

VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

September 16, 1991

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

Serial No. 91-536  
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 August 1991.

Very truly yours,



W. L. Stewart  
Senior Vice President - Nuclear

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

9109190136 910831  
PDR ADCK 05000280  
R PDR

FE24 11

**VIRGINIA ELECTRIC AND POWER COMPANY  
SURRY POWER STATION  
MONTHLY OPERATING REPORT  
REPORT NO. 91-08**

Approved:

David A. Cheston  
Station Manager

9-12-91  
Date

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**OPERATING DATA REPORT**

Docket No.: 50-280  
 Date: 09-06-91  
 Completed By: M. A. Negrón  
 Telephone: 804-365-2795

- 1. Unit Name:..... Surry Unit 1
- 2. Reporting Period: ..... August 1991
- 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	5831.0	163847.0
12. Number of Hours Reactor Was Critical .....	744.0	5831.0	105305.2
13. Reactor Reserve Shutdown Hours .....	0.0	0.0	3774.5
14. Hours Generator On-Line.....	744.0	5831.0	103311.2
15. Unit Reserve Shutdown Hours.....	0.0	0.0	3736.2
16. Gross Thermal Energy Generated (MWH).....	1742868.0	14019732.4	240239642.7
17. Gross Electrical Energy Generated (MWH)....	558720.0	4650720.0	78227543.0
18. Net Electrical Energy Generated (MWH).....	529647.0	4417262.0	74200391.0
19. Unit Service Factor.....	100.0%	100.0%	63.1%
20. Unit Availability Factor.....	100.0%	100.0%	65.3%
21. Unit Capacity Factor (Using MDC Net).....	91.2%	97.0%	58.4%
22. Unit Capacity Factor (Using DER Net).....	90.3%	96.1%	57.5%
23. Unit Forced Outage Rate.....	0.0%	0.0%	19.7%

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

Refueling, February 16, 1991, 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: 09-06-91  
 Completed By: M. A. Negron  
 Telephone: 804-365-2795

- 1. Unit Name:..... Surry Unit 2
- 2. Reporting Period: ..... August 1991
- 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:

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

10. Reasons For Restrictions, If Any: \_\_\_\_\_

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	This Month	YTD	Cumulative
11. Hours In Reporting Period .....	744.0	5831.0	160727.0
12. Number of Hours Reactor Was Critical .....	647.2	3590.0	102762.3
13. Reactor Reserve Shutdown Hours .....	0.0	0.0	328.1
14. Hours Generator On-Line.....	638.7	3494.5	101065.1
15. Unit Reserve Shutdown Hours.....	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH).....	1213098.8	7276454.3	235411922.6
17. Gross Electrical Energy Generated (MWH)....	384440.0	2396435.0	76626549.0
18. Net Electrical Energy Generated (MWH).....	360820.0	2268414.0	72647139.0
19. Unit Service Factor.....	85.8%	59.9%	62.9%
20. Unit Availability Factor.....	85.8%	59.9%	62.9%
21. Unit Capacity Factor (Using MDC Net).....	62.1%	49.8%	58.0%
22. Unit Capacity Factor (Using DER Net).....	61.5%	49.4%	57.4%
23. Unit Forced Outage Rate.....	14.2%	16.2%	15.3%

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

Planned maintenance, September 7, 1991, 7 days.

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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: August 1991

Docket No.: 50-280  
 Unit Name: Surry Unit 1  
 Date: 09-06-91  
 Completed by: M. A. Negron  
 Telephone: 804-365-2795

(1) 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
8-1-91	S	0	B	4	N/A	SH	HX	Reduced power from 99.5% to 78.5% to maintain condenser vacuum while cleaning waterboxes.
8-4-91	S	0	B	4	N/A	SH	HX	Reduced power from 100% to 74.5% to maintain condenser vacuum while cleaning waterboxes.
8-10-91	S	0	B	4	N/A	SH	HX	Reduced power from 100% to 72% to maintain condenser vacuum while cleaning waterboxes.
8-16-91	S	0	B	4	N/A	SH	HX	Reduced power from 100% to 78% to maintain condenser vacuum while cleaning waterboxes.
8-23-91	S	0	B	4	N/A	SH	HX	Reduced power from 100% to 76% to maintain condenser vacuum while cleaning waterboxes.

