

VIRGINIA ELECTRIC AND POWER COMPANY

SURRY POWER STATION

MONTHLY OPERATING REPORT

REPORT NO. 81-07

JULY, 1981

APPROVED: _____

J. Wilson

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OPERATING DATA REPORT

DOCKET NO. 50-280
DATE 05 AUG 81
COMPLETED BY SUE D. DUNN
TELEPHONE 804-357-3184

OPERATING STATUS

1. UNIT NAME	SURRY UNIT 1
2. REPORTING PERIOD	70181 TO 73181
3. LICENSED THERMAL POWER (MWT)	2441
4. NAMEPLATE RATING (GROSS MWE)	847.5 NOTES
5. DESIGN ELECTRICAL RATING (NET MWE)	788
6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWE)	811
7. MAXIMUM DEPENDABLE CAPACITY (NET MWE)	775
8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS 3 THROUGH 7) SINCE LAST REPORT, GIVE REASONS	N/A

9. POWER LEVEL TO WHICH RESTRICTED, IF ANY	N/A
(NET MWE)	
10. REASONS FOR RESTRICTIONS, IF ANY	N/A

THIS MONTH YR-TO-DATE CUMULATIVE

11. HOURS IN REPORTING PERIOD	744.0	5087.0	75455.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	556.1	556.7	43094.6
13. REACTOR RESERVE SHUTDOWN HOURS	0.0	0.0	3731.5
14. HOURS GENERATOR ON-LINE	505.0	505.0	42173.8
15. UNIT RESERVE SHUTDOWN HOURS	0.0	0.0	3736.2
16. GROSS THERMAL ENERGY GENERATED (MWH)	1061380.0	1061380.0	97450781.0
17. GROSS ELECTRICAL ENERGY GENERATED (MWH)	342480.0	342480.0	31644223.0
18. NET ELECTRICAL ENERGY GENERATED (MWH)	320551.0	320551.0	30020475.0
19. UNIT SERVICE FACTOR	67.9 %	9.9 %	55.9 %
20. UNIT AVAILABILITY FACTOR	67.9 %	9.9 %	60.8 %
21. UNIT CAPACITY FACTOR (USING MDC NET)	55.6 %	8.1 %	51.3 %
22. UNIT CAPACITY FACTOR (USING DER NET)	54.7 %	8.0 %	50.5 %
23. UNIT FORCED OUTAGE RATE	9.8 %	9.8 %	26.2 %
24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE DATE, AND DURATION OF EACH)	2/19/82 - SPRING MAINT APPROX. 10 DAYS		

25. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATE DATE OF STARTUP	
26. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION)	

FORECAST ACHIEVED

INITIAL CRITICALITY
INITIAL ELECTRICITY
COMMERCIAL OPERATION

OPERATING DATA REPORT

DOCKET NO. 50-281
 DATE 05 AUG 81
 COMPLETED BY O.J. COSTELLO
 TELEPHONE 804-357-3184

OPERATING STATUS

1. UNIT NAME	SURRY UNIT 2
2. REPORTING PERIOD	70181 TO 73181
3. LICENSED THERMAL POWER (MWT)	2441
4. NAMEPLATE RATING (GROSS MWE)	847.5 NOTES
5. DESIGN ELECTRICAL RATING (NET MWE)	788
6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWE)	811
7. MAXIMUM DEPENDABLE CAPACITY (NET MWE)	775
8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS 3 THROUGH 7) SINCE LAST REPORT, GIVE REASONS	N/A

9. POWER LEVEL TO WHICH RESTRICTED, IF ANY (NET MWE)	N/A
10. REASONS FOR RESTRICTIONS, IF ANY	N/A

THIS MONTH IR-TO-DATE CUMULATIVE

11. HOURS IN REPORTING PERIOD	744.0	5087.0	72335.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	729.8	4823.8	42607.8
13. REACTOR RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
14. HOURS GENERATOR ON-LINE	725.9	4785.3	41921.9
15. UNIT RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED (MWH)	1760531.5	11591227.5	98045888.5
17. GROSS ELECTRICAL ENERGY GENERATED (MWH)	554770.0	3755050.0	31994044.0
18. NET ELECTRICAL ENERGY GENERATED (MWH)	524771.0	3558890.0	30337378.0
19. UNIT SERVICE FACTOR	97.6 %	94.1 %	58.0 %
20. UNIT AVAILABILITY FACTOR	97.6 %	94.1 %	58.0 %
21. UNIT CAPACITY FACTOR (USING MDC NET)	91.0 %	90.3 %	54.1 %
22. UNIT CAPACITY FACTOR (USING DER NET)	89.5 %	88.8 %	53.2 %
23. UNIT FORCED OUTAGE RATE	2.4 %	1.4 %	18.0 %
24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH)	8/27/81 - SNUBBER INSP-3DAYS 11/13/81 - REFUELING APPROX - 42 DAYS		

25. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATE DATE OF STARTUP	
26. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION)	FORECAST ACHIEVED

INITIAL CRITICALITY
 INITIAL ELECTRICITY
 COMMERCIAL OPERATION

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH JULY, 1981

DOCKET NO. 50-280
 UNIT NAME Surry One
 DATE August 7, 1981
 COMPLETED BY S. D. Dunn
 TELEPHONE 804 357-3184

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
81-7	07-01-81	S	184.4	H	1				Continuation of shutdown for steam generator replacement which commenced 09-14-80.
81-8	07-09-81	F	50.0	H	2	81-026/03L-0			Manually tripped turbine & reactor due to increasing containment pressure and sump level caused by secondary system leakage through blown gasket on auxiliary feed water line flow restricting orifice flange. Repaired flange and inspected other prior to unit recovery.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance of Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Examination
 F-Administrative
 G-Operational Error (Explain)
 H-Other (Explain)

³
 Method:
 1-Manual
 2-Manual Scram.
 3-Automatic Scram.
 4-Other (Explain)

⁴
 Exhibit G - Instructions
 for Preparation of Data
 Entry Sheets for Licensee
 Event Report (LER) File (NUREG-
 0161)

⁵
 Exhibit I - Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH JULY, 1981DOCKET NO. 50-280UNIT NAME Surry OneDATE August 7, 1981COMPLETED BY S. D. DunnTELEPHONE 804 357-3184

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
81-9	07-15-81	F	0.0	H	4				A malfunction in the "up-down counter" circuit caused the valve position limiting circuit of the Electro-Hydraulic control system to run the turbine back to approximately 60% power. Runback stopped when control room operator shifted turbine control to manual. Control was left in turbine manual mode and power increased.

¹
F: Forced
S: Scheduled

²
Reason:
A-Equipment Failure (Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & License Examination
F-Administrative
G-Operational Error (Explain)
H-Other (Explain)

³
Method:
1-Manual
2-Manual Scram.
3-Automatic Scram.
4-Other (Explain)

⁴
Exhibit G - Instructions
for Preparation of Data
Entry Sheets for Licensee
Event Report (L - R) File (NIREG-
0161)

⁵
Exhibit I - Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH JULY, 1981

DOCKET NO. 50-280
 UNIT NAME Surry One
 DATE August 7, 1981
 COMPLETED BY S. D. Dunn
 TELEPHONE B04 357-3184

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
81-10	07-16-81	F	4.6	H	2				A malfunction in the "up-down counter" circuit caused the valve limiter circuit to run the turbine back to a "no-load" condition. The control room operator manually tripped the turbine and reactor. The problem was caused by a "bad card" in the "up-down counter" circuit. The card was replaced.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance or Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Examination
 F-Administrative
 G-Operational Error (Explain)
 H-Other (Explain)

³
 Method:
 1-Manual
 2-Manual Scram.
 3-Automatic Scram.
 4-Other (Explain)

⁴
 Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

⁵
 Exhibit I - Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH JULY, 1981

DOCKET NO. 50-281
 UNIT NAME Surry Two
 DATE August 7, 1981
 COMPLETED BY S. D. Dunn
 TELEPHONE 804 357-3184

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
81-8	07-17-81	F	14.4	H	3				A safety injection occurred on a spurious high steam header to steam line differential pressure signal. Cause of spurious signal is believed to have been vibration.
81-9	07-18-81	F	1.0	H	3				A turbine trip-reactor trip occurred on "A" S/G Hi-Hi Level signal due to leakage through the main feed regulating valve while increasing power.
81-10	07-18-81	F	2.7	H	3				Same as 81-9 above.

