

VIRGINIA ELECTRIC AND POWER COMPANY

SURRY POWER STATION

MONTHLY OPERATING REPORT

REPORT NO. 82-03

MARCH, 1982

APPROVED BY:

  
STATION MANAGER

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OPERATING DATA REPORT

DOCKET NO. 50-280  
 DATE 07 APR 82  
 COMPLETED BY Vivian H. Jones  
 TELEPHONE 804-357-3184

OPERATING STATUS

|   |                |
|---|----------------|
| 1. UNIT NAME  | SURRY UNIT 1   |
| 2. REPORTING PERIOD   | 30182 TO 33182 |
| 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<br>(ITEMS 3 THROUGH 7) SINCE LAST<br>REPORT, GIVE REASONS | N/A            |
| 9. POWER LEVEL TO WHICH RESTRICTED, IF ANY<br>(NET MWE)   | N/A            |
| 10. REASONS FOR RESTRICTIONS, IF ANY  | N/A            |

THIS MONTH YR-TO-DATE CUMULATIVE

|  |                                  |           |             |
|--|----------------------------------|-----------|-------------|
| 11. HOURS IN REPORTING PERIOD  | 744.0                            | 2160.0    | 81288.0     |
| 12. NUMBER OF HOURS REACTOR WAS CRITICAL   | 732.2                            | 1768.5    | 47803.0     |
| 13. REACTOR RESERVE SHUTDOWN HOURS   | 0.0                              | 0.0       | 3731.5      |
| 14. HOURS GENERATOR ON-LINE  | 728.6                            | 1753.6    | 46828.4     |
| 15. UNIT RESERVE SHUTDOWN HOURS  | 0.0                              | 0.0       | 3736.2      |
| 16. GROSS THERMAL ENERGY GENERATED (MWH)   | 1735017.5                        | 4081076.5 | 108414342.9 |
| 17. GROSS ELECTRICAL ENERGY GENERATED (MWH)                                      | 556885.0                         | 1285955.0 | 35105168.0  |
| 18. NET ELECTRICAL ENERGY GENERATED (MWH)  | 530421.0                         | 1220522.0 | 33297758.0  |
| 19. UNIT SERVICE FACTOR  | 97.9 %                           | 81.2 %    | 57.6 %      |
| 20. UNIT AVAILABILITY FACTOR   | 97.9 %                           | 81.2 %    | 62.2 %      |
| 21. UNIT CAPACITY FACTOR (USING MDC NET)   | 92.0 %                           | 72.9 %    | 52.9 %      |
| 22. UNIT CAPACITY FACTOR (USING DER NET)   | 90.5 %                           | 71.7 %    | 52.0 %      |
| 23. UNIT FORCED OUTAGE RATE  | 3.4 %                            | 4.7 %     | 24.8 %      |
| 24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS<br>(TYPE, DATE, AND DURATION OF EACH) | MAINTENANCE - 11/19/82 - DAYS-10 |           |             |

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. 50-201  
DATE 07 APR 82  
COMPLETED BY Vivian H. Jones  
TELEPHONE 804-357-3184

OPERATING STATUS

- 1. UNIT NAME SURREY UNIT 2
- 2. REPORTING PERIOD 30182 TO 33182
- 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 YR-TO-DATE CUMULATIVE

- 11. HOURS IN REPORTING PERIOD 744.0 2160.0 78168.0
- 12. NUMBER OF HOURS REACTOR WAS CRITICAL 611.0 1993.2 46855.9
- 13. REACTOR RESERVE SHUTDOWN HOURS 0.0 0.0 0.0
- 14. HOURS GENERATOR ON-LINE 589.8 1956.4 46068.1
- 15. UNIT RESERVE SHUTDOWN HOURS 0.0 0.0 0.0
- 16. GROSS THERMAL ENERGY GENERATED (MWH) 1285201.7 4218736.1 107515522.0
- 17. GROSS ELECTRICAL ENERGY GENERATED (MWH) 402635.0 1354900.0 35032129.0
- 18. NET ELECTRICAL ENERGY GENERATED (MWH) 377753.0 1273667.0 33202382.0
- 19. UNIT SERVICE FACTOR 79.3 % 90.6 % 58.9 %
- 20. UNIT AVAILABILITY FACTOR 79.3 % 90.6 % 58.9 %
- 21. UNIT CAPACITY FACTOR (USING MDC NET) 65.5 % 76.1 % 54.8 %
- 22. UNIT CAPACITY FACTOR (USING DER NET) 64.4 % 74.8 % 53.9 %
- 23. UNIT FORCED OUTAGE RATE 5.4 % 2.9 % 16.8 %
- 24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS SPRING MAINTANCE - 5/7/82 - 10DAYS  
(TYPE, DATE, AND DURATION OF EACH)

25. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATE DATE OF STARTUP

26. UNITS IN TEST STATUS FORECAST ACHIEVED  
(PRIOR TO COMMERCIAL OPERATION)

INITIAL CRITICALITY  
INITIAL ELECTRICITY  
COMMERCIAL OPERATION

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH March, 1982

DOCKET NO. 50-280  
 UNIT NAME Surry One  
 DATE April 7, 1982  
 COMPLETED BY Vivian H. Jones  
 TELEPHONE (804) 357-3184 ext. 477

| No.  | Date     | Type <sup>1</sup> | Duration (Hours) | Reason <sup>2</sup> | Method of Shutting Down Reactor <sup>3</sup> | Licensee Event Report # | System Code <sup>4</sup> | Component Code <sup>5</sup> | Cause & Corrective Action to Prevent Recurrence  |
|------|----------|-------------------|------------------|---------------------|--|-------------------------|--------------------------|-----------------------------|--|
| 82-6 | 03-20-82 | S                 | 0.0              | H                   | 4  |                         |                          |                             | Reduced power to allow stopping equipment to reduce load on "A" Reserve Station Service Transformer to <2000 amps during Unit 2 recovery.  |
| 82-7 | 03-25-82 | F                 | 15.4             | H                   | 3  | 50-280/<br>82-040/03L-0 |                          |                             | Instrument technicians performing a periodic test placed instrumentation in "trip" which in coincidence with a switch out adjustment caused the "A" reactor coolant pump to trip causing a low flow reactor trip. The switch was adjusted prior to unit startup. |

<sup>1</sup>  
 F: Forced  
 S: Scheduled

<sup>2</sup>  
 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)

<sup>3</sup>  
 Method:  
 1-Manual  
 2-Manual Scram.  
 3-Automatic Scram.  
 4-Other (Explain)

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

<sup>5</sup>  
 Exhibit I - Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH March, 1982

DOCKET NO. 50-281  
 UNIT NAME Surry Two  
 DATE April 7, 1982  
 COMPLETED BY Vivian H. Jones  
 TELEPHONE (804) 357-3184 ext. 477

| No.   | Date     | Type <sup>1</sup> | Duration (Hours) | Reason <sup>2</sup> | Method of Shutting Down Reactor <sup>3</sup> | Licensee Event Report # | System Code <sup>4</sup> | Component Code <sup>5</sup> | Cause & Corrective Action to Prevent Recurrence  |
|-------|----------|-------------------|------------------|---------------------|--|-------------------------|--------------------------|-----------------------------|--|
| 82-17 | 03-01-82 | S                 | 120.7            | H                   | 1  |                         |                          |                             | Continuation of shutdown for maintenance which began 02-27-82.   |
| 82-18 | 03-08-82 | F                 | 0.0              | A                   | 4  |                         |                          |                             | Power reduction to remove 2-SU-P-1A (high pressure drains pump) from service for repairs.  |
| 82-19 | 03-11-82 | F                 | 24.1             | G                   | 3  | 50-281/<br>82-017/03L-0 |                          |                             | The unit was shutdown IAW T.S. 3.3.B due to a loss of recirculation flow to the boron injection tank. The recirculation flow was reestablished prior to startup.                                       |
| 82-20 | 03-20-82 | F                 | 9.4              | A                   | 2  |                         |                          |                             | Loss of EHC pressure due to a relief valve lifting caused all turbine governor valves to drift closed. Operator manually tripped the turbine and reactor; problem was corrected prior to unit startup. |

