

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

May 12, 1993

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

Serial No. 93-294
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 April 1993.

Very truly yours,



M. L. Bowling, Manager
Nuclear Licensing & Programs

Enclosure

cc: U. S. Nuclear Regulatory Commission
Region II
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Suite 2900
Atlanta, Georgia 30323

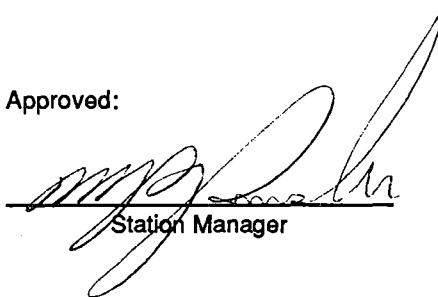
Mr. M. W. Branch
NRC Senior Resident Inspector
Surry Power Station

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**VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION
MONTHLY OPERATING REPORT
REPORT NO. 93-04**

Approved:


Station Manager

5/10/93
Date

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OPERATING DATA REPORT

Docket No.: 50-280
 Date: 05-07-93
 Completed By: D. Mason
 Telephone: (804) 365-2459

- 1. Unit Name:..... Surry Unit 1
- 2. Reporting Period: April 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	719.0	2879.0	178439.0
12. Number of Hours Reactor Was Critical	719.0	2772.4	118147.0
13. Reactor Reserve Shutdown Hours	0.0	0.0	3774.5
14. Hours Generator On-Line.....	719.0	2754.0	116029.4
15. Unit Reserve Shutdown Hours.....	0.0	0.0	3736.2
16. Gross Thermal Energy Generated (MWH).....	1751369.0	6484491.5	270103770.6
17. Gross Electrical Energy Generated (MWH)....	591070.0	2189990.0	88208243.0
18. Net Electrical Energy Generated (MWH).....	563909.0	2083690.0	83681550.0
19. Unit Service Factor.....	100.0%	95.7%	65.0%
20. Unit Availability Factor.....	100.0%	95.7%	67.1%
21. Unit Capacity Factor (Using MDC Net).....	100.4%	92.7%	60.5%
22. Unit Capacity Factor (Using DER Net).....	99.5%	91.8%	59.5%
23. Unit Forced Outage Rate.....	0.0%	4.3%	18.1%

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: 05-07-93
 Completed By: D. Mason
 Telephone: (804) 365-2459

- 1. Unit Name:..... Surry Unit 2
- 2. Reporting Period: April 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	719.0	2879.0	175319.0
12. Number of Hours Reactor Was Critical	0.0	1539.3	115226.2
13. Reactor Reserve Shutdown Hours	0.0	0.0	328.1
14. Hours Generator On-Line.....	0.0	1539.0	113470.0
15. Unit Reserve Shutdown Hours.....	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH).....	0.0	3529334.5	264860408.3
17. Gross Electrical Energy Generated (MWH)....	0.0	1183135.0	86379039.0
18. Net Electrical Energy Generated (MWH).....	0.0	1122728.0	81913141.0
19. Unit Service Factor.....	0.0%	53.5%	64.7%
20. Unit Availability Factor.....	0.0%	53.5%	64.7%
21. Unit Capacity Factor (Using MDC Net).....	0.0%	49.9%	59.9%
22. Unit Capacity Factor (Using DER Net).....	0.0%	49.5%	59.3%
23. Unit Forced Outage Rate.....	0.0%	0.0%	14.2%

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: May 5, 1993

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: April 1993

Docket No.: 50-280
 Unit Name: Surry Unit 1
 Date: 05-07-93
 Completed by: Anthony Xenakis
 Telephone: (804) 365-2145

(1) Date	(1) Type	(2) Duration Hours	(2) Reason	(3) Method of Shutting Down Rx	LER No.	(4) System Code	(5) Component Code	Cause & Corrective Action to Prevent Recurrence
930415	F	0	B	4	N/A	EL	FAN	Unit power was reduced to 64% to replace "C" Isolated Phase Bus Duct Cooling Fan Belt.

(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: April 1993

Docket No.: 50-281
 Unit Name: Surry Unit 2
 Date: 05-07-93
 Completed by: Anthony Xenakis
 Telephone: (804) 365-2145

(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
930401	S	719	C	1	N/A	N/A	N/A	Unit shut down for 60 day refueling outage.

