temporary Modification (TM) installed electrical jumpers to maintain electrical circuit continuity during the replacement of failed Unit 1 reactor protection system test switch, 01-RP-CS-151.

This TM enabled both trains of the Safety Injection (SI) system actuation circuitry to remain in service during the replacement of the test switch. Double verification was required for the installation and removal of the jumpers and post maintenance testing was performed. Therefore, an unreviewed safety question was not created.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: November 1992

TM S1-92-39 **Temporary Modification** 11-03-92
(Safety Evaluation No. 92-226)

This Temporary Modification (TM) installed electrical jumpers to maintain electrical circuit continuity during the replacement of failed Unit 1 reactor protection system test switch, 01-RP-CS-144.

This TM enabled both trains of the Safety Injection (SI) system actuation circuitry to remain in service during the replacement of the test switch. Double verification was required for the installation and removal of the jumpers and post maintenance testing was performed. Therefore, an unreviewed safety question was not created.

EWR 90-330 **Engineering Work Request** 11-04-92
(Safety Evaluation No. 90-253)

This Engineering Work Request provided instructions for the inspection and cleaning of the Unit 2 recirculating spray heat exchanger service water supply piping.

This activity was performed with Unit 2 at cold shutdown and with no fuel movement in process. The configuration or function of the subject piping was not modified. Therefore, an unreviewed safety question was not created.

AC S2-92-1109 **Administrative Control** 11-09-92
(Safety Evaluation No. 92-228)

Administrative control of Unit 2 main steam trip valve manual bypass valve 2-MS-155 was established to allow the valve to be opened and maintenance to be performed to correct a steam leak.

The administrative controls were established for this maintenance activity to ensure that the manual valve would be closed promptly in the event of a safety injection signal. The administrative controls also ensured that the manual valve would be reclosed following the maintenance. Furthermore, the probability of a steam line break during the maintenance period (approximately four hours) is insignificant and the radiological consequences remained bounded by the existing design basis. Therefore, an unreviewed safety question was not created.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: November 1992

EWR 90-332 **Engineering Work Request** 11-09-92
(Safety Evaluation No. 90-332)

This Engineering Work Request provided instructions for the inspection and cleaning of the Unit 2 48-inch service water (SW) headers and the 30-inch and 36-inch SW piping.

The 48-inch SW headers supply water to the control room habitability chillers. To ensure the control room envelope temperatures remained within the analyzed limits during this activity, compensatory actions were implemented as directed by a Justification for Continued Operation. The configuration or function of the SW system was not modified. Therefore, an unreviewed safety question was not created.

AC S1-92-1112 **Administrative Control** 11-12-92
(Safety Evaluation No. 92-229)

Administrative control of service water valves 1-SW-263, 1-SW-265, and 1-SW-303 was established to permit strainer 1-VS-S-1A to be removed from service for maintenance.

The administrative controls maintained service water flow to control room chillers and charging pump service water pumps and ensured compliance with Appendix R fire protection requirements. Therefore, an unreviewed safety question was not created.

FS 92-39 **UFSAR Change** 11-12-92
(Safety Evaluation 92-231)

The Updated Final Safety Analysis Report (UFSAR) Section 4.1, "Reactor Coolant System Design Bases," was revised to reflect Surry's participation in the Babcock and Wilcox Owner's Group (B&WOG) Master Integrated Reactor Vessel Surveillance Program (MIRVSP).

The change is administrative in nature. No procedures are affected and no physical modifications are involved. The change involves only a modification to the reactor vessel materials surveillance capsule withdrawal schedule. Therefore, an unreviewed safety question was not created.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: November 1992

FS 92-46 **UFSAR Change** 11-12-92
(Safety Evaluation 92-234)

The Updated Final Safety Analysis Report (UFSAR) Section 11A.3, "Plant and Animal Census," was revised to clarify the purpose of the plant and animal census and to identify the station program which documents the census information. Table 11A-9, "Distance to the Nearest Residence, Garden, Milk Cow, Milk Goats, and Beef Cattle Within 5 Miles of the Surry Plant," was deleted to eliminate the need to revise the UFSAR to reflect changes in the annual plant and animal census.