¹
 F: Forced
 S: Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance or Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Examination
 F-Administrative
 G-Operational Error (Explain)
 H-Other (Explain)

³
 Method:
 1-Manual
 2-Manual Scram.
 3-Automatic Scram.
 4-Other (Explain)

⁴
 Exhibit G - Instructions
 for Preparation of Data
 Entry Sheets for Licensee
 Event Report (LER) File (NUREG-
 0161)

⁵
 Exhibit I - Same Source

LOAD REDUCTIONS DUE TO ENVIRONMENTAL RESTRICTIONS

UNIT NO. 2

MONTH: JULY, 1981

<u>DATE</u>	<u>TIME</u>	<u>HOURS</u>	<u>LOAD, MW</u>	<u>REDUCTIONS, MW</u>	<u>MWH</u>	<u>REASON</u>
NONE DURING THIS REPORTING PERIOD.						
MONTHLY TOTAL						

LOAD REDUCTIONS DUE TO ENVIRONMENTAL RESTRICTIONS

UNIT NO. 1

MONTH: JULY, 1981

<u>DATE</u>	<u>TIME</u>	<u>HCJRS</u>	<u>LOAD, MW</u>	<u>REDUCTIONS, MW</u>	<u>MWH</u>	<u>REASON</u>
NONE DURING THIS REPORTING PERIOD.						
MONTHLY TOTAL						

DOCKET NO 50-280
UNIT SURRY I
DATE 8-1-81
COMPLETED BY Sue D. Dann

AVERAGE DAILY UNIT POWER LEVEL

MONTH: JULY 81

DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)	DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)
1	0.0	17	350.9
2	0.0	18	701.1
3	0.0	19	747.1
4	0.0	20	752.0
5	0.0	21	753.2
6	0.0	22	754.8
7	0.0	23	755.5
8	51.6	24	754.5
9	205.7	25	748.2
10	0.0	26	740.1
11	4.5	27	748.8
12	257.5	28	745.2
13	280.5	29	747.1
14	601.5	30	747.9
15	592.9	31	736.3
16	579.5		

DAILY UNIT POWER LEVEL FORM INSTRUCTIONS

ON THIS FORM, LIST THE AVERAGE DAILY UNIT POWER LEVEL IN MWE-NET FOR EACH DAY IN THE REPORTING MONTH. THESE FIGURES WILL BE USED TO PLOT A GRAPH FOR EACH REPORTING MONTH. NOTE THAT BY USING MAXIMUM DEPENDABLE CAPACITY FOR THE NET ELECTRICAL RATING OF THE UNIT, THERE MAY BE OCCASIONS WHEN THE DAILY AVERAGE POWER EXCEEDS THE 100 +/- LINE (OR THE RESTRICTED POWER LEVEL LINE). IN SUCH CASES, THE AVERAGE DAILY UNIT POWER OUTPUT SHEET SHOULD BE FOOTNOTED TO EXPLAIN THE APPARENT ANOMALY.

DOCKET NO 50-281
UNIT SURRY II
DATE 8-1-81
COMPLETED BY Sue D. Dunn

AVERAGE DAILY UNIT POWER LEVEL

MONTH: JULY 81

DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)	DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)
1	734.2	17	349.3
2	735.5	18	463.0
3	730.3	19	725.8
4	721.2	20	738.0
5	714.3	21	739.8
6	710.4	22	736.0
7	708.1	23	738.5
8	711.6	24	739.8
9	712.2	25	737.8
10	708.7	26	738.6
11	705.3	27	734.4
12	708.0	28	734.0
13	719.2	29	735.4
14	715.6	30	737.3
15	724.5	31	723.6
16	735.1		

DAILY UNIT POWER LEVEL FORM INSTRUCTIONS

ON THIS FORM, LIST THE AVERAGE DAILY UNIT POWER LEVEL IN MWE-NET FOR EACH DAY IN THE REPORTING MONTH. THESE FIGURES WILL BE USED TO PLOT A GRAPH FOR EACH REPORTING MONTH. NOTE THAT BY USING MAXIMUM DEPENDABLE CAPACITY FOR THE NET ELECTRICAL RATING OF THE UNIT, THERE MAY BE OCCASIONS WHEN THE DAILY AVERAGE POWER EXCEEDS THE 100 +/- LINE (OR THE RESTRICTED POWER LEVEL LINE). IN SUCH CASES, THE AVERAGE DAILY UNIT POWER OUTPUT SHEET SHOULD BE FOOTNOTED TO EXPLAIN THE APPARENT ANOMALY.

SUMMARY OF OPERATING EXPERIENCE

Month/Year July, 1981

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

UNIT 1

- July 1 This reporting period begins with the unit at cold shutdown with preparations for unit recovery in progress.
- July 3 Heated primary system above cold shutdown (200°F) at 0915. Established bubble in pressurizer at 1230.
- July 4 Exceeded 350°F primary system temperature at 0650.
- July 5 Established hot shutdown conditions at 0455.
- July 6 The reactor was taken critical at 1712 and low power physics testing commenced.
- July 7 Rod control system urgent failure occurred at 0040. The Instrument Technicians investigated and determined problem was a blown fuse in the "IBD" Power Cabinet. They replaced the fuse and returned rod control system to service at 0320.
- At 1020 a reactor trip occurred when the Instrument Technicians simulated a first stage turbine pressure >10% without the turbine latched. The reactor was critical at 1045.
- July 8 The generator was synchronized to the line at 1623. Power was increased to 38% and held for resolution of steam generator chemistry problem.
- July 9 S/G chemistry within specifications and power increase to 50% power at 3% per hour began at 1100. Unit reached 50% power at 1440. At 2030 commenced a rampdown from 50% power due to increasing containment partial pressure and containment sump level. At 2054 the decision was made to manually trip the turbine and reactor and commence a plant cooldown. The cooldown commenced at 2100 and a safety injection initiated at 2127. The SI was a result of the control room operator failing to block the header to line AP SI signal prior to commencing the cooldown.
- July 10 The primary system temperature was <350°F at 0200 and <200°F at 0607.
- July 11 The primary system temperature exceeded 200°F at 0018 and 350°F at 0545. The unit reached hot shutdown conditions at 1215. The reactor was critical at 1758. A header to line AP SI occurred at 1817. It is believed the SI occurred as a result of pressure swing on the main steam header when the turbine was latched. The reactor was critical at 2114 and the generator was synchronized to the line at 2252. Stopped power increase at 43% at 2400 to clean up steam generator chemistry.

July 12 Commenced power increase to 50% power at 3% per hour. Commenced S/G stability tests at 50% power at 2325.

July 13 Completed 10% load reject test at 0235. Test was satisfactory and unit at 40% power. At 1325 commenced increasing power at 3% per hour. Stop power increase at 2145 at 66% power for flux mapping.

July 14 Started power increase to 90% at 3% per hour. Power at 90% at 1031. Started power increase at 3% per hour. Power at 100% at 2120.

July 15 At 1138 a malfunction in the "Up-Down" counter circuit of the electro-hydraulic control system caused a turbine runback. Runback stopped when operator shifted turbine control to manual. Conditions were stabilized at 60% power and 470 MWe. Started power increase at 3% per hour from 63% power at 1735.