(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: 05-07-93
Completed by: M. A. Negrón
Telephone: (804) 365-2795

Month: April 1993

<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>	<u>Day</u>	<u>Average Daily Power Level (MWe - Net)</u>
1	789	17	786
2	794	18	788
3	789	19	788
4	755	20	788
5	788	21	786
6	786	22	787
7	785	23	786
8	785	24	787
9	787	25	797
10	787	26	795
11	786	27	792
12	786	28	782
13	786	29	778
14	788	30	775
15	767		
16	727		

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: 05-07-93
Completed by: M. A. Negron
Telephone: (804) 365-2795

Month: April 1993

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

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: April 1993

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

04/01/93	0000	This reporting period began with the Unit operating at 100% power, 825 MWe.
04/15/93	2114	Started ramp down to remove "C" Isolated Phase Bus Duct Cooling Fan from service to replace the belt; 100% power, 825 MWe.
	2240	Stopped ramp; 64% power, 510 MWe.
04/16/93	0330	Started ramp up; 63% power, 500 MWe.
04/30/93	2400	This reporting period ended with the Unit operating at 100% power, 825 MWe.

UNIT TWO

04/01/93	0000	This reporting period began with the Unit in a scheduled refueling outage.
04/30/93	2400	This reporting period ended with the Unit at Hot Shutdown preparing to start up. Periodic test procedure 2-PT-11, "Reactor Coolant Pressure Test", was in progress.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: April 1993

- TM S1-93-06 **Temporary Modification** 04-01-93
(Safety Evaluation No. 93-067)
- Temporary Modification S2-93-06 deleted the automatic transfer scheme between 34.5 KV switchyard buses 5 and 6 and between each of these buses and transformer number 4.
- This modification maintains two independent off-site power sources and a third that is available with manual action. It did not negatively impact the operation of safety-related systems or components and eliminated the potential for damage to equipment caused by transferring loads out of phase. Therefore, an unreviewed safety question does not exist.
- TM S2-93-04 **Temporary Modification** 04-01-93
(Safety Evaluation No. 93-068)
- Temporary Modification S2-93-04 installed electrical jumpers to prevent a spurious Unit 2 safety injection system train A signal during the replacement of a reactor protection system relay 2-RP-REL-SI-5A.
- The activity was performed while Unit 2 was at cold shutdown with the safety injection system function defeated. The operation of other systems was not affected. Double verification of jumper installation/removal and post maintenance testing were performed. Therefore, an unreviewed safety question does not exist.
- TM S2-93-05 **Temporary Modification** 04-01-93
(Safety Evaluation No. 93-069)
- Temporary Modification S2-93-05 installed electrical jumpers to prevent a spurious Unit 2 safety injection system train A signal during the replacement of a reactor protection system relay CI-1A.
- The activity was performed while Unit 2 was at cold shutdown with the safety injection system function defeated. The operation of other systems was not affected. Double verification of jumper installation/removal and post maintenance testing were performed. Therefore, an unreviewed safety question does not exist.
- SE 93-070 **Safety Evaluation** 04-02-93
- Safety Evaluation 93-070 assessed isolating (for a maximum of seven days) the Unit 2 refueling water storage tank (RWST) cross-connect valves 2-SI-TV-202A and 2-SI-TV-202B to the Unit 1 RWST to permit an inspection of safety injection system check valve 2-SI-25.
- The assessment concluded that this activity was consistent with and in a fashion similar to the requirements of Technical Specification 3.2.E.2. The activity was performed while Unit 2 was shutdown and did not impact the operation of safety-related systems or components on Unit 1. Therefore, an unreviewed safety question does not exist.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: April 1993

- EWR 89-237 Engineering Work Request 04-06-93**
- Engineering Work Request (EWR) 89-237 interlocked the control room annunciators that indicate chiller trouble (i.e., a chiller trip or low service water temperature) with the respective control switches for mechanical chiller units 1-CD-REF-1A, 1-CD-REF-1B, and 2-CD-REF-1. The EWR also installed color banding on the boric acid storage tank level indicators in the control room, and interlocked the volume control tank Lo-Lo alarm so that annunciation will occur from loop L-1112 or L-1115.
- These nonsafety-related modifications are human factor enhancements that will help operators to monitor the applicable systems more effectively. The changes did not adversely affect other plant systems, equipment, or safety analyses. Therefore, an unreviewed safety question does not exist.
- TM S2-93-06 Temporary Modification 04-07-93**
(Safety Evaluation No. 93-072)
- Temporary Modification S2-93-06 installed electrical jumpers to prevent a spurious Unit 2 Hi CLS train A signal during the replacement of consequence limiting safeguards system relays 3/4-CLS-1A and 3-CLS-1AM.
- The activity was performed while Unit 2 was at cold shutdown with the safety injection system signal defeated. The operation of other systems was not affected. Double verification of jumper installation/removal and post maintenance testing were performed. Therefore, an unreviewed safety question does not exist.
- TM S2-93-07 Temporary Modification 04-07-93**
(Safety Evaluation No. 93-073)
- Temporary Modification S2-93-07 installed electrical jumpers to prevent a spurious Unit 2 Hi CLS train B signal during the replacement of a consequence limiting safeguards system relay 3/4-CLS-1B.
- The activity was performed while Unit 2 was at cold shutdown with the safety injection system signal defeated. The operation of other systems was not affected. Double verification of jumper installation/removal and post maintenance testing were performed. Therefore, an unreviewed safety question does not exist.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: April 1993