(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: August 1991  
 [continued]

Docket No.: 50-280  
 Unit Name: Surry Unit 1  
 Date: 09-06-91  
 Completed by: M. A. Negron  
 Telephone: 804-365-2795

(1) Date	(1) Type	(1) Duration Hours	(2) Reason	(3) Method of Shutting Down Rx	LER No.	(4) System Code	(5) Component Code	Cause & Corrective Action to Prevent Recurrence
8-26-91	F	0	A	4	91-018-00	EA	BU	Fault on Bus 5 in switchyard caused the loss of "D" & "E" transfer bus which resulted in a runback from 100% to 70%.
8-30-91	S	0	B	4	N/A	SH	HX	Reduced power from 100% to 66% to maintain condenser vacuum while cleaning waterboxes.

(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)

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 METHOD:  
 1 - Manual  
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 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: August 1991

Docket No.: 50-281  
 Unit Name: Surry Unit 2  
 Date: 09-06-91  
 Completed by: M. A. Negron  
 Telephone: 804-365-2795

(1) Date	(1) Type	(2) Duration Hours	(2) Reason	(3) Method of Shutting Down Rx	(4) LER No.	(4) System Code	(5) Component Code	(5) Cause & Corrective Action to Prevent Recurrence
8-2-91	F	105.3	A	3	91-007-00	EE	JX	Reactor trip and safety injection occurred due to a power supply failure on vital bus 2-IVA. Safety Injection occurred from high steam flow/low T <sub>ave</sub> signal.
8-11-91	S	0	B	4	N/A	SH	HX	Reduced power from 100% to 80% to maintain condenser vacuum while cleaning waterboxes
8-12-91	S	0	B	4	N/A	SH	HX	Reduced power from 100% to 79.7% maintain condenser vacuum while cleaning waterboxes.
8-14-91	F	0	A	4	N/A	CD	CL	Control rod D-4 dropped due to blown fuse resulting from a problem in the coil stack. Runback occurred from 100% to 53.9% power.
8-18-91	S	0	B	4	N/A	SH	HX	Reduced power from 90% to 70% to maintain condenser vacuum while cleaning waterboxes.

(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: August 1991  
 [continued]

Docket No.: 50-281  
 Unit Name: Surry Unit 2  
 Date: 09-06-91  
 Completed by: M. A. Negron  
 Telephone: 804-365-2795

(1) Date	(1) Type	(1) Duration Hours	(2) Reason	(3) Method of Shutting Down Rx	LER No.	(4) System Code	(5) Component Code	Cause & Corrective Action to Prevent Recurrence
8-23-91	F	0	A	4	N/A	CD	CL	Control rod D-4 dropped due to blown fuse resulting from a problem in the coil stack. Runback occurred from 80% to 50% power.

(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: 09-06-91  
Completed by: M. A. Negron  
Telephone: 804-365-2795

Month: August 1991

<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>	<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>
1	659.1	17	584.5
2	758.2	18	755.5
3	756.5	19	749.7
4	500.5	20	745.9
5	708.5	21	739.9
6	757.3	22	731.5
7	762.8	23	722.9
8	759.8	24	650.7
9	756.9	25	750.5
10	682.8	26	602.5
11	754.2	27	733.1
12	753.7	28	734.6
13	748.1	29	731.6
14	744.8	30	703.9
15	739.4	31	559.8
16	729.8		

### 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: 09-06-91  
Completed by: M. A. Negron  
Telephone: 804-365-2795

Month: August 1991

<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>	<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>
1	756.8	17	657.7
2	529.0	18	612.2
3	0.0	19	629.9
4	0.0	20	706.8
5	0.0	21	581.6
6	0.0	22	588.2
7	461.3	23	430.0
8	727.8	24	416.8
9	712.8	25	425.3
10	705.4	26	423.4
11	709.5	27	429.8
12	701.8	28	401.0
13	702.3	29	404.0
14	617.2	30	414.4
15	418.2	31	410.6
16	460.6		