<sup>1</sup>  
 F: Forced  
 S: Scheduled

<sup>2</sup>  
 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)

<sup>3</sup>  
 Method:  
 1-Manual  
 2-Manual Scram.  
 3-Automatic Scram.  
 4-Other (Explain)

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

<sup>5</sup>  
 Exhibit I - Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH March, 1982

DOCKET NO. 50-281  
 UNIT NAME Surry Two  
 DATE April 7, 1982  
 COMPLETED BY Vivian H. Jones  
 TELEPHONE (804) 357-3184 ext. 477

| No.   | Date     | Type <sup>1</sup> | Duration (Hours) | Reason <sup>2</sup> | Method of Shutting Down Reactor <sup>3</sup> | Licensee Event Report # | System Code <sup>4</sup> | Component Code <sup>5</sup> | Cause & Corrective Action to Prevent Recurrence   |
|-------|----------|-------------------|------------------|---------------------|--|-------------------------|--------------------------|-----------------------------|---|
| 82-21 | 03-30-82 | F                 | 0.0              | A                   | 4  |                         |                          |                             | Reduced power to allow 2-FW-P-1B (main feed pump) to be taken out of service for repairs. |

<sup>1</sup>  
 F: Forced  
 S: Scheduled

<sup>2</sup>  
 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)

<sup>3</sup>  
 Method:  
 1-Manual  
 2-Manual Scram.  
 3-Automatic Scram.  
 4-Other (Explain)

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

<sup>5</sup>  
 Exhibit I - Same Source

(1/77)



LOAD REDUCTIONS DUE TO ENVIRONMENTAL RESTRICTIONS

UNIT NO. 1

MONTH: March, 1982

| <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. 2

MONTH: March, 1982

| <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 |             |              |                                    |                       |            |               |

-8- DOCKET NO 50-280  
UNIT SURRY I  
DATE 4-1-82  
COMPLETED BY Vivian H. Jones

AVERAGE DAILY UNIT POWER LEVEL

MONTH: MARCH 82

| DAY | AVERAGE DAILY POWER LEVEL<br>(MWE-NET) | DAY | AVERAGE DAILY POWER LEVEL<br>(MWE-NET) |
|-----|--|-----|--|
| 1   | 751.7                                  | 17  | 747.7                                  |
| 2   | 752.4                                  | 18  | 745.5                                  |
| 3   | 748.8                                  | 19  | 744.6                                  |
| 4   | 747.8                                  | 20  | 654.2                                  |
| 5   | 748.5                                  | 21  | 744.8                                  |
| 6   | 747.8                                  | 22  | 745.8                                  |
| 7   | 749.0                                  | 23  | 743.6                                  |
| 8   | 749.2                                  | 24  | 744.9                                  |
| 9   | 751.9                                  | 25  | 329.5                                  |
| 10  | 748.5                                  | 26  | 280.0                                  |
| 11  | 748.3                                  | 27  | 678.3                                  |
| 12  | 744.4                                  | 28  | 744.1                                  |
| 13  | 746.6                                  | 29  | 739.9                                  |
| 14  | 741.9                                  | 30  | 745.4                                  |
| 15  | 744.5                                  | 31  | 745.2                                  |
| 16  | 746.4                                  |     |  |

DAILY UNIT POWER LEVEL FORM INSTRUCTIONS

IN 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.

