

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

January 14, 1994

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

Serial No. 94-014
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 December 1993.

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

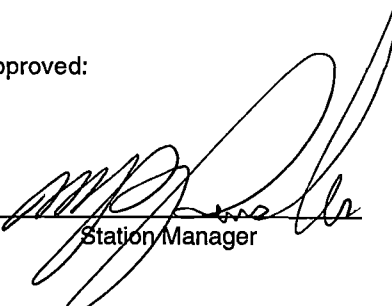
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**VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION
MONTHLY OPERATING REPORT
REPORT NO. 93-12**

Approved:



Station Manager

1/7/94

Date

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OPERATING DATA REPORT

Docket No.: 50-280
 Date: 01-03-94
 Completed By: D. Mason
 Telephone: (804) 365-2459

- 1. Unit Name:..... Surry Unit 1
- 2. Reporting Period: December, 1993
- 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	744.0	8760.0	184320.0
12. Number of Hours Reactor Was Critical	744.0	8432.2	123807.2
13. Reactor Reserve Shutdown Hours	0	0	3774.5
14. Hours Generator On-Line.....	744.0	8403.6	121679.0
15. Unit Reserve Shutdown Hours.....	0	0	3736.2
16. Gross Thermal Energy Generated (MWH).....	1305076.1	19548466.0	283167745.1
17. Gross Electrical Energy Generated (MWH)....	443175.0	6521295.0	92539548.0
18. Net Electrical Energy Generated (MWH).....	419735.0	6229241.0	87827101.0
19. Unit Service Factor.....	100.0%	95.9%	66.0%
20. Unit Availability Factor.....	100.0%	95.9%	68.0%
21. Unit Capacity Factor (Using MDC Net).....	72.2%	91.1%	61.4%
22. Unit Capacity Factor (Using DER Net).....	71.6%	90.2%	60.5%
23. Unit Forced Outage Rate.....	0.0%	1.5%	17.4%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
 Refueling (10 Year ISI), January 21, 1994, 64 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	_____	_____

OPERATING DATA REPORT

Docket No.: 50-281
 Date: 01-03-94
 Completed By: D. Mason
 Telephone: (804) 365-2459

- 1. Unit Name:..... Surry Unit 2
- 2. Reporting Period:..... December, 1993
- 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	744.0	8760.0	181200.0
12. Number of Hours Reactor Was Critical	738.5	6389.4	120076.3
13. Reactor Reserve Shutdown Hours	0	0	328.1
14. Hours Generator On-Line	730.1	6284.6	118215.6
15. Unit Reserve Shutdown Hours.....	0	0	0
16. Gross Thermal Energy Generated (MWH).....	1700869.3	14344668.6	275675742.4
17. Gross Electrical Energy Generated (MWH)....	571745.0	4749720.0	89945624.0
18. Net Electrical Energy Generated (MWH).....	551196.0	4541657.0	85332070.0
19. Unit Service Factor	98.1%	71.7%	65.2%
20. Unit Availability Factor.....	98.1%	71.7%	65.2%
21. Unit Capacity Factor (Using MDC Net).....	94.9%	66.4%	60.4%
22. Unit Capacity Factor (Using DER Net).....	94.0%	65.8%	59.8%
23. Unit Forced Outage Rate.....	0.0%	9.5%	14.1%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
 None

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: December, 1993

Docket No.: 50-280
 Unit Name: Surry Unit 1
 Date: 01-03-94
 Completed by: Craig Olsen
 Telephone: (804) 365-2155

	(1)	(2)	(3)	(4)	(5)			
Date	Type	Duration Hours	Reason	Method of Shutting Down Rx	LER No.	System Code	Component Code	Cause & Corrective Action to Prevent Recurrence

None during 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: December, 1993

Docket No.: 50-281
 Unit Name: Surry Unit 2
 Date: 01-03-94
 Completed by: Craig Olsen
 Telephone: (804) 365-2155

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
931222	F	0	B	N/A	N/A	SJ	P	Unit power reduced to 60% to facilitate replacement of feedwater pump, 2-FW-P-1A, motor bearings.