### 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: August 1991

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

08-01-91	0000	This report period started with the Unit operating at 100% power and 765 MWe.
	0945	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 99.5% power, 765 MWe.
	1224	Stopped power reduction; 78.5% power, 605 MWe.
	2200	Started ramp up; 79.2% power, 625 MWe.
08-02-91	0005	Stopped ramp; 99.5% power, 800 MWe.
08-04-91	0030	Started power reduction to hydrolase waterboxes; 100% power, 790 MWe.
	0252	Stopped power reduction; 74.5% power, 560 MWe.
08-05-91	0305	Started ramp up; 69.5% power, 510 MWe.
	0540	Stopped ramp; 100% power, 800 MWe.
08-10-91	0945	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 100% power, 775 MWe.
	1215	Stopped power reduction; 72% power, 530 MWe.
	1534	Started ramp up; 70% power, 500 MWe.
	2038	Stopped ramp; 100% power, 800 MWe.
08-16-91	2245	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 100% power, 760 MWe.
08-17-91	0116	Stopped power reduction; 78% power, 575 MWe.
	1912	Started ramp up; 74.5% power, 590 MWe.
	2212	Stopped ramp; 100% power, 790 MWe.
08-23-91	2150	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 100% power, 760 MWe.
	2400	Stopped power reduction; 85.5% power, 640 MWe.
08-24-91	1326	Started power reduction while cleaning waterboxes; 85.5% power, 630 MWe.
	1404	Stopped power reduction; 76% power, 540 MWe.
	1456	Started ramp up; 76% power, 600 MWe.

## SUMMARY OF OPERATING EXPERIENCE

MONTH/YEAR: August 1991

[continued]

### UNIT ONE [continued]

08-24-91 [continued]	1818	Stopped ramp; 100% power, 790 MWe.
08-26-91	0329	Unit experienced a turbine runback due to the loss of "D" and "E" Transfer Bus. Power was reduced from 100% power, 790 MWe to 70% power, 500 MWe.
	1053	Started power increase; 73% power, 567 MWe.
	0243	Stopped power increase; 100% power, 780 MWe.
08-30-91	1605	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 100% power, 765 MWe.
	2340	Stopped power reduction; 66% power, 450 MWe.
08-31-91	1302	Started ramp up; 63% power, 460 MWe.
	1732	Stopped ramp; 100% power, 795 MWe.
	2400	This reporting period ended with the Unit operating at 100% power and 790 MWe.

### UNIT TWO

08-01-91	0000	This report period started with the Unit operating at 100% power and 800 MWe.
08-02-91	1507	Unit power was reduced to 92% power due to steam dump operation resulting from electrical spiking on Vital Bus 2-IVA.
	1657	The Unit experienced a Reactor Trip/Safety Injection as a result of a power supply failure on Vital Bus 2-IVA. The Unit was stabilized at Hot Shutdown.
08-06-91	1747	Reactor critical.
08-07-91	0217	Unit on line and increasing power.
	2100	Unit at 100% power.
08-08-91	2020	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 100% power, 770 MWe.
08-09-91	0343	Stopped power reduction and started power increase; 81% power, 635 MWe.
	0616	Stopped power increase; 100% power, 795 MWe.
	2338	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 100% power, 775 MWe.