July 16 Unit reached 100% power at 0710. At 1952 the reactor was manually tripped when a malfunction in the "Up-Down" counter circuit of the EHC system caused the valve limiter to reduce turbine power to a no load condition. The reactor was critical at 2214.

July 17 Performed a turbine over speed test at 0006. The turbine tripped at 1900 RPM. The generator was synchronized to the line at 0028. and power increased to 40%. Power was held at 40% for clean up of S/G chemistry. At 1027 S/G chemistry was within specifications and a power increase was commenced. At 1120 stopped power increase at 65% until "B" main feed pump is returned to service. "B" MFP returned to service and power increase commenced at 3% per hour at 1730.

July 18 Stop power increase at 89% power due to increasing cation conductivity indication. Started power increase at 3% per hour at 0328. Stopped power increase at 95% at 0600. Started power increase at 0818 and reached 100% power at 1020.

July 20 Integrated 72 hours at 100% power as of 0900.

July 25 The steam generator carryover test was completed at 1950.

July 31 At 1233 a turbine runback occurred when a Daniels Construction Company electrician accidentally opened the breaker supplying the R-43 power range instrument. The electrician was replacing the panel corner on VB-1-I when the cover slipped and tripped the breaker. The runback terminated at 86% power when the breaker was reclosed. At 1311 a power increase began and the Unit was at 100% power at 1441. This reporting period ends with the unit at 100% power.

UNIT 2

July 1 This reporting period begins with the unit at 100% power.

July 14 At 2230 the power was reduced to 96% to correct a condenser vacuum problem caused by removing the "2D" waterbox from service.

July 15 The "2D" waterbox was returned to service and power increased to 100% at 0415.

July 17 A reactor trip and safety injection occurred at 1122. The SI and reactor trip were caused by a header to line ΔP signal, which was determined to be spurious.

July 18 The reactor was critical at 0032 and the generator on the line at 0150. At 0200 a turbine trip - Reactor trip occurred due to a hi-hi level in the "A" S/G. The hi-hi level was a result of leakage thru the main feedwater regulating valve. The reactor was critical at 0223 and the generator on the line at 0302. At 0325 a turbine trip - reactor trip occurred due to a hi-hi level in the "A" S/G. The reactor was critical at 0409 and the generator on the line at 0606. The unit reached 100% power at 1221.

July 31 This reporting period ends with the unit at 100% power.

/caa

AMENDMENTS TO FACILITY LICENSE
OR TECHNICAL SPECIFICATION

JULY, 1981

NONE DURING THIS REPORTING PERIOD.

FACILITY CHANGES REQUIRING
NRC APPROVAL

NONE DURING THIS REPORTING PERIOD.

FACILITY CHANGES THAT
DID NOT REQUIRE NRC APPROVAL

JULY, 1981

UNIT

DC-76-14 - Containment Instrument Air System Modification

1

This design change installed new compressors of larger capacity. The location of the new compressors is in the lower elevation of the safeguards building i.e., 11'6" elevation. Access for the suction and discharge piping to the containment penetrations will be through existing holes between auxiliary and safeguards buildings.

Summary of Safety Analysis

This modification requires revision to the FSAR and no changes to Technical Specifications. There are no safety implications as a result of this design change.

DC-77-09 - Containment Spray System Modification

1

This design change meets the following objectives:

- a) Increased spray coverage
- b) Decreased caustic spray transit time to the spray nozzles.
- c) Addition of caustic solution to the spray water at an essentially constant rate.
- d) Provide caustic spray until the containment is depressurized under all operating modes of the safeguards system.

Summary of Safety Analysis

This modification requires no change to Technical Specifications. A review of the FSAR indicates a change to the function of the affected systems are not required. An unreviewed safety question does not exist.

DC-77-32B - Containment Cooling System Modification

1

This design change installed new chilled water units and piping into the new system.

Summary of Safety Analysis

There is no change in the operation of safety related equipment as a result of this design change.

FACILITY CHANGES THAT
DID NOT REQUIRE NRC APPROVAL
(CONTINUED)

		<u>UNIT</u>
<u>DC-78-08</u>	- <u>Reactor Containment Fire Protection</u> Portions of this design change involving installation of a Smoke Detection System (78-8E) and Hose Station in Containment 1 (78-8J (1)) were implemented.	1 & 2
<u>Summary of Safety Analysis</u> This modification increases the protection afforded the safety related equipment from fire and reduces the chance of a fire related accident.		
<u>DC-78-10</u>	- <u>Condensate Polishing Addition</u> Portions of this design change involving Major Mechanical Installation and Erection of Pipes and Hangers (78-10K, Unit 1) Lighting System (78-10SA) and, Blowdown Connecting Piping (78-10U) were implemented.	1 & 2
<u>Summary of Safety Analysis</u> This design change neither constitutes an Unreviewed Safety Question nor requires a change to Technical Specifications.		
<u>DC-78-21</u>	- <u>Condenser Rebuild Work</u> The system was rebuilt to the original design criteria and no affect is imposed on the operation of safety related equipment.	1
<u>DC-78-37C</u>	- <u>Recirculation Spray and Low Head Safety Injection NPSH Modification</u> This design change included various changes made to assure adequate NPSH performance from the recirculation spray and low head safety injection pumps.	1
<u>Summary of Safety Analysis</u> This modification is entirely passive requiring no operator action to function. Therefore, the operation of the CS, SI and RS Systems are not affected by this modification.		
<u>DC-78-40</u>	- <u>RCS RTD Isolation Valve Removal</u> This design change removed four manual isolation valves in each RCS RTD bypass loop. The valves which incorporate an adjustable stem packing have proven to be a source of uncontrolled RCS leakage through the stem packing. The valves were originally installed such that the RTD manifolds could be isolated for maintenance purposes. However, because of the leakage problem associated with the valves, they were more of a maintenance problem than the RTD's. The four valves in each RCS RTD bypass loop were replaced with straight pipe.	1

FACILITY CHANGES THAT
DID NOT REQUIRE NRC APPROVAL
(CONTINUED)

UNIT

Summary of Safety Analysis

The removal of the RTD bypass system isolation valves reduces the amount of maintenance performed on the RCS. Consequently, the number of personnel exposures to high radiation is also reduced. This further insures the safe and efficient operation of the Unit.

DC-78-44 - Steam Generator Blowdown Treatment System

1

Portions of this design change involving Piping (78-44B), Electrical (78-44C), Instrumentation (78-44D) and Sample Point Relocation and Instrumentation were implemented.

Summary of Safety Analysis

This modification has improved the overall safety reliability and performance the steam generator blowdown system. The design specifications have met or exceeds the specifications of the existing system. The system was designed to meet the NRC guidelines presented in Standard Review Plan (10.4.8) for steam generator blow-down systems. The overall effects of radiological releases to the environment will be significantly reduced by removal of activity in the demineralizers.

DC-78-48 - RTD Relocation and Installation

1

This design change replaces the presently installed RTD's with ones newly calibrated, relocating them and four new ones with computer points.

Summary of Safety Analysis

Containment integrity was not affected and no safety implications created with this design change.

DC-79-14 - Replacement of NAMCO Model D2400X Stem Mounted Limit Switches

1

This design change was initiated to replace the originally installed limit switches with those which have the required documentation as to environment qualifications.

Summary of Safety Analysis

The change out of these limit switches that performs latch-in function from unqualified to environmentally qualified limit switches will not affect station operation, but will assure proper operation of the safety related equipment.

DC-79-49 - ILRT Air Pressurization System

1

This modification provides for installing a temporary containment air pressurization system for the type A ILRT.