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|--|---|----------|
| DR S-93-0174 | Deviation Report
(Safety Evaluation No. 93-076) | 04-13-93 |
| <p>Deviation Report S-93-0174 assessed the continued use of charging system pressure transmitters 1-CH-FT-1130 and 2-CH-FT-2130 until they can be replaced. These safety-related transmitters, which have a design pressure of 2000 psig, are being used in the chemical and volume control system (CVCS), which has a design pressure of 2750 psig.</p> <p>The assessment concluded that it is acceptable to continue to use the subject transmitters. The process flanges of the transmitters, the major pressure retaining components, have a pressure rating of 3000 psig and are capable of withstanding CVCS pressure. In addition, a failure of the transmitters is bounded by the UFSAR pipe break and volume control tank rupture accident analyses. Therefore, an unreviewed safety question does not exist.</p> | | |
| TM S2-93-10 | Temporary Modification
(Safety Evaluation No. 93-081) | 04-16-93 |
| <p>Temporary Modification S2-93-10 installed electrical jumpers to prevent a spurious Unit 2 Hi CLS train B signal during the replacement of consequence limiting safeguards system relays 2-CLS-REL-1BM and 2-CLS-REL-1B01.</p> <p>The activity was performed while Unit 2 was at cold shutdown with the safety injection system signal defeated. The operation of other systems was not affected. Double verification of jumper installation/removal and post maintenance testing were performed. Therefore, an unreviewed safety question does not exist.</p> | | |
| TM S2-93-11 | Temporary Modification
(Safety Evaluation No. 93-082) | 04-16-93 |
| <p>Temporary Modification S2-93-11 installed electrical jumpers to prevent a spurious Unit 2 Hi CLS train A signal during the replacement of a consequence limiting safeguards system relay 2-CLS-REL-1A01.</p> <p>The activity was performed while Unit 2 was at cold shutdown with the safety injection system signal defeated. The operation of other systems was not affected. Double verification of jumper installation/removal and post maintenance testing were performed. Therefore, an unreviewed safety question does not exist.</p> | | |
| DCP 92-63-3 | Design Change Package | 04-17-93 |
| <p>Design Change Package 92-63-3 installed permanent manways on vertical sections of the Units 1 and 2 main steam crossunder piping to provide access for inspections and repairs.</p> <p>This modification did not affect the operation or function of the nonsafety-related main steam system or any other system. The UFSAR or Technical Specifications were not affected. Therefore, an unreviewed safety question does not exist.</p> | | |