**SUMMARY OF OPERATING EXPERIENCE****MONTH/YEAR:** August 1991

[continued]

**UNIT TWO** [continued]

08-10-91	0130	Stopped power reduction; 81.5% power, 628 MWe.
	0310	Started power increase; 81.5% power, 625 MWe.
	0910	Stopped power increase; 100% power, 800 MWe.
08-11-91	0745	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 100% power, 775 MWe.
	0940	Stopped power reduction; 80% power, 610 MWe.
	1226	Started ramp up; 80% power, 640 MWe.
	1500	Stopped ramp; 100% power, 800 MWe.
08-12-91	1448	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 100% power, 765 MWe.
	2239	Stopped power reduction; 79.7% power, 600 MWe.
08-13-91	0217	Started ramp up; 80% power, 625 MWe.
	0545	Stopped ramp; 100% power, 800 MWe.
	2129	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 100% power, 770 MWe.
	2220	Stopped power reduction; 86% power, 670 MWe.
08-14-91	0548	Started ramp up; 85% power, 670 MWe.
	0649	Stopped ramp; 100% power, 800 MWe.
	1013	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 99% power, 780 MWe.
	1041	Stopped power reduction; 93% power, 710 MWe.
	1252	Started ramp up; 93% power, 740 MWe.
	1329	Stopped ramp; 100% power, 795 MWe.
	1753	Control Rod D-4 dropped causing the unit to experience a runback to 53.9% power, 370 MWe.
08-15-91	2134	Started ramp up to stop Main Feedwater Pump recirculation mode; 58% power, 465 MWe.
	2154	Stopped ramp below rod stop setpoint to perform flux mapping; 65% power, 490 MWe.
08-16-91	1735	Started ramp up following completion of flux mapping; 62% power, 470 MWe.

## SUMMARY OF OPERATING EXPERIENCE

MONTH/YEAR: August 1991

[continued]

### UNIT TWO [continued]

08-17-91	0642	Stopped ramp due to power restriction (based on results of 8/16/91 flux mapping); 90% power, 725 MWe.
08-18-91	1600	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 90% power, 700 MWe.
	1820	Stopped power reduction; 70% power, 730 MWe.
08-19-91	0044	Started power increase; 70% power, 540 MWe.
	1156	Stopped power increase; 90% power, 690 MWe.
08-20-91	0015	Started ramp up (power restriction cleared based on results of 8/17/91 flux mapping); 90% power, 735 MWe.
	0313	Stopped ramp; 100% power, 805 MWe.
	1322	Started unit power reduction to maintain condenser vacuum while cleaning waterboxes; 100% power, 770 MWe.
08-21-91	0810	Stopped power reduction; 81% power, 620 MWe.
08-23-91	0435	Control Rod D-4 dropped causing unit to runback from 80% power to 50% power.
	1105	Started power increase; 52% power, 390 MWe.
	1325	Stopped power increase; 60% power, 460 MWe.
08-31-91	2400	This report ended with the Unit operating at 60% power, 430 MWe because of dropped control rod D-4.

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

MONTH/YEAR: August 1991

**EWR 90-270J                      Engineering Work Request                      08-01-91**  
**(Safety Evaluation No. 90-222)**

This Engineering Work Request (EWR) installed a flow path between the chilled Component Cooling (CC) Water system and the abandoned Boron Evaporator demineralizers to provide a means for removing contaminants from and reducing radiation levels in the CC system.

This modification is an extension of the CC system and does not affect the operability or function of the system. The piping modification was designed and installed in accordance with the original engineering design requirements of the CC system and thus does not adversely impact the previously analyzed accidents. Therefore, an unreviewed safety question was not created.

**EWR 91-097                      Engineering Work Request                      08-04-91**  
**(Safety Evaluation No. 91-183)**

This Engineering Work Request (EWR) modified the circuit breaker wiring in the 500 kilovolt switchyard such that a Unit 2 shutdown will be initiated if breakers G2T567 and G202 or 53102 are opened. The EWR also changes breaker 53102 to operate as a lagging reclose breaker.

This modification was implemented to prevent a scenario in which the Unit 2 main generator is isolated from the system but continues to supply station service loads. The affected switchyard equipment is non-safety related, thus the modification will not impact accident mitigation or safe shutdown capability. Therefore, an unreviewed safety question is not created.

**EWR 91-093                      Engineering Work Request                      08-09-91**  
**(Safety Evaluation No. 91-175)**

This Engineering Work Request (EWR) changes the alarm setpoint of the tailpipe temperature for the Unit 2 letdown relief valve, 2-CH-RV-2203. This change increases the alarm setpoint temperature from 135 °F to 165 °F to eliminate nuisance alarms caused by high ambient temperatures.