Summary of Safety Analysis

Since this system was installed only during the test and the unit was shutdown at the time, there was no effect on Technical Specifications.

DC-79-50 - Containment and Recirculation Spray System Isolation
Valve Replacement

1

This design change removed the welded gate valves and replaced them with flanged butterfly valves.

The containment spray and recirculation spray capability and operational readiness will not be affected. There are no safety implications created by this design change. The effect of this modification on NPSH has been incorporated into the design basis for the NPSH modification.

1

This design change installed a redundant pressure transmitter that will be capable of measuring a pressure range of three times the containment design pressure, 0-180 psig. The transmitter will provide a continuous indication of containment pressure in the control room.

This modification does not affect the operation of any safety-related equipment and there are no safety problems caused by this modification.

1 & 2

This design change installed redundant wide range and redundant narrow range level transmitters for each unit. The wide range transmitters are capable of measuring from the bottom of the containment to an elevation of 9 ft. in the containment which is equivalent to a 600,000 gallon capacity. The narrow range transmitters are capable of measuring from the bottom to the top of the containment sump which is a distance of about 22 inches.

This containment level modification provides a redundant safety related indication of containment level conditions for both wide and narrow ranges at all times.

1 & 2

This design change provides alternate shutdown capability independent of cables, system or components in the area. Charging Pump Cross-connect shall consist of two locked closed manual valves installed between the Unit 1 "C" charging Pump discharge and the Unit 2 "C" charging pump discharge.

FACILITY CHANGES THAT
DID NOT REQUIRE NRC APPROVAL
(CONTINUED)

UNIT

Summary of Safety Analysis

The modification does not affect normal power operations or the mitigation of accidents. The cross-connect will only be used in the event that a fire renders all three charging pumps of one unit unavailable for safe shutdown of that unit. The addition of a cross-connect line between the "C" charging pump discharges of Unit 1 & 2 does not create a safety problem.

- DC-79-68 - Fire Protection Modification Remote Monitoring Panel For Alternative Shutdown Capability (ASC) 1

This design change provides an alternative reactor shutdown capability in the event that a fire disables control room and auxiliary shutdown panel monitoring and control devices.

Summary of Safety Analysis

The installation of the remote monitoring panel and its associated field equipment and materials does not create any safety problems.

- DC-79-76 - RCP Oil Collection 1

This design change reduces the potential for fire in the containment by using a collection system on the reactor coolant pump motors. The system collects and temporarily stores any lubricating oil which leaks out of the RCP motor lube oil system.

Summary of Safety Analysis

RCP motor oil collection system consists of a leak-proof can under oil bearing components to contain leaks in pressurized lines. The modification does not affect the operation of any safety-related equipment; therefore, there are no safety problems caused by this modification.

- DC-80-29 - Reactor Coolant Vent System 1

This design change installed a remotely operated high point vent, to provide venting capability of the primary coolant system. The need for remote venting capability was identified upon review of the installed systems response to the accident conditions encountered at TMI-2.

Summary of Safety Analysis

The effect of this design change on station operation has not been clearly defined since specific procedure and functions are not available at this time. This design change will not have any adverse impact on the operation of any safety-related equipment.

- DC-80-37A - Auxiliary Feedwater Redundant Level Indication and Alarm In Control Room 1

This design change installed instrument and electrical equipment for the addition of Auxiliary Feedwater redundant level indication and alarm capability in the Control Room.

FACILITY CHANGES THAT
DID NOT REQUIRE NRC APPROVAL
(CONTINUED)

UNIT

Summary of Safety Analysis

This modification does not affect the Technical Specifications and the FSAR. Installation of the safety grade redundant level indication and alarm capability for the AFW System Condensate Storage Tanks does not create an unreviewed safety question as defined in 10CFR 50.59.

DC-80-42 - Control and Relay Room AC and Charging Pump Service Water Piping Modification 1 & 2

The design of the system change enhances the reliability of the system, increases the seismic margin of safety, and provides complete documentation to substantiate the engineering analysis. The modification has no adverse effect on the safety-related equipment.

DC-80-44 - Redundant Wide Range Pressure Loop 1

This design change upgrades the existing reactor coolant system wide range (0-3000 psig) pressure transmitter which is located in the reactor coolant loop C. In addition, a redundant reactor coolant system wide range (0-3000 psig) pressure transmitter was installed into reactor coolant loop B. The transmitters are a safety grade Category I, Rosemount 1153 Series D, Pressure Transmitters.

Summary of Safety Analysis

The addition of the reactor coolant system wide range pressure loop provides the operator with two independent sources for indication of reactor coolant system wide range pressure measurement making it possible to provide redundant inputs of this measurement to the subcooling monitors.

DC-80-60 - Replacement of Post-Accident Sample System Valves 1

This design change replaced air operated trip valves for the RCS + RHR samples with direct acting solenoid valves. The function of the valves have not changed. An additional direct acting solenoid valve was added to the RHR sample line inside containment and functions as a containment isolation valve.

Summary of Safety Analysis

This modification does not affect normal station operation or the operation of any safety related equipment. Replacement of these containment isolation valves improves the capability of the valves to open after an accident to obtain required samples.

DC-80-73 - Relocation of Chemical and Volume Control Piping 1 & 2

This design change relocated line 3" DG-41-152 and 3" CH-99-152. Also included was the installation of an analytical anchor on line 2" DG-242-152. This allows analyses of these lines as required by NRC Bulletin 79-14B.

FACILITY CHANGES THAT
DID NOT REQUIRE NRC APPROVAL
(CONTINUED)

UNIT

Summary of Safety Analysis

This modification does not affect the Technical Specifications, requires no change to FSAR and, does not create an unreviewed safety question.

DC-80-75 - AFW System Cavitating Venturi Addition

1

This design change added cavitating venturis in each of the 3 in. AFWS lines to each steam generator. The venturis will restrict the flow of feedwater to the affected steam generator (i.e., loop with a MSLB or MFLB inside containment) permitting greater flow to the intact loops.

Summary of Safety Analysis

This modification does not directly change the operation of the Auxiliary feedwater system although operating procedures will have to be modified to reflect the new auxiliary feedwater flow rate.

DC-80-78 - Post Accident Sample System Containment Return Line

1 & 2

This design change provides a drain path to containment sump for post accident sample system drains. Pumping to the containment sump provides an alternative to pumping radioactive liquid to the high and low level waste drain tanks and therefore reduce the activity levels inside the auxiliary building.

Summary of Safety Analysis

This modification has no effect on normal station operation or operation of any existing safety related equipment.

DC-80-79 - Removal Pressurizer Cubicle Wall C-47-4-6

1

This design change replaced existing concrete block portion of the biological shield wall around the pressurizer with precast concrete panels to comply with IE Bulletin 80-11.

Summary of Safety Analysis

The completed modification will have no effect on the operation of safety-related equipment.

DC-80-85 - Turbine Driven Auxiliary Feedwater Pump Automatic Control

1

This design change fulfilled the requirement that at least one AFW system pump and its associated flow path and essential instrumentation automatically initiate AFW System flow and is capable of being operated independently of any AC power Source for at least two hours.

Summary of Safety Analysis

This modification allows operation of the steam driven AFW pump independent of any AC power source. Replacement of a motor operated valve with an air-operated valve will not affect the safety function of this system. No adverse safety implications will result from this design change.

FACILITY CHANGES THAT
DID NOT REQUIRE NRC APPROVAL
(CONTINUED)

UNIT

DC-80-86 - Modification of Masonary Wall

1

Portion of this design change involving Masonary Wall 1C-47-4-6 (8086H), replaced existing block wall with precast concrete panels to comply with IE Bulletin 80-11.

Summary of Safety Analysis

The completed modification will have no effect on the operation of safety related equipment.