(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: 01-06-94
Completed by: Pat Kessler
Telephone: 365-2790

MONTH: December, 1993

Day	Average Daily Power Level (MWe - Net)	Day	Average Daily Power Level (MWe - Net)
1	645	17	576
2	644	18	570
3	638	19	559
4	633	20	553
5	628	21	539
6	627	22	483
7	619	23	486
8	618	24	489
9	610	25	489
10	606	26	484
11	607	27	489
12	602	28	486
13	594	29	488
14	589	30	490
15	585	31	489
16	575		

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: 01-06-94
Completed by: Pat Kessler
Telephone: 365-2790

MONTH: December, 1993

<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>	<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>
1	169	17	793
2	770	18	793
3	792	19	764
4	792	20	790
5	791	21	791
6	790	22	648
7	792	23	473
8	791	24	469
9	791	25	676
10	789	26	794
11	791	27	794
12	791	28	793
13	789	29	792
14	790	30	792
15	791	31	792
16	793		

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: December, 1993

The following 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:

12/01/93	0000	The reporting period began with the Unit operating at 83% power, 693 MWe, in a power coast down.
12/31/93	2400	The reporting period ended with the Unit operating at 63% power, 516 MWe, in a power coast down.

UNIT TWO:

12/01/93	0000	The reporting period began with the Unit at Hot Shutdown, preparing to startup following the completion of a maintenance outage for "C" steam generator.
12/01/93	0529	Reactor critical.
12/01/93	1354	Unit on-line. Power increased to 34%, 280 MWe; chemistry hold.
12/01/93	1641	Started power increase at 34%, 280 MWe.
12/01/93	1916	Stopped power increase at 64%, 525 MWe.
12/01/93	2329	Started power increase at 64%.
12/02/93	0506	Stopped power increase at 100%, 820 MWe.
12/19/93	0917	Started power reduction to alternate high pressure heater drain pumps.
12/19/93	1121	Stopped power reduction at 85%, 715 MWe.
12/19/93	1448	Started power increase following start of alternate high pressure heater drain pump.
12/19/93	1665	Stopped power increase at 100%, 820 MWe.
12/22/93	1144	Started power reduction to facilitate replacement of feedwater pump, 2-FW-P-1A, motor bearings.
12/22/93	1444	Stopped power reduction at 60%, 500 MWe.
12/25/93	0655	Started power increase following replacement of feedwater pump, 2-FW-P-1A, motor bearings.
12/25/93	1342	Stopped power increase at 100%, 820 MWe.
12/31/93	2400	The reporting period ended with the Unit operating at 100% power, 820 MWe.

**FACILITY CHANGES THAT DID NOT
REQUIRE NRC APPROVAL**

MONTH/YEAR: December, 1993

EWR 89-762 **Engineering Work Request** 12-20-93
(Safety Evaluation No. 91-093)

Engineering Work Request 89-762 replaced obsolete Instrument Air system pressure switches and three-way release valves with safety-related pressure switches.

The replacement switches upgraded the existing components and did not affect their original design function. Therefore, an unreviewed safety question does not exist.

EWR 91-039 **Engineering Work Request** 12-20-93
(Safety Evaluation No. 91-176)

Engineering Work Request 91-039 replaced carbon steel globe type vent valves on Service Water (SW) system recirculation lines with enhanced 316 stainless steel ball valves.

The replacement valves are more compatible with SW system chemistry and will help prevent valve and piping corrosion and degradation. The modification did not affect the SW system strainers or control room chiller condenser and did not reduce the margin of safety. Therefore, an unreviewed safety question does not exist.