This change affects only the Control Room annunciator alarm setpoint and is sufficiently low to indicate leakage through the valve. The alarm setpoint has no impact on any safety parameters and does not change the operational characteristics of the unit. Therefore, an unreviewed safety question is not created.



## FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: August 1991

[continued]

AC S1-91-0808      **Administrative Control**      08-22-91  
(Safety Evaluation No. 91-193)

Administrative Control of the Number 2 Emergency Switchgear room (ESGR)/Turbine Building door will be established by stationing a person at the door to immediately disconnect temporary air hoses routed through the door and close the door in the event of a main control room (MCR) air bottle bank discharge. The person will also perform the required fire watch responsibilities while the door is open.

Establishment of administrative control of the subject door ensures the capability of rapidly restoring the MCR/ESGR pressure envelope to required conditions, thus minimizing the potential for exposure of MCR personnel to radioactivity releases in the event of an accident. Therefore, an unreviewed safety question is not created.

TSR 91-073      **Temporary Shielding Requests**      08-22-91  
(Safety Evaluation No. 91-194)

This Temporary Shielding Request (TSR) installs temporary lead shielding on Safety Injection (SI) System piping in the Unit 2 "B" Charging Pump cubicle to reduce the radiation dose received by personnel while working in the Charging Pump cubicle.

The subject SI lines will remain operable while the shielding is installed. A seismic analysis was performed and the installation was determined to be acceptable. Therefore, an unreviewed safety question does not exist.

TM S1-91-16      **Temporary Modification**      08-19-91  
(Safety Evaluation No. 91-188)

This Temporary Modification (TM) installs a gage, tubing, and fittings in the instrument air supply to the Unit 1 vent gas header containment isolation valve, 1-VG-TV-109B, to allow troubleshooting and analysis of the valve's air regulator.

The subject valve will be considered inoperable while this modification is in place, but will continue to function as designed (fail closed upon loss of air, power, or upon receipt of the Phase I containment isolation signal). The redundant valve, 1-VG-TV-109A, will be kept closed under administrative control to ensure Technical Specifications containment integrity requirements are maintained. Therefore, an unreviewed safety question is not created.

## FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: August 1991

[continued]

TM S2-91-36      **Temporary Modification**      08-21-91  
(Safety Evaluation No. 91-189)

This Temporary Modification (TM) installs a recorder to monitor the contact resistance of the Nuclear Instrumentation Source Range channel II high voltage switching circuit.

This TM will be used for identification of the cause of the high voltage power supply energizing when at power. The recorder will only monitor the circuit and will not affect the operation of the Source Range Nuclear Instrumentation. Therefore, an unreviewed safety question is not created.

QLCR R91-012      **Q-List Change Request**      08-22-91  
(Safety Evaluation No. 91-190)

This Q-List Change Request changes the classification of some Emergency Diesel Generator (EDG) air starting system components from "safety-related" to "non-safety related."

The subject components do not perform a safety function and the EDG starting circuit is designed with adequate redundancy and capacity (designed to provide three starts with a loss of electrical power to the air compressor). Therefore, an unreviewed safety question is not created.

TM S2-91-37      **Temporary Modification**      08-23-91  
(Safety Evaluation No. 91-195)

This Temporary Modification (TM) installs electrical jumpers to permit the replacement of failed Unit 2 Reactor Protection System (RPS) undervoltage relay 27-3XA while maintaining the "A" train logic and preventing an inadvertent reactor trip or auxiliary feedwater pump automatic start.

This TM will not affect the "B" train of the RPS and thus will not affect the ability of the RPS to perform its intended safety function. Therefore, an unreviewed safety question is not created.

## FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: August 1991

[continued]

TM S1-91-17      **Temporary Modification**      08-25-91  
(Safety Evaluation No. 91-196A)

This Temporary Modification (TM) installs a capping device on the damaged Unit 1 Low Pressure (LP) Turbine rupture disc. The device will help to maintain condenser vacuum by sealing holes in the rupture disc until it can be replaced when the unit is off line.