DC-80-96 - Reactor Vessel Level

1

This design change installed redundant microprocessor-based monitoring systems to monitor Reactor Vessel Level. The system utilizes differential pressure measuring transmitters which measure water level and relative void content of the circulating primary coolant system fluid and thus provides direct readings of the reactor vessel level.

Summary of Safety Analysis

This modification provides redundant safety-related indication of reactor vessel water level thus providing an indication of inadequate core cooling.

DC-80-101 - Control and Relay Room Air Treatment Modification

1 & 2

This design change provides a means for injecting and mixing of tracer gases and aerosoles with the intake air for periodic testing of the control and relay room air treatment (pressurization) system.

Summary of Safety Analysis

The operation of the station and of the control and relay room air treatment system remains unchanged.

DC-81-06 - Electrical Penetration Replacement

1

This design change replaces Amphenol spare containment penetrations with Conax penetrations. This provides the new penetrations with pigtails on the feed-throughs long enough to permit splicing to the corresponding cable in the cable trays. Amphenol terminal connectors soldering of terminals delayed installation in the field and were difficult to procure with a 26 week delivery.

Summary of Safety Analysis

This modification has no effect of the proposed change on station operation and the operation of safety-related equipment.

DC-81-24 - Reroute of Pressurizer Relief Tank Vent Sample Line

1

This design change rerouted sample line 3/8"-SS-99-ICN9 on the pressurizer vent from penetration #55 to penetration #57.

Summary of Safety Analysis

This modification does not create any safety problems.

TESTS AND EXPERIMENTS REQUIRING
NRC APPROVAL

NONE DURING THIS REPORTING PERIOD.

TEST AND EXPERIMENTS THAT
DID NOT REQUIRE NRC APPROVAL

<u>Special Test No.</u>	<u>Unit</u>	<u>Title</u>	<u>Completed</u>
ST-127	1 & 2	Mechanical Snubber Stroke Test	07-16-81
ST-117	1	Pressurizer Spray Flow Verification	07-16-81
ST-119	1	Reactor Coolant System Cooldown	07-23-81
ST-104	1 & 2	Class IE Electrical Equipment Environmental Qualification Verification Inspection Program	06-25-81
ST-113	1	Atmospheric Steam Dump Valves	07-03-81
ST-116	1	Pressurizer Relief Tank	07-01-81
ST-131	1	Subsequent Testing for Periodic Test 8.5A	07-01-81

OTHER CHANGES, TESTS AND EXPERIMENTS

JULY, 1981

NONE DURING THIS REPORTING PERIOD.

SURRY POWER STATION

MAR 20 1981

CHEMISTRY REPORT

July , 1981

T.S. 6.6.3.d

PRIMARY COOLANT ANALYSIS	UNIT NO. 1 (A)(B)			UNIT NO. 2 (G)		
	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	AVERAGE
Gross Radioact., $\mu\text{Ci/ml}$	8.73E-1 ^(C)	5.06E-3	1.99E-1	3.36E-1	1.22E-1	2.51E-1
Suspended Solids, ppm	0.1	0.1	0.1	0.2	0.1	0.1
Gross Tritium, $\mu\text{Ci/ml}$	1.24E-1	7.89E-3	6.56E-2	1.19E-1	3.50E-2	7.78E-2
Iodine-131, $\mu\text{Ci/ml}$	9.79E-2 ^(C)	4.90E-4	3.52E-2 ^(C)	1.74E-1 ^(H)	1.91E-3	1.70E-2 ^(E)
I-131/I-133	.5587	.2434	.3817	1.3445 ^(I)	.7940	1.1692 ^(I)
Hydrogen, cc/kg	49.7	25.6	34.9	58.2	32.9	44.2
Lithium, ppm	2.14	.00 ^(D)	.58	1.64	.31 ^(K)	1.07
Boron-10, ppm +	606	181	279	127	48	58
Oxygen-16, ppm	2.3 ^(E)	.000	.371 ^(E)	.000	.000	.000
Chloride, ppm	<.05	<.05	<.05	<.05	<.05	<.05
pH @ 25°C	6.75	4.50	5.69	7.33	6.49	7.02

+ Boron-10 = Total Boron x 0.196

NON-RADIOACTIVE CHEMICAL
RELEASES, POUNDS (J)
T.S. 4.13.A.6

Phosphate	-0-	Boron	1421
Sulfate	-0-	Chromate	0.12
50% NaOH	-0-	Chlorine	-0-

Remarks: (A) Initial criticality after SGRP on 7-6-81 at 1712 hrs.

(B) Rx trips on 7-9 at 2054, 7-11 at 1815, and 7-16 at 1952

(C) High value due to suspected fuel failure (D) Placed mixed bed (LiOH) in service 7-21-81

(E) High values reflect pre-start-up conditions

(G) Rx trips on 7-17 at 1122, 7-18 at 0159, and 7-18 at 0325 (H) High values due to Rx trip

(I) High values due to suspected pin-hole leaks in fuel (See (G))

(J) These volumes of chemicals are believed to have no major adverse environmental effects.

(K) LiOH added on 7-2 and 7-22

DESCRIPTION OF ALL INSTANCES WHERE THERMAL DISCHARGE LIMITS WERE EXCEEDED

Month/Year JULY, 1981

Due to the impairment of the circulating water system on the following days, the thermal discharge limits were exceeded as noted.

July 14, 1981	Exceeded 15°F ΔT across station*
July 15, 1981	Exceeded 15°F ΔT across station*
July 16, 1981	Exceeded 17.5°F ΔT across station*
July 18, 1981	Exceeded 15°F ΔT across station*
July 19, 1981	Exceeded 15°F ΔT across station*
July 20, 1981	Exceeded 15°F ΔT across station*
July 21, 1981	Exceeded 15°F ΔT across station*
July 22, 1981	Exceeded 15°F ΔT across station*
July 23, 1981	Exceeded 15°F ΔT across station*
July 24, 1981	Exceeded 15°F ΔT across station*
July 25, 1981	Exceeded 15°F ΔT across station*
July 26, 1981	Exceeded 15°F ΔT across station*
July 27, 1981	Exceeded 15°F ΔT across station*
July 28, 1981	Exceeded 15°F ΔT across station*
July 29, 1981	Exceeded 15°F ΔT across station*
July 30, 1981	Exceeded 15°F ΔT across station*
July 31, 1981	Exceeded 15°F ΔT across station*

*Indicates dates where station ΔT was 15.0°F or less across the station for sometime during the day.

The ΔT excursions were allowable under Technical Specification 4.14.B.2. There were no reported instances of adverse environmental impact.

The temperature change at the station discharge exceeded 3°F per hour on: July 9, 1981, due to a reactor trip on Unit 1; on July 16, 1981, due to a reactor trip on Unit 1; and on July 17, 1981, due to a reactor trip on Unit 2.

These events were allowable in accordance with Technical Specification 4.14. There were no reported instances of adverse environmental impact.

FUEL HANDLING

JULY, 1981

NONE DURING THIS REPORTING PERIOD.

PROCEDURE REVISIONS THAT CHANGED THE
OPERATING MODE DESCRIBED IN THE FSAF

JULY 1981

<u>PROCEDURE NO.</u>	<u>UNIT</u>	<u>TITLE</u>	<u>CHANGE</u>
PT 18.9	1	Boric Acid Pump Operability and Performance	Change acceptance criteria and other information due to installation of new pump.

DESCRIPTION OF PERIODIC TESTS WHICH WERE NOT
COMPLETED WITHIN THE TIME LIMITS SPECIFIED
IN TECHNICAL SPECIFICATIONS

JULY, 1981

NONE DURING THIS REPORTING PERIOD.

INSERVICE INSPECTION

JULY, 1981

Unit One

The Westinghouse program of inservice inspection has been completed with no major reportable indications being noted.