TM S2-93-45 **Temporary Modification** 12-22-93
(Safety Evaluation No. 93-241)

Temporary Modification (TM) S2-93-45 installed an electrical jumper around the withdrawn limit switch on the Unit 2 "B" incore detector. The jumper allowed use of the "B" detector 10 path transfer device along with the "A" detector 5 path transfer device and drive motor to perform Technical Specification required full core flux mapping. The "B" detector 5 path transfer switch was also disabled to prevent damaging the detector cable when the detector is inserted into its storage location. This option was made available due to periodic thermal trips of the "B" incore detector drive motor.

This change prevented potential containment entries (to reset the drive motor) and unnecessary radiation hazards. Furthermore, operation of the incore detection system was not adversely affected and the integrity of the Reactor Coolant system boundary at the seal table was not compromised. Therefore, an unreviewed safety question did not exist.

**FACILITY CHANGES THAT DID NOT
REQUIRE NRC APPROVAL**

MONTH/YEAR: December, 1993

Surry Emergency Plan 12-23-93
(Safety Evaluation No. 93-242)

The Surry Emergency Plan was revised to reflect a change from the Regulatory Guide 1.109 methodology to the use of ICRP-26 and EPA-400 guidelines for calculating and estimating worker population dose rates. This revision also incorporated the terminology changes, relative to whole body and thyroid dose, as reflected in the revision of 10 CFR 20, which became effective on January 1, 1994.

These changes provide for a more complete post-accident estimation of potential population dose and lower protective action guidelines. The revision did not affect station operation. Therefore, an unreviewed safety question does not exist.

FS 93-38 **UFSAR Change** 12-23-93
(Safety Evaluation 93-244)

Updated Final Safety Analysis Report Change 93-38 revised Section 15A.3.4.2, "Verification of Analysis Methods", to reflect the use of an alternate computer code for performing piping analysis.

This change was administrative in nature and involved no physical changes to the station. The alternate computer code provides equivalent results and does not reduce the Technical Specification margin of safety. Therefore, an unreviewed safety question does not exist.

TM S1-93-12 **Temporary Modification** 12-27-93
(Safety Evaluation No. 93-245)

Temporary Modification (TM) S1-93-12 installed electrical jumpers to bypass test switch PC-455E-TB on the Unit 1 Safety Injection (SI) system train "B" circuitry to allow the switch to be replaced without rendering the circuits inoperable.

This TM continued to allow SI system train "B" actuation on a valid signal and did not affect train "A", thus maintaining the design SI functions. Double verification of jumper installation/removal and post maintenance testing were performed. Therefore, an unreviewed safety question did not exist.

WO 262059-08 **Work Order** 12-27-93
(Safety Evaluation No. 93-239, Revision 1)

Work Order 262059-08 applied a freeze seal to temporarily isolate Unit 1 Chilled Water system discharge line, 1-VS-E-4C, to facilitate the replacement of Primary Grade Water system valve, 1-PG-MOV-107C.

Application of the freeze seal was procedurally controlled to ensure that adequate provisions were employed to ensure compliance with station operating requirements. Contingency actions were also in place to minimize the consequences of a freeze seal failure. In addition, Nondestructive Examination of the affected piping was performed prior to and following the seal installation. Therefore, an unreviewed safety question did not exist.