-9- DOCKET NO 50-281  
 UNIT SURRY II  
 DATE 4-1-82  
 COMPLETED BY Vivian H. Jones

AVERAGE DAILY UNIT POWER LEVEL

MONTH: MARCH 82

| DAY | AVERAGE DAILY POWER LEVEL<br>(MWE-NET) | DAY | AVERAGE DAILY POWER LEVEL<br>(MWE-NET) |
|-----|--|-----|--|
| 1   | 0.0                                    | 17  | 697.0                                  |
| 2   | 0.0                                    | 18  | 696.3                                  |
| 3   | 0.0                                    | 19  | 694.3                                  |
| 4   | 0.0                                    | 20  | 333.9                                  |
| 5   | 0.0                                    | 21  | 602.4                                  |
| 6   | 381.8                                  | 22  | 622.0                                  |
| 7   | 428.7                                  | 23  | 626.5                                  |
| 8   | 538.3                                  | 24  | 624.8                                  |
| 9   | 712.1                                  | 25  | 694.5                                  |
| 10  | 722.9                                  | 26  | 694.8                                  |
| 11  | 490.0                                  | 27  | 696.9                                  |
| 12  | 83.2                                   | 28  | 696.5                                  |
| 13  | 614.9                                  | 29  | 696.0                                  |
| 14  | 669.5                                  | 30  | 682.4                                  |
| 15  | 693.8                                  | 31  | 649.4                                  |
| 16  | 696.6                                  |     |  |

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

MARCH, 1982

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

- March 1            This reporting period begins with the unit at 100% power.
- March 20           1000 - Started reducing power to allow stopping 1-FW-P-1A (main feed pump) and 1-CN-P-1A (main condensate pump) to reduce "A" Reserve Station Service Transformer load to < 2000 amps during Unit 2 recovery.
- 1155 - Stopped power decrease at 72% power.
- 1157 - Stopped 1-FW-P-1A and 1-CN-P-1A.
- 1548 - Started 1-FW-P-1A and 1-CN-P-1A and commenced increasing power at 3% per hour.
- March 21           0330 - The unit is at 100% power.
- March 25           1035 - During the performance of Monthly Periodic Test (safety injection and feedwater control isolation logic) the breaker to the "A" Reactor Coolant Pump ("A" RCP) opened. This resulted in a RCP "A" breaker open reactor trip. Reactor and generator power dropped off to zero very rapidly along with steam flow from "A" S/G. Steam flow from S/G's B & C didn't fall as fast as programmed flow, thus a 2 out of 3 high steam flow signal was generated. Tave dropped below 543°F giving a low Tave signal, which combined with the high steam flow signal to give a Safety Injection.
- 1912 - The reactor was critical.
- 1958 - The reactor tripped on a Safety Injection (SI) signal from steam header to steam line ΔP. The SI was spurious and caused by vibration of the header pressure transmitters mounted in the turbine building.
- 2312 - The reactor was critical.
- March 26           0157 - The generator was placed on the line.
- 0219 - Power increase was stopped at 35% to verify Steam Generator chemistry in specification.
- 1102 - S/G chemistry was verified in specification and a power increase at 3% per hour commenced.

SUMMARY OF OPERATING EXPERIENCE  
MARCH, 1982

- March 27 1300 - The unit was at 100% power.
- March 29 1230 - Leakage past the reactor coolant system (RCS) make-up valves during boration to the spent fuel pool introduced unwanted boron in the RCS. This caused a reduction in RCS temperature (Tave).
- 1245 - Started reducing power to recover Tave.
- 1305 - Stopped power decrease at 86%/710 MWe. Tave has been recovered.
- 1348 - Started power increase at 3% per hour.
- 1525 - The unit was at 100% power.
- March 31 This reporting period ends with the unit at 100% power.

UNIT TWO

- March 1 This reporting period begins with the unit at cold shutdown for environmental upgrade of various power supply cable splices and various maintenance items.
- March 4 1715 - Commenced primary system heatup.
- 1810 - RCS temperature exceeded 200°F (Cold Shutdown condition).
- 2243 - Started 2-RC-P-1A (reactor coolant pump) after repairs on the "open" limit switch on the cold leg stop valve were completed. The failure of this LS prevented makeup of the logic circuit for starting 2-RC-P-1A.
- March 5 0025 - RCS temperature and pressure exceeded 350°F and 450 PSIG respectively.
- 0800 - The unit reached hot shutdown condition.
- 1349 - The reactor was critical.
- March 6 0045 - The generator was placed on the line. The delay between reactor criticality achievement and the generator going on line was due to problems encountered with the auxiliary overspeed governor solenoid valves. The solenoid valves were disassembled and repaired.