A system hydrostatic test was performed on all of the ASME Class I systems prior to unit start up. Only one indication was noted on a small sample valve off C-loop cold leg. This was a bonnet to body leak and was repaired and reinspected with acceptable results.

The preservice inspection program of the unit one steam generator replacement has been completed with no indications being recorded.

The ASME Class III Support and Hangar Inspection is complete. Minor indications were recorded on this inspection and repairs are being effected, as station scheduling permits, with approved maintenance procedures.

Unit Two

No inservice inspection work this month.

DEPT-NUT

UNIT

(MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS)

RECEIVED	SYS	COMP	NAME	SUNMARY	WFRP	U	MR	TOTAL	1920	1970
07/08/81	RC	PIPING		PERFORM PRESERVICE EXAM	PERFORMED PSI ON REPORTABLE IND.	1	103171500			
DEPT TOTAL										

REPORTABLE OCCURRENCES PERTAINING TO
ANY OUTAGE OR POWER REDUCTIONS

NONE DURING THIS REPORTING PERIOD.

Maintenance of Safety Related Systems During
Outage or Reduced Power Periods

UNIT #1

Mechanical Maintenance

DEPT-MECH

UNIT 1

(MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS)

RETSERVDT	STS	COMP	MARKNO	SUMMARY	WKPFR	U	NR	TOTWHTM
07/02/81	PR	SNUBBER	1-RC-PSS-163	REMOVE SNUBBER	REMOVED FOR SHIPPING	1	009101332	6928
07/02/81	BR	VALVE	1-BR-84	REPLACE BOLTING	REPLACED STUDS + NUTS	1	011191539	163
07/02/81	BR	VALVE	1-BR-431	REPLACE BOLTING	VALVE NO LONGER EXIST	1	011191838	164
07/02/81	BR	VALVE	1-BR-62	REPLACE BOLTING	REPLACED STUDS + NUTS	1	011191911	163
07/02/81	PR	SNUBBER	1-RC-HSS-170	PUL' SNUBBER SHIP	REMOVED SNUBBER	1	012081301	4221
07/02/81	SI	PUMP	1-SI-P-1A	FOR TYPE A TEST	LOOSEMED AND RESTORED AFTER TEST	1	106070120	570
07/02/81	SI	PUMP	1-SI-P-1B	FOR TYPE A TEST	LOOSEMED AND RESTORED AFTER TEST	1	106070121	570
07/02/81	RS	PUMP	1-RS-P-2A	FOR TYPE A TEST	LOOSEMED AND RESTORED AFTER TEST	1	106070130	570
07/02/81	RS	PUMP	1-RS-P-2B	FOR TYPE A TEST	LOOSEMED AND RESTORED AFTER TEST	1	106070131	570
07/02/81	RC	VALVE	PCV-1456	BLOCK OPEN PORT 1456 FOR TYPE A TEST	BLOCKS WERE REMOVED	1	106130200	400
07/02/81	IA	COMPRESS		REMOVE COMPRESSED AIR BOTTLES	REMOVED AND REPLACED AIR BOTTLES	1	106171809	311
07/02/81	PC	PUMP	1-PC-P-3A	COUPLE MOTOR TO PUMP	COUPLE MOTOR TO PUMP	1	106211241	237
07/02/81	MOV		MOV-1535	BODY TO BARNET LEAK	REPLACED GASKET	1	106280902	71
07/02/81	CH	PIPING	2-CH-42-152	PLUGGED LINE	REMOVED CLEANED AND REPLACED FLW NB	1	106300827	47
07/02/81	SI	VALVE	RCV-1850A	REPLACE SOV	REPLACED SOV	1	106302230	33
07/05/81	PR	SNUBBER		REMOVE FLOW RESISTORS	REMOVED AND INSTALLED RESERVOIRS	1	010011401	6621
07/05/81	RH	VALVE	1-RH-24	PACKING LEAK	ADJ PACKING	1	106140730	470
07/06/81	CH	VALVE	MOV-CH-1350	VALVE LEAK THROUGH	REPLACED NAIL DISC	1	008031221	40
07/06/81	RH	VALVE	1-RH-3	FAILED PT 16.4 TEST AT 6.5 SCFH	REPLACED VALVE	1	101301400	12096
07/06/81	CH	PUMP	1-CH-P-2A	BAD SEAL LEAK	INSTALLED NEW PUMP	1	106220535	336
07/06/81	HSS	SNUBBER	1-CC-HSS-356A	REMOVE SNUBBER TEST	TESTED	1	106231932	293
07/06/81	HSS	SNUBBER	1-CC-HSS-365B	REMOVE SNUBBER TEST	TESTED	1	106231933	293
07/06/81	CC	HX	1-CC-K-1C	REPLACE MANWAY GASKETS	FIX MANWAY COVER SEAL	1	106300417	84
07/06/81	SI	VALVE	1859	LEAK FROM BODY OF VALVE	REPLACED PLUG ON SIDE OF VALVE	1	107020955	87
07/06/81	VC	PIPE	3/4 RC-167-152	REMOVE SPOOL PIECE FROM PRT VENT	REMOVED SPOOL PIECE AND BLANKED	1	107022317	74
07/06/81	SW	PUMP	1-SW-P-10B	ADJ. PACKING	TIGHTENED PACKING GLAND	1	107031930	53
07/06/81	HS	HANGER		RELIEVE TENSION ON SPRING HANGER	CUT IRON AWAY FROM SG	1	107040045	49
07/06/81	CV	PUMP	1-CV-P-1B	PUMP BROKE	CHANGED PUMPS	1	107040721	42
07/06/81	CH	VALVE	PCV-1122	VALVE DOES NOT PULL SHUT	REPAIRED VALVE	1	107040914	48
07/06/81	SI	VALVE	1-SI-2	REPAIR PACKING GLAND LEAKS	TIGHTEN GLAND	1	107041615	4
07/06/81	CH	VALVE	1-CH-295	REPAIR PACKING GLAND LEAK	TIGHTEN PACKING	1	107041617	4
07/06/81	CH	VALVE	1-CH-298	REPAIR PACKING GLAND LEAK	TIGHTEN PACKING	1	107041618	4
07/06/81	CH	VALVE	1-CH-299	REPAIR PACKING GLAND LEAK	TIGHTEN PACKING	1	107041619	4
07/06/81	SI	VALVE	1-SI-6	REPAIR PACKING GLAND	TIGHTEN GLAND	1	107041620	4
07/06/81	OW	FILTER	1-OW-FL-1B	REPLACE FILTER MATERIAL	REMOVE CARBON BANKS	1	107041730	42
07/07/81	CH	VALVE	1-CH-21	REPLACE DIAPHRAM	REPAIRED+REPLACED DIAPHRAM ORING	1	107030931	64
07/07/81	CH	VALVE	1-CH-60	REACH ROD DISCONNECTED	CONNECTED REACH ROD+CK OK	1	107030932	64
07/07/81	CH	VALVE	RV-1209	FLANGE LEAK	CHANGE FLX	1	107040300	70
07/07/81	CH	VALVE	1-CH-61	HANDWHEEL ON REACH ROD	REPLACE SET SCREWS MISSING	1	107041316	60