**FACILITY CHANGES THAT DID NOT
REQUIRE NRC APPROVAL**

MONTH/YEAR: December, 1993

- EWR 90-369 **Engineering Work Request** 12-29-93
(Safety Evaluation No. 90-294)
- Engineering Work Request 90-369 provided instructions for repairing the nonsafety-related Ground Water De-Watering system.
- This was a maintenance activity that did not affect any safety-related systems or accident analyses. Therefore, an unreviewed safety question did not exist.
- DCP 93-12 **Design Change Package** 12-30-93
(Safety Evaluation No. 91-093)
- Design Change Package 93-12 installed a water tight door at the entrance to Mechanical Equipment Room (MER) No. 3 and removed the existing flood dike.
- These modifications were implemented in order to protect the Emergency Switchgear Room (ESGR) from potential flooding (via a penetration in the wall separating the ESGR and MER No. 3) as a result of a Service Water system pipe rupture. Installation of the water tight door satisfies an Individual Plant Evaluation flooding concern, which is not a station design basis event. Therefore, an unreviewed safety question does not exist.
- WO 260090 **Work Order** 12-30-93
(Safety Evaluation No. 93-246)
- Work Order 260090 implemented a leak repair for Unit 2 Charging System flow control valve, 2-CH-FCV-2160. The repair method failed the valve in the closed position.
- The subject valve was designed for filling the reactor coolant system during cold shutdown or during 2 loop operation (which is currently not permitted). The valve is normally closed and does not perform any safety-related function. Therefore, an unreviewed safety question does not exist.
- FS 93-21 **UFSAR Change** 12-23-93
(Safety Evaluation 93-243)
- Updated Final Safety Analysis Report Change 93-21 revised Sections 6.2.2.1.1, "Injection Phase", 6.2.3.11.1, "Low-Head Safety Injection Pumps", Table 6.2-6, "Pump Parameters", and Table 6.2-13, "Low-Head Safety Injection Pumps" to enhance the accuracy in describing the design basis requirements and capabilities of the Safety Injection system pumps and the Emergency Core Cooling system injection flows.
- The changes were administrative and editorial in nature. No procedures or plant equipment were affected and no physical modifications were involved. Therefore, an unreviewed safety question did not exist.

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

MONTH/YEAR: December, 1993

1/2-IPT-CC-MS-F-474, **Instrument Periodic Test Procedures** 12-14-93
475,484,485,494,495 (Safety Evaluation No. 93-233)

1/2-IPT-FT-MS-F-474,
475,484,485,494,495 Instrument Periodic Test Procedures 1/2-IPT-CC-MS-F-474, 475, 484, 485, 494, 495, "Steam Line Flow Protection [Loop] Channel Calibration", and 1/2-IPT-FT-MS-F-474, 475, 484, 485, 494, 495, "Steam Line Flow Protection [Loop] Functional Test", were developed to replace/upgrade the existing procedures and to include instructions for removing power, under certain plant conditions, from the corresponding instrument loop's signal summator to prevent a spurious safety injection signal while performing a loop calibration.

This procedurally controlled temporary modification will be implemented for a single channel at a time. The redundant channel will remain unaffected and capable of initiating a safety injection, if required. Therefore, an unreviewed safety question does not exist.

1/2-IPT-RC-T-430 **Instrument Periodic Test Procedures** 12-14-93
1/2-IPT-RC-T-433 (Safety Evaluation No. 93-232)

Instrument Periodic Test Procedures 1/2-IPT-RC-T-430, "Reactor Coolant Wide Range Temperature Loop T-[1/2]-430 Calibration", and 1/2-IPT-RC-T-433, "Reactor Coolant Wide Range Temperature Loop T-[1/2]-433 Calibration" were developed to replace/upgrade the existing procedures and to include instructions for removing the Unit 1 and 2 Reactor Coolant system loop "C" wide range temperature indicating instrument loops from service to facilitate calibration and other maintenance activities.

The subject instrument loops provide indication only. Sufficient redundancy exists to ensure that Technical Specification compliance is maintained during the performance of these procedures. Therefore, an unreviewed safety question does not exist.

1-ECM-2403-02 **Electrical Corrective Maintenance Procedure** 12-16-93
(Safety Evaluation No. 93-236)

Electrical Corrective Maintenance Procedure 1-ECM-2403-02, "RSS Transformer B Outage with Backfeed of Transfer Bus E" was developed to replace/upgrade the existing procedure and to include instructions for implementing temporary modifications to defeat automatic tripping and lockout of selected 4160 volt breakers associated with transfer bus E. These modifications will ensure a reliable electric plant lineup during a reserve station service transformer B outage while on Unit 1 backfeed to transfer bus E.

This procedure will be performed with Unit 1 at cold shutdown and will provide for the normal Unit 1 backfeed line-up. Safety systems and emergency diesel generators will remain available to Unit 1. Therefore, an unreviewed safety question does not exist.