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: April 1993

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|-------------|---|----------|
| DCP 92-06-3 | Design Change Package | 04-21-93 |
| | <p>Design Change Package 92-06-3 replaced the Units 1 and 2 low pressure heater drain pumps recirculation piping with larger diameter piping to allow for greater recirculation flow.</p> <p>This modification did not affect the operational methods or procedures for the nonsafety-related low pressure heater drains system or any other system. The low pressure heater drain pumps (including their discharge and recirculation piping) are not discussed in the Technical Specifications or described in detail in the UFSAR. Therefore, an unreviewed safety question does not exist.</p> | |
| TM S2-93-12 | Temporary Modification
(Safety Evaluation No. 93-089) | 04-21-93 |
| | <p>Temporary Modification S2-93-12 installed an electrical jumper to maintain power to certain Unit 2 reactor protection (RP) system train A circuit relays during the replacement of a RP system relay PRB-YA.</p> <p>The activity was performed while Unit 2 was at cold shutdown with the reactor trip breakers open. The operation of other systems was not affected. Double verification of jumper installation/removal and post maintenance testing were performed. Therefore, an unreviewed safety question does not exist.</p> | |
| TM S2-93-13 | Temporary Modification
(Safety Evaluation No. 93-088) | 04-21-93 |
| | <p>Temporary Modification S2-93-13 installed electrical jumpers to maintain power to certain Unit 2 reactor protection (RP) system train B circuit relays during the replacement of a RP system relay SDX6-B.</p> <p>The activity was performed while Unit 2 was at cold shutdown. The operation of other systems was not affected. Double verification of jumper installation/removal and post maintenance testing were performed. Therefore, an unreviewed safety question does not exist.</p> | |
| DCP 91-11-3 | Design Change Package
(Safety Evaluation No. 91-247) | 04-22-93 |
| | <p>Design Change Package 91-11-3 replaced Units 1 and 2 pressurizer heater feeder and branch cables, distribution panels, and distribution panel circuit breakers in order to eliminate problems resulting from high ambient temperatures and electrical overloads.</p> <p>The modifications were performed while the units were at cold shutdown. These changes improved the design and performance characteristics of the affected systems and do not impact any UFSAR accident analyses. Therefore, an unreviewed safety question does not exist.</p> | |

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: April 1993

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|--|--|----------|
| DR S-93-0485 | Deviation Report
(Safety Evaluation No. 93-092) | 04-23-93 |
| <p>Deviation Report S-93-0485 assessed the structural condition of the containment equipment hatch platform and its ability to support the equipment hatch missile shield during tornado wind loading.</p> <p>The assessment concluded, based on a structural analysis, that the platform may be degraded by tornado wind loading. However, it would continue to provide adequate support for the missile shield enabling it to protect the equipment hatch. Therefore, an unreviewed safety question does not exist.</p> | | |
| TM S2-93-14
TM S2-93-15 | Temporary Modifications
(Safety Evaluation No. 93-091) | 04-23-93 |
| <p>Temporary Modifications S2-93-14 and S2-93-15 installed electrical jumpers to maintain power to certain Unit 2 reactor protection (RP) system train B circuit relays during the replacement of RP system relays SRB-XB and SRB-YB.</p> <p>The activity was performed while Unit 2 was at cold shutdown with the reactor trip breakers open. The operation of other systems was not affected. Double verification of jumper installation/removal and post maintenance testing were performed. Therefore, an unreviewed safety question does not exist.</p> | | |
| DCP 92-67-2 | Design Change Package
(Safety Evaluation No. 92-188) | 04-26-93 |
| <p>Design Change Package 92-67-2 replaced miscellaneous Unit 2 carbon steel secondary systems piping with enhanced erosion/corrosion resistant chromemolly piping in order to mitigate flow assisted corrosion.</p> <p>The modifications were performed while the unit was at cold shutdown. These changes enhanced the integrity and safe operation of the affected systems and did not impact their operation or function. Therefore, an unreviewed safety question does not exist.</p> | | |
| TM S2-93-16 | Temporary Modification
(Safety Evaluation No. 93-095) | 04-26-93 |
| <p>Temporary Modification S2-93-16 installed a plug in the vent line to the oil sensor level for the Unit 2 reactor coolant pump B motor bearing lubrication system.</p> <p>This modification was made to reduce turbulence and provide a more reliable indication of oil level. The credible results of a failure of the plug are bounded by the applicable UFSAR accident analyses. Therefore, an unreviewed safety question does not exist.</p> | | |

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: April 1993

TM S2-93-17 Temporary Modification 04-27-93
(Safety Evaluation No. 93-097)

Temporary Modification S2-93-17 disabled the current temperature input to the Unit 2 main transformer winding temperature gauge, changed the gauge alarm setpoint, and placed the main transformer cooling system in the manual mode of operation. This change resulted from an equipment malfunction within the main transformer oil tank that prevented the winding temperature gauge from being calibrated.

Main transformer cooling oil temperature will continue to be an input to the subject gauge. These modifications will ensure that sufficient cooling and malfunction alarms are provided for the nonsafety-related main transformers. The operation of other systems was not affected. Therefore, an unreviewed safety question does not exist.

TM S2-93-18 Temporary Modification 04-28-93
(Safety Evaluation No. 93-098)

Temporary Modification S2-93-18 installed an electrical jumper to prevent a spurious Hi CLS signal to the safety injection (SI) system train B circuit while the wires on failed contacts of Unit 2 reactor protection system relay 3-CLS-1BM were relocated to spare contacts.