The capping device will be held in place only by the condenser vacuum and will not affect the ability of the rupture disc to perform its intended function (condenser overpressure protection). In addition, a lanyard will be attached to the cap to prevent a missile hazard in the event the rupture disc is actuated. Therefore, an unreviewed safety question is not created.

SE 91-198      **Safety Evaluation**      08-27-91

This Safety Evaluation assesses the operation of Unit 2 at 60% power with Rod Cluster Control Assembly D-4 fully inserted for a period of fourteen days during which troubleshooting and corrective actions will be performed to address the related dropped rod event.

The evaluation concluded that safety limits will continue to be met while operating under these conditions for a period of fourteen days. In addition, it was determined by an evaluation that the applicable UFSAR accident analyses remain bounding. Therefore, an unreviewed safety question is not created.

## FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: August 1991

[continued]

SE 91-198B

### Safety Evaluation

08-28-91

This Safety Evaluation assesses blocking the Unit 2 Turbine Load Reference Runback signal from Nuclear Instrumentation system channel, N-43, during the withdrawal of Rod Cluster Control Assembly (RCCA) D-4 from the fully inserted to the fully withdrawn position and engaging the stationary gripper using the "DC Hold" power supply. This action will prevent a potential turbine runback and reactor trip in the event RCCA D-4 is dropped during this evolution.

The evaluation concluded that this activity is acceptable on the condition that the power level be maintained at or below 60% reactor thermal power (while the rod is being withdrawn), the rod control system is placed in the manual mode, and that the turbine runback feature be reenabled within two hours of withdrawing RCCA D-4. In addition, it was concluded that the current core reload safety evaluation remains bounding and the assumptions of the UFSAR accident analyses remain unchanged. Therefore, an unreviewed safety question is not created.

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

**MONTH/YEAR:** August 1991

1-OSP-AMS-001      **Operations Surveillance Procedure**      08-22-91  
(Safety Evaluation No. 91-192)

Unit 1 Operations Surveillance Procedure, 1-OSP-AMS-001, "Anticipated Transients Without Scram (ATWS) System Functional Surveillance" was developed to provide instructions for conducting a functional test of ATWS Mitigation System Actuation Circuitry (AMSAC).

This procedure will be performed with the unit at cold shutdown and will not affect station control systems. Therefore, an unreviewed safety question is not created.

2-OSP-AMS-001      **Operations Surveillance Procedure**      08-22-91  
(Safety Evaluation No. 91-191)

Unit 2 Operations Surveillance Procedure, 2-OSP-AMS-001, "Anticipated Transients Without Scram (ATWS) System Functional Surveillance" was developed to provide instructions for conducting a functional test of ATWS Mitigation System Actuation Circuitry (AMSAC).

This procedure will be performed with the unit at cold shutdown and will not affect station control systems. Therefore, an unreviewed safety question is not created.

1-OPT-ZZ-001      **Operations Periodic Test Procedure**      08-29-91  
(Safety Evaluation No. 91-199)

Unit 1 Operations Periodic Test Procedure, 1-OPT-ZZ-001, "Engineered Safety Features Actuation With Delayed Undervoltage 1H Bus" was revised to include verification that temporary modifications, used for the testing of the Safety Injection system undervoltage logic, do not adversely impact plant operation.

This procedure will be performed with the unit at cold shutdown and at least two cooling loops operable (i.e. the Residual Heat Removal system pump not being tested and a Reactor Coolant pump). Only one train of a safety system will be tested at a time. Therefore, an unreviewed safety question is not created.

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

**MONTH/YEAR:** August 1991

[continued]

1-OPT-ZZ-002      **Operations Periodic Test Procedure**      08-29-91  
(Safety Evaluation No. 91-200)

Unit 1 Operations Periodic Test Procedure, 1-OPT-ZZ-002, "Engineered Safety Features Actuation With Delayed Undervoltage 1J Bus" was revised to include verification that temporary modifications, used for the testing of the Safety Injection system undervoltage logic, do not adversely impact plant operation.