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

MONTH/YEAR: December, 1993

1-OPT-SI-006

Operations Periodic Test Procedure
(Safety Evaluation No. 93-031, Revision 1)

12-16-93

Operations Periodic Test Procedure, 1-OPT-SI-006, "SI Accumulator Discharge Check Valves Full Open Test" was developed to verify that Unit 1 Safety Injection system accumulator discharge check valves are free to open and exhibit full stroke operation.

The Unit will be at cold shutdown and the equipment and systems will be operated within design limits during the performance of this test. Measures will be taken to preclude the introduction of gas into the Reactor Coolant and Residual Heat Removal systems. Reactivity addition will be precluded by ensuring the accumulator boron concentration is greater than the Reactor Coolant system (RCS) concentration and by ensuring accumulator temperature is greater than the RCS shutdown margin temperature. Therefore, an unreviewed safety question does not exist.

2-ECM-2403-03

Electrical Corrective Maintenance Procedure
(Safety Evaluation No. 93-237)

12-16-93

Electrical Corrective Maintenance Procedure 2-ECM-2403-03, "RSS Transformer C Outage with Backfeed of Transfer Bus F" was developed to replace/upgrade the existing procedure and to include instructions for implementing temporary modifications to defeat automatic tripping and lockout of selected 4160 volt breakers associated with transfer bus F. These modifications will ensure a reliable electric plant lineup during a reserve station service transformer C outage while on Unit 2 backfeed to transfer bus F.

This procedure will be performed with Unit 2 at cold shutdown and will provide for the normal Unit 2 backfeed line-up. Safety systems and emergency diesel generators will remain available to Unit 2. Therefore, an unreviewed safety question does not exist.

0-ECM-0701-01

Electrical Corrective Maintenance Procedure
(Safety Evaluation No. 93-240)

12-22-93

Electrical Corrective Maintenance Procedure 0-ECM-0701-01, "Emergency Diesel Generator Maintenance" was developed to replace/upgrade the existing procedures and to include instructions for temporarily installing electrical jumpers to facilitate opening and closing the radiator louvers on the emergency diesel generators (EDGs) when adjusting or repairing the louver controls.

This activity will not affect the ability of an EDG to perform its safety function since the EDG will be removed from service prior to implementing the procedure. Double verification of jumper installation/removal and post maintenance testing will be performed. Therefore, an unreviewed safety question does not exist.

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

MONTH/YEAR: December, 1993

1-OP-CC-002

Operating Procedure
(Safety Evaluation No. 93-247)

12-30-93

Operating Procedure 1-OP-CC-002, "Chilled Component Cooling System", was developed to replace/upgrade the existing procedure and to include instructions for temporarily disconnecting an electrical lead in order to maintain Unit 1 Boron Recovery system valve, 1-BR-HCV-101G, in the open position. This temporary modification is required during operation of the Component Cooling Water Clean-up system to provide a flow path through the primary drain tank vent chiller condenser.

An evaluation of Component Cooling Water Clean-up system operation with 1-BR-HCV-101G in the open position determined that the cooling loads or flow rates required of the normal or chilled Component Cooling Water systems were not adversely affected. Therefore, an unreviewed safety question does not exist.

TESTS AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: December, 1993

1-ST-307

Special Test
(Safety Evaluation 93-202)

12-03-93

Special Test 1-ST-307, "Nuclear Instrumentation System Noise Measurement and Analysis", was conducted during November, 1993, to measure and analyze electrical noise on the Nuclear Instrumentation (NI) system power range drawers while the Unit was at power. The testing was performed in preparation for the installation of Hafnium flux suppression inserts into the reactor core during the 1994 Unit 1 refueling outage. The presence of electrical noise could impact the operation of the NI system, since the flux suppression inserts will reduce the nuclear instrumentation signal.

The test results indicated that the electrical noise measured was not a significant portion of the overall power range signal. Additional testing will be performed during the 1994 refueling outage.