Unit 2 was below 350°F and 450 psig during this activity and the SI train A logic was not affected. Double verification of the jumper installation/removal and post maintenance testing were performed. Therefore, an unreviewed safety question does not exist.

TM S2-93-020 Temporary Modification 04-30-93
2-IPT-CC-RC-T-412 Instrument Periodic Test Procedures
2-IPT-FT-RC-T-412 (Safety Evaluation No. 93-102)

Temporary Modification S2-93-020 changed the Unit 2 reactor coolant system loop A hot leg average temperature (T_{h-avg}) summator to calculate T_{h-avg} by averaging the data from two resistance temperature devices (RTD) rather than three. This change was necessary since the measured response time of one of the RTDs and its corresponding spare exceeded the design value. Instrument Periodic Test Procedures 2-IPT-CC-RC-T-412, "Delta T and TAVG Loop T-412 Channel Calibration" and 2-IPT-FT-RC-T-412, "Delta T and TAVG Protection Channel Functional Test Data Package" were temporarily revised to address this modification.

This change has a small effect on the temperature input to the reactor protection system. However, the change is within the uncertainties of the channel statistical allowance and the Safety Analysis. Therefore, an unreviewed safety question does not exist.

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

MONTH/YEAR: April 1993

2-FDTP-92-64-3-1 **Final Design Test Procedure** 03-04-93
(Safety Evaluation No. 93-037)

Final Design Test Procedure 2-FDTP-92-64-3-1, "Charging Pump Logic Modifications" was developed to provide instructions for performing an integrated functional test and verification of Unit 2 charging pump operability following the completion of Design Change Package 92-64-3.

The test was performed while Unit 2 was shutdown with no fuel in the reactor vessel. The charging system was unavailable and the appropriate Unit 1 Technical Specification limiting condition for operation was entered. Therefore, an unreviewed safety question does not exist.

JCO 89-3-009 **Justification For Continued Operation** 03-12-93
(Safety Evaluation No. 93-048)

Justification For Continued Operation (JCO) 89-3-009 assessed the condition in which the refueling water storage tank low level bistable test switch is placed in the test position. In this position, the recirculation mode transfer actuation circuit is bypassed and the trip logic is reduced from 2-out-of-4 to 2-out-of-3. This condition does not meet the requirements of IEEE 279-1971, section 4.13 since it is not continuously indicated in the control room.

The JCO revised the applicable periodic test procedures to require the test technician to notify the control room when the test switch is placed in the test position. The assessment concluded that this notification satisfies the IEEE requirement. In addition, it was determined that the single failure criteria continue to be met and the affected systems are able to perform their intended functions. Therefore, an unreviewed safety question does not exist.

2-OP-RH-002 **Operating Procedure** 04-06-93
(Safety Evaluation No. 93-071)

Operating Procedure 2-OP-RH-002, "Dewatering the Reactor Cavity Using RHR" was developed to provide instructions for lowering the reactor coolant system level in the reactor cavity using the residual heat removal (RHR) system.

The procedure controls the installation of a temporary modification that defeats the seal-in feature for Unit 2 RHR valve 2-RH-MOV-2720B. This modification allows the control room operator to have more precise control of the valve during the drain down operation. The procedure was performed while the unit was at cold shutdown. There was no effect on the operation of the RHR system or any UFSAR accident analyses. Therefore, an unreviewed safety question does not exist.

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

MONTH/YEAR: April 1993

1-PT-8.1 **Periodic Test Procedures** 04-10-93
2-PT-8.1 (Safety Evaluation No. 93-075)

Periodic Test Procedures 1-PT-8.1 and 2-PT-8.1, "Reactor Protection System Logic (for Normal Operations)," were revised to incorporate administrative control steps for the steam generator (SG) blowdown permissive key switches to ensure proper operation of the SG blowdown trip valves.

This change places the SG blowdown permissive key switches under administrative control when in the permissive mode during monthly logic testing. The procedural steps direct an operator to place the key switches in the normal position in the event of an auxiliary feedwater system automatic start signal. This action ensures operability of the SG blowdown trip valves. Therefore, an unreviewed safety question does not exist.

2-OPT-ZZ-001 **Operations Periodic Test Procedures** 04-14-93
2-OPT-ZZ-002 (Safety Evaluation No. 93-079)

Operations Periodic Test Procedures 2-OPT-ZZ-001, "ESF Actuation with Undervoltage and Degraded Voltage - 2H Bus" and 2-OPT-ZZ-002, "ESF Actuation with Undervoltage and Degraded Voltage - 2J Bus" were temporarily revised to provide instructions for installing electrical jumpers to support the testing of relays SI-5A, CI-1A, C1-1A1, 3-CLS-2A3, F1-B, F2-B, and F3-B.