This procedure will be performed with the unit at cold shutdown and at least two cooling loops operable (i.e. the Residual Heat Removal system pump not being tested and a Reactor Coolant pump). Only one train of a safety system will be tested at a time. Therefore, an unreviewed safety question is not created.

2-OPT-ZZ-001      **Operations Periodic Test Procedure**      08-29-91  
(Safety Evaluation No. 91-201)

Unit 2 Operations Periodic Test Procedure, 2-OPT-ZZ-001, "Engineered Safety Features Actuation With Delayed Undervoltage 2H Bus" was revised to include verification that temporary modifications, used for the testing of the Safety Injection system undervoltage logic, do not adversely impact plant operation.

This procedure will be performed with the unit at cold shutdown and at least two cooling loops operable (i.e. the Residual Heat Removal system pump not being tested and a Reactor Coolant pump). Only one train of a safety system will be tested at a time. Therefore, an unreviewed safety question is not created.

2-OPT-ZZ-002      **Operations Periodic Test Procedure**      08-29-91  
(Safety Evaluation No. 91-202)

Unit 2 Operations Periodic Test Procedure, 2-OPT-ZZ-002, "Engineered Safety Features Actuation With Delayed Undervoltage 2J Bus" was revised to include verification that temporary modifications, used for the testing of the Safety Injection system undervoltage logic, do not adversely impact plant operation.

This procedure will be performed with the unit at cold shutdown and at least two cooling loops operable (i.e. the Residual Heat Removal system pump not being tested and a Reactor Coolant pump). Only one train of a safety system will be tested at a time. Therefore, an unreviewed safety question is not created.

**TESTS AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL**

**MONTH/YEAR:** August 1991

None During This Reporting Period.

**CHEMISTRY REPORT**

**MONTH/YEAR:** August 1991

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioact., $\mu\text{Ci/ml}$	6.68E-1	3.96E-1	5.08E-1	2.17E-1	3.99E-3	1.05E-1
Suspended Solids, ppm	0.0	0.0	0.0	0.0	0.0	0.0
Gross Tritium, $\mu\text{Ci/ml}$	1.86E-1	1.79E-1	1.84E-1	2.29E-1	1.89E-1	2.09E-1
$\text{I}^{131}$ , $\mu\text{Ci/ml}$	3.24E-3	1.61E-3	2.11E-3	4.33E-3	5.35E-5	5.22E-4
$\text{I}^{131}/\text{I}^{133}$	0.13	0.07	0.09	0.21	0.07	0.12
Hydrogen, cc/kg	38.7	29.1	32.8	40.0	29.6	32.7
Lithium, ppm	2.33	1.94	2.17	3.29	1.77	2.26
Boron - 10, ppm*	97.6	72.3	81.3	372.2	257.7	293.2
Oxygen, (DO), ppm	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$	$\leq 0.005$
Chloride, ppm	0.003	0.002	0.002	0.003	$\leq 0.001$	0.002
pH at 25 degree Celsius	7.13	6.89	7.04	6.38	5.81	6.26

\* Boron - 10 = Total Boron x 0.196

Comments:

Unit 1: Lithium was outside the limits of the Boron/Lithium Program, low on 8-24 for 2 hours and 20 minutes.

Unit 2: Lithium was outside the limits of the Boron/Lithium Program, low on 8-15 for 6 hours and 5 minutes, 8-16 for 5 hours, 8-24 for 20 hours and 20 minutes and 8-25 for 50 minutes. Lithium was outside the limits of the Boron/Lithium Program for a total of 32 hours and 15 minutes.



**FUEL HANDLING  
UNITS 1 & 2**

MONTH/YEAR: August 1991

**Units One and Two**

Cask	Stored	Number for Assemblies per Shipment	Assembly Number	ANSI Number	Nominal Initial Enrichment	New or Spent Fuel Shipping Cask Activity
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None during this reporting period.

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

**MONTH/YEAR:** August 1991

None During This Reporting Period.