UNIT (MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS)											
RETSERV	SIS	COMP	MARNO	SUMMARY	WORK	U	AR	TOTAL	U	AR	TOTAL
07/07/81	CH	MOV	CH-1350	ROUT TO DOWNST LEAK	TIGHTENED BOLTS	1	107061754	24			
07/08/81	CV	PUMP	1-CV-P-1A	PUMP BROKE	CHANGED PUMP	1	107040720	98			
07/08/81	IA	COMPRESS	1-IA-C-4B	COMPRESSOR WILL NOT PUMP	COMPRESSOR HAS ELECTRICAL PROBLEM	1	107041105	62			
07/08/81	SS	RI	1-SS-E-3C	BLU/WHM COOLER LEAKS	REPLACE GASKETS	1	107041320	59			
07/08/81	CV	PUMP	1-CV-P-1A	PUMP BAD	CHANGED OUT PUMP	1	107060630	52			
07/08/81	SV	PUMP	1-SV-P-10B	HIGH VIBRATIONS	CORRECTED SHAFT RUNOUT	1	107060700	51			
07/08/81	NS	VALVE	1-NS-268	VALVE REQUIRES REPACKING	FURNISHED VALVE	1	107071420	1			
07/10/81	SV	PUMP	1-SV-P-50	MTR DRAINS LOCKED	REPLACE IMPELLER AND MTR SEAL	1	009231430	6647			
07/10/81	PR	SHURBER		REMOVE FOR SHIPMENT TO MTR	REMOVED FOR SHIPMENT	1	009282110	7019			
07/10/81	CP	SHURBER	1-SHP-RSS-2B	TEST AND O-HAUL AS NEEDED	TEST SHURBER	1	103051420	3021			
07/10/81	CP	SHURBERS	1-SHP-RSS-2B	TEST AND O-HAUL AS NEEDED	TEST SHURBER	1	103051421	3021			
07/10/81	NS	SHURBERS	1-SI-RSS-24A	TEST SHURBER	TESTED SHURBERS	1	103090825	2928			
07/10/81	NS	SHURBERS	1-SI-RSS-24B	TEST SHURBER	TESTED SHURBERS	1	103090826	2928			
07/10/81	SV	VALVE	MOV-SV-104B	REMOVE EXPANSION JOINT	REMOVED EXPANSION JOINT+BLANKED	1	105031131	1804			
07/10/81	CH	INSTR	P-1-110	REPLACE BORIC ACID FLW	INSTALLED NEW TRANSMITTER	1	106191020	142			
07/10/81	CC	HANGER		REPAIR HANGERS	COMPLETED	1	107041533	132			
07/10/81	PR	SHURBERS	1-SHP-RSS-1B	RESERVOIR TUBING LEAKING FLUID	TIGHTEN LINE ADDED MORE FLUID	1	107080700	47			
07/10/81	CH	VALVE	MOV-1286C	PACKING LEAK	TIGHTENED PACKING	1	107080740	45			
07/10/81	CH	VALVE	MOV-1275B	PACKING LEAK	TIGHTENED PACKING	1	107080741	45			
07/10/81	CH	VALVE	1-CH-305	PACKING LEAK	TIGHTENED PACKING	1	107080746	45			
07/10/81	SI	VALVE	MOV-1864A	VALVE STEM PACKING LEAK	ADJUSTED PACKING	1	107080812	45			
07/10/81	SI	VALVE	MOV-1864B	VALVE STEM PACKING LEAK	ADJUSTED PACKING	1	107080813	45			
07/13/81	CH	TANK	1-CH-I-2	LEAKAGE FROM TOP OF DRAIN.	TIGHTENED DOWNST	1	107080738	79			
07/13/81	SI	VALVE	1-SI-183	VALVE LEAKS BY SEAT	INSTALLED CAP	1	107080744	103			
07/15/81	CC	VALVE	1-CC-24	REPAIR VALVE	INSP VALVE NO NEED FOR REPAIR	1	107100249	125			
07/17/81	SS	PIPING	1-SS-P-1C	FIX LEAKING FUEL OIL LINE	TIGHTENED UP ON LEAK	1	107161434	69			
DEPT TOTAL											65061

Maintenance of Safety Related Systems During
Outage or Reduced Power Periods

UNIT #2

Mechanical Maintenance

SEPTEMBER

UNIT 2

(MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS)

REPAIR/RT STS COMP	NAHRO	SUNVAL	WKPRT	U	NR TOTDNTN
01/17/81 IN PIPING	18-WCTD	REPAIR RTD	REPAIRED LEAKS	2	107171301 5
OSPT TOTAL					5

Maintenance of Safety Related Systems During
Outage or Reduced Power Periods

UNIT #1

Electrical Maintenance

DEPT-5532

UNIT1
(MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS)

RETSRVDT	SIS	COMP	MARKNO	SUMMARY	WKPERS	U	MI	TOTWMTN
07/02/81	RC	PMP MTR	1-RC-P-1C	DISCONNECT INSP + RECONNECT	COMPLETED AS PER EMP-C-EPH-02B/03A	1	008271708	8938
07/02/81	RC	PMP MTR	1-RC-P-13	DISCONNECT INSP AND RECONNECT	DISCONNECT CLEANED RECONNECT+REPAIR	1	008271709	8938
07/02/81	CH	MOV	MOV-LCV-1115C	MOV WILL NOT CLOSE LCV	RENEWED TORQUE SWITCH TESTED SAT	1	107010625	591
07/02/81	CH	MOV	MOV-CH-1287A	VALVE WILL NOT OPEN ELECTRICALLY	RESET CORRECTED NTR ADJ. CYCLED SAT	1	107011100	20
07/02/81	RS	SWITCH	1-RS-P-1A	REPLACE ZERO SPEED INDICATOR	REPLACED INDICATOR ON MOTOR SAT	1	107011430	22
07/02/81	RP	CHRM	H-10	REPLACE STATIONARY COIL ON CHRM H-10	REPLACED STATIONARY COIL SAT	1	107021135	7
07/03/81	RC	PMP MTR	1-RC-P-1A	DISCONNECT INSPECT AND RECONNECT	COMPLETED AS PER EMP-C-EPH-01A/03B	1	008271710	8915
07/03/81	SW	PMP MTR	1-SW-P-5C	PERFORM PMS	COMPLETED AS PER PMS PROCEDURE	1	009031908	8689
07/03/81	SW	PMP MTR	1-SW-P-5B	PERFORM PMS	COMPLETED AS PER PMS PROCEDURE OP 5A	1	009031909	8689
07/03/81	PC	BREAKER	DB-50	PMS 1-M6-2 OUTPUT BREAKER	PERFORMED PMS OP SAT	1	011061558	5671
07/03/81	PC	BREAKER	DE-50	PMS 1-M6-1 OUTPUT BREAKER	PERFORMED PMS OP SAT	1	011061559	5671
07/03/81	SW	MOTOR	1-SW-P-10B	MOTOR WONT TURN	REPAIRED MOTOR SAT	1	107010600	66
07/03/81	RP	BREAKER		REPAIR REACTOR TRIP BREAKER B	OPFR SAT	1	107030800	5
07/03/81	RP	BREAKER		REPAIR TRIP BYPASS BREAKER B	ADJUSTED INTERLOCK	1	107030801	5
07/03/81	CS	MOV	MOV-CS-101A	VALVE WILL NOT OPEN	REPLACED STATOR	1	107031100	6
07/04/81	CM	MOTOR	1-CM-F-1A	CHANGE OUT MOTOR	DISCONNECTED AND REPLACED WITH NEW	1	107031202	14
07/04/81	CM	MOTOR	1-CM-F-1B	CHANGE OUT MOTOR	REPLACED WITH NEW MOTOR SAT	1	107031331	34
07/04/81	CV	PMP MTR	1-CV-P-1A	PUMP RKR TRIPS	PUMP BAD MECHANICAL REPLACED	1	107040630	3
07/04/81	VP	PUMP	1-CV-P-1A/1B	INCORPORATE DC 80-100	RECONNECTED SWITCH 1AW D/C	1	107041655	1
07/05/81	CH	MOV	MOV-CH-1350	DISCONNECT PWR	DISCONNECTED+RECONNECTED SAT	1	107030930	21
07/06/81	CH	HT	CIRPANS+9	ADD TO HEAT TRACING ON FT-1113	ADDED HEAT TAPE	1	106301302	129
07/06/81	CH	PUMP	1-CH-P-2A	REMOVE HT AND RESISTOR HEATER	RECONNECTED STRIP HEATERS	1	107011600	73
07/06/81	CM	SWITCH	LS-CM-101	HIGH LEVEL ON KNOCKOUT DRUM	ADJUSTED SWITCH	1	107031550	2
07/06/81	CH	HT	PNL11CKT1A	LOW AMPS	REPLACED HEAT TAPE	1	107051035	21
07/06/81	CH	HT	PNL11CKT1B	LOW AMPS	REPLACED HEAT TAPE	1	107051036	21
07/06/81	CH	HT	PNL11CKT2A	LOW AMPS	REPLACED HEAT TAPE	1	107051037	15
07/06/81	CH	HT	PNL11CKT2A	LOW AMPS	REPLACED HEAT TAPE	1	107051038	15
07/06/81	CH	HT	FT-110	REPAIR HEAT TAPE	REPAIRED HEAT TAPE	1	107060730	2
07/06/81	SS	VALVE	TV-SS-100B	TRIP VALVE WILL NOT STAY OPEN	ADJUSTED LIMITS	1	107061600	4
07/07/81	RP	RELAYS		PERFORM EMP-P-RT-188	SAT COMPLETED EMP-P-RT-188	1	102260056	1851
07/07/81	RP	RELAYS		PERFORM EMP-P-RT-140	SAT COMPLETED EMP-P-RT-140	1	102260100	2021
07/07/81	RP	RELAYS		PERFORM EMP-P-RT-133	SAT COMPLETED EMP-P-RT-133	1	102260104	1395
07/08/81	RH	INSTR	LS102	Check Operation of Level Switches	ADJUSTED LIMITS AS PER OPERATION REQ	1	106141001	527
07/09/81	BR	PMP MTR	1-BR-P-4B	PERFORM PMS	PMS COMPLETE	1	012112334	2254
07/09/81	BR	PUMP	1-BR-P-4B	DISCONNECT+RECONNECT	DISCONNECT+RECONNECTED	1	104020910	2330
07/09/81	SW	MOTOR	1-SW-P-10B	HIGH VIBRATIONS	DISCONNECTED+RECONNECTED MTR FOR ABC	1	107060701	75
07/09/81	SPDC	BATT		BATT GROUND INDICATED	GROUND CLEARED	1	107081600	13
07/10/81	CH	VALVE	MOV-1287A	VALVE THERMALED OUT	REPLACED TORQUE SWITCH	1	107062148	73
07/10/81	SE	BREAKER	1-SE-P-1C	BREAKER BURNED UP	REPAIRED XPNR TEST RAN MTR SAT	1	107100232	14
07/10/81	RH	MOV	MOV-1700	MOTOR SHORTED	MOTOR REPLACED	1	107100511	9
07/11/81	RP	IRPI	G-12	IRPI NO MOTION INDICATED	FOUND NO PROBLEM WITH PLUG	1	107102630	6