The Unit was at cold shutdown during the performance of this testing. The procedurally controlled temporary modifications and administrative controls ensured compliance with the Technical Specifications. Therefore, an unreviewed safety question does not exist.

2-OP-15.1 **Operating Procedure** 04-17-93
(Safety Evaluation No. 93-084)

Operating Procedure 2-OP-15.1, "Putting the Reactor Cavity Purification System in Service" was temporarily revised to provide instructions for installing a temporary piping jumper to facilitate flushing a reactor cavity purification (RL) system line with primary grade (PG) water.

This activity was performed when the RL system was not required to be in service and did not affect the margin of safety of the Technical Specifications. The jumper and associated valves were adequately rated to withstand PG water pressure. Therefore, an unreviewed safety question does not exist.

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

MONTH/YEAR: April 1993

1-EPT-1803-01 **Electrical Periodic Test Procedures** 04-26-93
2-EPT-1803-01 (Safety Evaluation No. 93-094)

Electrical Periodic Test Procedures 1-EPT-1803-01 and 2-EPT-1803-01, "Turbine Solenoid Trip Protective Relay Testing," were developed to provide instructions for installing electrical jumpers and de-terminating electrical leads to facilitate turbine trip functional testing.

These procedures are performed during unit start-up or shut-downs (< 10 % reactor power) when the turbine protection system is not required. Double verification of jumper installation/removal and post maintenance testing is required. Therefore, an unreviewed safety question does not exist.

FS 92-73 **UFSAR Change** 04-27-93
(Safety Evaluation 93-096)

Updated Final Safety Analysis Report Change 92-73 revised section 6.3.1.3, "[Spray System] Description," to include the option of using the mechanical refrigeration units to initially cool the water in the refueling water storage tanks (RWST) below 45 °F.

This change provides operational flexibility by permitting an alternate method of initially cooling water in the RWST. It does not affect RWST operation or the applicable UFSAR accident analyses. Therefore, an unreviewed safety question does not exist.

JCO C-93-001 **Justification For Continued Operation** 04-30-93
(Safety Evaluation No. 93-100)

Justification For Continued Operation (JCO) C-93-001 assessed fire barriers that do not satisfy the full one hour or three hour rating with respect to 10 CFR 50, Appendix R compliance.

The JCO established fire watches in the affected areas to provide for early fire detection and suppression. The assessment concluded that these measures will meet the intent of 10 CFR 50, Appendix R. Therefore, an unreviewed safety question does not exist.

TESTS AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL

MONTH/YEAR: April 1993

None

CHEMISTRY REPORT

MONTH/YEAR: April 1993

Primary Coolant Analysis	Unit No. 1			Unit No. 2		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Gross Radioact., $\mu\text{Ci/ml}$	4.01E-1	2.81E-1	3.49E-1	2.61E-2	1.87E-5	5.35E-3
Suspended Solids, ppm	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1
Gross Tritium, $\mu\text{Ci/ml}$	2.12E-1	1.88E-1	1.99E-1	N/A	N/A	N/A
I^{131} , $\mu\text{Ci/ml}$	1.12E-3	4.61E-4	7.79E-4	N/A	N/A	N/A
I^{131}/I^{133}	0.12	0.06	0.08	N/A	N/A	N/A
Hydrogen, cc/kg	38.5	32.5	35.3	30.7	20.0	25.4
Lithium, ppm	2.35	2.05	2.19	2.27	≤ 0.10	0.76
Boron - 10, ppm*	118.0	101.1	109.8	472.6	440.6	460.6
Oxygen, (DO), ppm	≤ 0.005	≤ 0.005	≤ 0.005	12.0	≤ 0.005	2.36
Chloride, ppm	0.004	0.001	0.003	0.127	≤ 0.001	0.016
pH at 25 degree Celsius	6.95	6.69	6.84	5.56	4.47	4.91

* Boron - 10 = Total Boron x 0.196

Comments:

Unit 2 shut down for refueling on 3/6/93.

**FUEL HANDLING
UNITS 1 & 2**

MONTH/YEAR: April 1993

<u>New or Spent Fuel Shipment Number</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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No Fuel Received or Stored During this Reporting Period.

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

MONTH/YEAR: April 1993

None During This Reporting Period.