The change is administrative in nature. No physical modifications are involved. Therefore, an unreviewed safety question is not created.

FS 92-48 **UFSAR Change** 11-12-92
(Safety Evaluation 92-232)

The Updated Final Safety Analysis Report (UFSAR) Section 9.10.2.2.1, "Water Storage Tanks," and Table 15.2-1, "Structures, Systems, and Components Designed for Seismic and Tornado Criteria," were revised to delete incorrect statements regarding the use of the intake canal as a backup source of water for the fire protection system.

The change is administrative in nature. No procedures are affected and no physical modifications are involved. The existing fire protection system meets regulatory requirements and provides adequate fire suppression capability to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. Therefore, an unreviewed safety question was not created.

DR S-92-1839 **Deviation Reports** 11-17-92
(Safety Evaluation No. 92-238)

This Safety Evaluation was performed to evaluate Deviation Report S-92-1839 concerning the operation of the mechanical equipment rooms 3 and 4 service water supply piping with valve 1-SW-301 fixed in the open position with a cracked yoke.

It was determined that the cracked yoke does not affect the integrity of the valve or plant operation. Therefore, an unreviewed safety question is not created.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: November 1992

TSI-015 **Technical Specification Interpretation** 11-17-92
(Safety Evaluation No. 92-237)

Technical Specification Interpretation TSI-015 was developed to clarify the operability status of a station battery and associated chargers while testing is being conducted pursuant to Technical Specification (TS) 4.6.C.1.d.

An evaluation of the applicable TS concluded that turning off a battery charger during testing merely places the respective battery in its design operating condition for a brief period of time. Furthermore, sufficient margin exists in station battery capacity to remain fully capable of its design basis duty cycle following the completion of the subject testing. Therefore, an unreviewed safety question is not created.

DCP 90-02-03 **Design Change Package** 11-20-92
(Safety Evaluation No. 90-128)

This Design Change Package (DCP) increased the storage capacity of the main control room bottled air system by installing additional air bottles in mechanical equipment room 3 and a new bottle bank in the switchgear area stairwell.

This modification was made to ensure the compressed air storage capacity is adequate to maintain the control room pressure envelope at a positive pressure for one hour consistent with the design criteria. The change did not affect the operation of the main control room bottled air system. Therefore, an unreviewed safety question was not created.

10 CFR 50, Appendix R Report 11-24-92
(Safety Evaluation 92-241)

The 10 CFR 50, Appendix R Report was revised to incorporate completed plant modifications that affect the Appendix R program and additional/revised engineering evaluations.

The plant modifications were evaluated independently, with respect to Appendix R compliance, prior to implementation as part of the design change process. The additional engineering evaluations were performed in accordance with Generic Letter 86-10. The revised engineering evaluations resulted from walkdowns of fire area boundaries to assess current plant configurations. These changes document commitments which form part of the licensing basis for fire protection for Units 1 and 2. No physical changes to the plant were made. Therefore, an unreviewed safety question was not created.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: November 1992

AC S2-92-1130 **Administrative Control** 11-30-92
(Safety Evaluation No. 92-242)

Administrative control of the Unit 2 emergency switchgear room/cable tunnel door was established to permit an air hose to be temporarily routed through the doorway.

A continuous fire watch was stationed at the door while it was open. The fire watch was responsible for disconnecting the temporary air hose and closing the door in the event of a safety injection, main control room air bottle bank discharge, fire, or a carbon dioxide discharge. This control action ensured the capability of rapidly restoring the main control room/emergency switchgear room pressure envelope to its required accident condition. Therefore, an unreviewed safety question was not created.