Maintenance of Safety Related Systems During
Outage or Reduced Power Periods

UNIT #2

Electrical Maintenance

NONE DURING THIS REPORTING PERIOD.

Maintenance of Safety Related Systems During
Outage or Reduced Power Periods

UNIT #1

Instrument Maintenance

DEPT-INST

UNIT1

(MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS)

DATE	DEPT	INST	COMP	MARKNO	SUMMARY	WORKPERF	U	NR	TOTIWNTH
07/02/81	RM	MONITOR	RM-162		ACTUAL ALARM SETPOINT > 7PERCENT	RESET SETPOINT	1	106270128	70
07/03/81	NI	OTHER	N31		SOURCE RANGE N31 PEGGED LOW	REPLACED DETECTORS	1	106190707	72
07/03/81	RC	INSTR	F1-1-415		DOES NOT INDICATE CORRECTLY	FILLED REF LEG IN TRANSMITTER	1	106231306	217
07/03/81	RC	INSTR	F1-416		DOES NOT INDICATE CORRECTLY	FILLED REF LEG ON TRANSMITTER	1	106231307	217
07/08/81	RC	VALVE	HCV-1557A		INST AIR TUBING HAS TO BE CONNECT TO	REPLACED TUBING	1	106051030	117
07/08/81	NS	INSTR	FT-1475		SHOWED INCREASING FLOW	NO PROBLEM FOUND	1	106272230	212
07/08/81	RM	MONITOR	RC-VG-103		FLOW ALARM LOCKED	ADJUSTED SWITCH	1	107070107	24
07/10/81	CS	INSTR	F1-C-110A		CALIBRATE RHR HX CC FLOW INDICATOR	VALVE LINEUP	1	106041301	1
07/10/81	SW	INSTR	PS-SW-204		PRESSURE SWITCH DOES NOT ANNUNCIATE	ADJUSTED PRESSURE SWITCH	1	106261352	48
07/10/81	CS	INSTR	T1-CS-100B		BAD METER	CALIB LOW LEV+REPLACED IND.	1	107040301	149
07/10/81	RM	MONITOR	R1-VG-109		ERRATIC FLOW AT MONITOR	TAPPED FLOWMETER	1	107070423	21
07/10/81	RM	MONITOR	R1-VG-110		ERRATIC FLOW	TAPPED FLOWMETER	1	107070424	10
07/14/81	CS	INSTR	L1-CS-100A-D		CALIBRATE	RESPANNED TRANSMITTERS	1	106271035	26
07/16/81	NS	INSTR	RV-MS-101C		VALVE DOES NOT STROKE PROPERLY	REPLACED E/P CONVERTER	1	107149714	41
07/17/81	RC	INSTR			ROD CONTROL DOES NOT FUNCTION	CALIBRATED ROD SPEED CIRCUITRY	1	107111630	71
07/17/81	CV	INSTR			TEMP RECORDER	CALIBRATED RECORDER	1	107111630	71
07/17/81	PR	INSTR	PI-1-484		INDICATOR DROPPED TO ZERO	REPLACED AND CALIBRATED BAD ISOLATOR	1	107111630	71

DEPT TOTAL

1417

Maintenance of Safety Related Systems During
Outage or Reduced Power Periods

UNIT #2

Instrument Maintenance

NONE DURING THIS REPORTING PERIOD.

HEALTH PHYSICS

JULY, 1981

There was no single release of radioactivity or radiation exposure specifically associated with an outage that accounted for more than 10% of the allowable annual values in 10CFR20.

PROCEDURE DEVIATIONS REVIEWED BY STATION NUCLEAR
SAFETY AND OPERATING COMMITTEE AFTER TIME LIMITS
SPECIFIED IN TECHNICAL SPECIFICATIONS

JULY 1981

<u>PROC. NO.</u>	<u>UNIT</u>	<u>TITLE</u>	<u>DATE DEVIATED</u>	<u>DATE SNSOC REVIEWED</u>
OP 8A	1	CVCS System - Valve Checkoff	06-24-81	07-13-81
OP-48.5	1	Station Vacuum Priming System - Valve Checkoff	07-02-81	07-23-81
OP-51A	1	Chilled Water System - Valve Chekcoff	07-03-81	07-23-81
ST-127	1, 2	Mechanical Snubber Stroke Test	07-03-81	07-23-81
ST-130	1	Recirculation Spray Heat Exchanger Service Water Foreign Material Evaluation	06-28-81	07-23-81
PT-11	1	Reactor Coolant Integrity Test Following Opening	07-05-81	07-23-81
PT-16.3	1	Reactor Containment Building Integrated Leak Rate Test	06-25-81	07-13-81
PT-28.11	1	Nuclear Design Check Tests	07-07-81	07-23-81