SUMMARY OF OPERATING EXPERIENCE  
MARCH, 1982

- March 6  
(cont'd)
- 0150 - The unit was at 35% power and holding for steam generator (S/G) chemistry verification.
  - 0319 - S/G chemistry verified in specification and power increase started.
  - 1418 - Stopped power increase at 66% to maintain condensate polishing building  $\Delta P \leq 50$  PSIG until the high pressure heater drain pump is returned to service.
- March 7
- 0403 - Attempted to start the 2-FW-P-1A main feed pump. The attempt failed due to a ground on the inboard motor. The ground was a result of water in the motor. The water entered the motor when the relief valve on a feedwater heater lifted.
  - 1553 - The high pressure heater drain pump was returned to service.
- March 8
- 0825 - The "A" MFP was returned to service.
  - 0840 - Started increasing power.
  - 1030 - The unit was at 100% power.
  - 1427 - Commenced power reduction to stop the high pressure heater drain pump.
  - 1433 - Stopped power decrease at 94% power and secured the high pressure heater drain pump for shaft seal repairs.
  - 1446 - Commenced power reduction to reduce  $\Delta P$  across the condensate polishing demineralizers to  $\leq 50$  PSIG.
  - 1645 - Stopped power decrease at 70% power and 540 MWe with six condensate polishing demineralizers in service.
  - 2342 - Returned seventh condensate polishing demineralizer to service and commenced increasing power until  $\Delta P$  is equal to 50 PSIG.
- March 9
- 0146 - Stopped power increase at 86% power.
  - 0226 - Started the high pressure heater drain pump.
  - 0320 - Started increasing power.
  - 0527 - The unit was at 100% power.
  - 1720 - Numbers 2 and 3 Governor Valves started drifting closed causing loss of approximately 50 MWe.

SUMMARY OF OPERATING EXPERIENCE  
MARCH, 1982

- March 9  
(cont'd)
- 1743 - Stabilized the unit at 690 MWe/85% power.
  - 1753 - No. 2 and 3 GV's slowly opening.
  - 1838 - The unit was at 100% power.
  - 1942 - Isolated EHC fluid to no. 3 GV to clean the EHC strainer in the servo-valve.
- March 10
- 1111 - Number 2 GV failed closed causing drop in load to approximately 700 MWe and in power to approximately 90%. The EHC fluid to no. 2 GV was isolated to allow cleaning the strainer in the servo-valve.
  - 1345 - Valved in EHC fluid to no. 3 GV.
  - 1400 - Valved in EHC fluid to no. 2 GV.
  - 1548 - Commenced increasing power. The strainers for no. 1 and no. 4 GV's were also cleaned.
  - 1620 - The unit was at 100% power.
- March 11
- 1200 - The Chemist reported low boron concentration in the samples drawn on the boron injection tank (BIT). Investigation by the Operations Department revealed no recirculation flow to or from the BIT and no boric acid flow to the blender. Started two (2) hour "clock" for start of shutdown due to loss of BIT recirc.
  - 1208 - A valve was discovered closed on the suction of the boric acid transfer pump supplying boric acid to the blender and boric acid recirc on the BIT. The valve was opened and boric acid flow to the blender was restored.
  - 1355 - All attempts to restore recirculation flow on the BIT have proven unsuccessful and a shutdown has commenced.
  - 1735 - The reactor tripped from 15% power due to a high level signal from the 6A feedwater heater. The high level was a result of leaking tube(s) in the feedwater heater. The 5A and 6A feedwater heaters were subsequently bypassed and isolated.
- March 12
- 1500 - The reactor was critical after the plug in the inlet line to the BIT recirc was cleared and the heat tracing on the lines restored.
  - 1742 - The generator was placed on the line. The upper limit for turbine power is 90% with the 5A and 6A feedwater heaters bypassed and isolated.