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

MONTH/YEAR: November 1992

1-IPT-FT-RC-T-412
1-IPT-FT-RC-T-422
1-IPT-FT-RC-T-432

Instrument Periodic Test Procedures 11-12-92
(Safety Evaluation No. 92-233)

Instrument Periodic Test Procedures 1-IPT-FT-RC-T-412, "Delta T and T_{AVG} Protection Set I Loop T-412 Channel Calibration," 1-IPT-FT-RC-T-422, "Delta T and T_{AVG} Protection Set II Loop T-422 Channel Calibration," and 1-IPT-FT-RC-T-432, "Delta T and T_{AVG} Protection Set III Loop T-432 Channel Calibration," were revised to provide instructions for gathering additional data from the respective spare resistance temperature devices to determine inherent process noise and streaming effects associated with the operation of these instrument loops.

This activity is a test only and will not involve any modifications, setpoint changes, or impact on plant operations. The additional testing will be performed in conjunction with the normal monthly functional test of the three delta T and T average protection loops and involves only gathering additional data within the provisions established for the monthly testing. Therefore, an unreviewed safety question is not created.

1-PT-18.1
2-PT-18.1

Operations Periodic Test Procedure 11-12-92
(Safety Evaluation No. 92-230)

Operations Periodic Test Procedures 1/2-PT-18.1, "LHSI Pump Test," were revised ("one-time only" change) to permit the use of temporary transmitters to enable the measurement of low head safety injection pump pressure during the few seconds following pump start.

The use of the temporary safety-related transmitters does not affect the operation of the subject pumps or the ability of the safety injection system to perform its required safety function. Therefore, an unreviewed safety question was not created.

TESTS AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: November 1992

None during this reporting period.

CHEMISTRY REPORT

MONTH/YEAR: November 1992

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioact., µCi/ml	3.57E-1	2.52E-1	2.99E-1	2.42E-1	1.45E-1	1.78E-1
Suspended Solids, ppm	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1
Gross Tritium, µCi/ml	3.51E-1	3.32E-1	3.45E-1	3.02E-1	2.78E-1	2.90E-1
I^{131}, µCi/ml	8.15E-4	5.03E-4	6.82E-4	6.17E-4	2.69E-4	3.85E-4
I^{131}/I^{133}	0.12	0.07	0.09	0.14	0.07	0.09
Hydrogen, cc/kg	40.7	30.7	36.7	45.2	34.9	39.9
Lithium, ppm	2.30	2.02	2.22	2.18	1.67	1.99
Boron - 10, ppm*	194.4	171.7	179.4	58.6	40.2	49.3
Oxygen, (DO), ppm	≤ 0.005	≤ 0.005	≤ 0.005	≤ 0.005	≤ 0.005	≤ 0.005
Chloride, ppm	0.006	0.002	0.005	0.003	≤ 0.001	0.001
pH at 25 degree Celsius	6.79	6.62	6.70	7.39	7.23	7.32

* Boron - 10 = Total Boron x 0.196

Comments:

None.

FUEL HANDLING
UNITS 1 & 2

MONTH/YEAR: November 1992

New or Spent Fuel Shipment Number	Date Stored or Received	Number of Assemblies per Shipment	Assembly Number	ANSI Number	Initial Enrichment	New or Spent Fuel Shipping Cask Activity
CASTOR V/21 500-11-017	11-10-92	N/A	0B4	LM08LR	3.22	N/A
			0B9	LM08M7	3.22	
			0L8	LM06ET	3.13	
			1B0	LM08LJ	3.22	
			1B2	LM08LN	3.22	
			2C3	LM08M6	3.40	
			3C1	LM08MN	3.40	
			3C3	LM08MV	3.40	
			3C8	LM08ME	3.40	
			4C7	LM08N5	3.40	
			4C8	LM08ND	3.40	
			4C9	LM08N9	3.40	
			5C1	LM08MX	3.40	
			5C2	LM08NJ	3.40	
			5C3	LM08N2	3.40	
			5C5	LM08N4	3.40	
			5C6	LM08M5	3.40	
			J10	LM034G	2.90	
			J40	LM035R	2.90	
			J41	LM035L	2.90	
			J49	LM034T	2.90	

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

MONTH/YEAR: November 1992

None During This Reporting Period.