This test was performed in conjunction with the normal monthly Technical Specification required surveillance of the power range drawers. The test points in each drawer were monitored for electrical noise while the drawer was placed in the test mode, in accordance with the surveillance test procedure. Therefore, an unreviewed safety question did not exist.

CHEMISTRY REPORT

MONTH/YEAR: December, 1993

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioactivity, $\mu\text{Ci/ml}$	5.53E-1	3.05E-1	3.82E-1	2.60E-1	1.69E-3	1.51E-1
Suspended Solids, ppm	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1
Gross Tritium, $\mu\text{Ci/ml}$	5.90E-2	5.48E-2	5.72E-2	4.02E-1	3.02E-1	3.57E-1
I^{131} , $\mu\text{Ci/ml}$	3.68E-3	2.24E-3	2.74E-3	1.83E-4	5.00E-5	9.62E-5
I^{131}/I^{133}	0.35	0.20	0.25	0.16	0.06	0.11
Hydrogen, cc/kg	42.4	36.2	38.5	42.5	33.2	37.9
Lithium, ppm	0.81	0.72	0.76	2.80	1.61	2.21
Boron - 10, ppm*	0.61	0.20	0.28	323.4	200.1	224.5
Oxygen, (DO), ppm	≤ 0.005	≤ 0.005	≤ 0.005	≤ 0.005	≤ 0.005	≤ 0.005
Chloride, ppm	≤ 0.050	≤ 0.001	0.007	≤ 0.050	0.006	0.014
pH at 25 degree Celsius	9.27	8.95	9.16	6.43	5.87	6.31

* Boron - 10 = Total Boron x 0.196

Comments:

None

**FUEL HANDLING
 UNITS 1 & 2**

MONTH/YEAR: December, 1993

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
Unit 1 Batch 15 Shipment 4	12/02/93	12	2K5	LM0YKZ	3.8137	14.76 Ci
			2K6	LM0YLO	3.8059	
			3K7	LM0YLB	3.9935	
			4K0	LM0YLE	3.9979	
			4K9	LM0YLP	3.9958	
			5K2	LM0YLS	3.9957	
			2K8	LM0YL2	3.8071	
			2K9	LM0YL3	3.8137	
			3K0	LM0YL4	3.8135	
			3K1	LM0YL5	3.8139	
			5K8	LM0YLY	3.9998	
			5K9	LM0YLZ	4.0012	
Unit 1 Batch 15 Shipment 5	12/02/93	12	4K3	LM0YLH	3.9961	14.97 Ci
			4K4	LM0YLJ	3.9878	
			4K5	LM0YLK	3.9828	
			4K7	LM0YLM	3.9815	
			4K8	LM0YLN	3.9847	
			5K0	LM0YLQ	3.9816	
			0K2	LM0YKA	3.8144	
			4K6	LM0YLL	3.9833	
			5K1	LM0YLR	3.9825	
			5K3	LM0YLT	3.9835	
			5K4	LM0YLU	3.9835	

**FUEL HANDLING
 UNITS 1 & 2**

MONTH/YEAR: December, 1993

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
Unit 1 Batch 15 Shipment 5	12/02/93	12	6K0	LM0YM0	3.9829	
CASTOR V/21 500-11-015	12/09/93	N/A	D11	LM007W	3.325	
			D20	LM007N	3.325	
			D23	LM006Z	3.325	
			D24	LM007R	3.325	
			D29	LM008P	3.325	
			D30	LM008Q	3.325	
			D38	LM007F	3.325	
			G12	LM01QD	2.111	
			J01	LM034D	2.902	
			J07	LM034L	2.902	
			J08	LM034K	2.902	
			J16	LM034X	2.902	
			J23	LM0354	2.902	
			W12	LM040W	3.203	
			W21	LM040B	3.203	
			W25	LM040J	3.203	
			W33	LM0415	3.203	
			W35	LM041G	3.203	
			W39	LM041W	3.203	
			W43	LM041V	3.203	
			W51	LM0420	3.203	

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

MONTH/YEAR: December, 1993

None during this reporting period.