SUMMARY OF OPERATING EXPERIENCE

MARCH, 1982

- March 12 (cont'd) 1903 - Stopped power increase at 35% to verify S/G chemistry.  
1910 - S/G chemistry was in specification and a power increase commenced.
- March 13 0005 - Stopped power increase at 90%.  
0145 - Stopped the high pressure heater drains pump for shaft seal repair.
- March 14 0527 - Started the high pressure heater drains pump.  
0835 - Started increasing power to 740 MWe.  
0915 - Stopped power increase at 740 MWe/95% power.
- March 20 0545 - All turbine governor valves started drifting closed causing a loss of turbine load. The control room operator manually tripped the turbine and the turbine trip caused a reactor trip. A relief valve lifting on the EHC system caused a loss of EHC pressure to the hydraulically operated GV's allowing them to close.  
0642 - The reactor was critical.  
1506 - The generator was placed on the line.  
1601 - Stopped power increase at 35% to verify S/G chemistry.  
1623 - S/G chemistry was in specification and a power increase has commenced.  
2045 - Stopped increasing load and power at 87% on the turbine and 97% on the reactor.  
2205 - Reduced turbine load to 85% and assumed all auxiliary steam loads.
- March 30 2129 - Started reducing power to allow removing 2-FW-P-1B (main feed pump) from service for repairs.  
2210 - Stopped B MFP.  
2218 - Stopped power decrease at 560 MWe/72% power.
- March 31 0545 - Started B MFP.  
0554 - Started power increase.  
0715 - Stopped power increase at 740 MWe/96% power.

This reporting period ends with the unit at 96% power and limited to 740 MWe as a result of 5A and 6A feed-water heaters being out of service.

AMENDMENTS TO FACILITY LICENSE OR TECHNICAL SPECIFICATIONS

MARCH, 1982

The Nuclear Regulatory Commission, on January 19, 1982, issued Amendment Nos. 73 and 74 to the Operating License for Surry Power Station Unit Nos. 1 and 2 respectively.

These amendments revise the Technical Specifications to allow an increase in enrichment for new and spent fuel from 3.7 to 4.1 weight percent of U-235.

Accordingly, the paragraph 3.B of the Operating License for Unit 1 and 2, respectively, is amended as follows:

(Unit 1) "B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 73, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications."

(Unit 2) "B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 74, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications."

The Nuclear Regulatory Commission, on February 2, 1982, issued Amendment Nos. 74 and 75 to the Operating License for Surry Power Station Unit Nos. 1 and 2 respectively.

These amendments revise the Technical Specifications to reduce the minimum number of thimbles required for incore flux mapping from 40 to 38.

Accordingly, the paragraph 3.B of the Operating License for Unit 1 and 2, respectively, is amended as follows:

(Unit 1) "B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 74, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications."

(Unit 2) "B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 75, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications."

FACILITY CHANGES REQUIRING  
NRC APPROVAL

March, 1982

None during this reporting period.

FACILITY CHANGES THAT  
DID NOT REQUIRE NRC APPROVAL

March, 1982

|   | <u>Unit</u> |
|---|-------------|
| <u>D/C 80-45</u> <u>Add Gasket to Top and Bottom of RSHX</u>  | 1 & 2       |
| This design change isolates the diaphragm from potential excessive positive containment pressure by installing a gasket between the diaphragm and the coverplate. This is a more conservative measure taken to provide protection for the diaphragms during a LOCA. |             |

SUMMARY OF SAFETY ANALYSIS

The modification will not affect the operation of any safety related equipment; it serves only as an added degree of protection for the system involved.

|  |       |
|--|-------|
| <u>D/C 81-03</u> <u>Liquid Storage Warehouse</u>   | 1 & 2 |
| To insure that proper fire and safety precautions are utilized, a storage facility was built for flammable, combustible and corrosive liquids. This warehouse was constructed in Storage Area "C" east of the Plant Warehouse. |       |

SUMMARY OF SAFETY ANALYSIS

This facility allows for the proper storage of flammable and corrosive chemicals, thereby enhancing the safe and efficient operation of the plant.

|   |       |
|---|-------|
| <u>D/C 81-08</u> <u>Ballistic Protection and Modification of Masonry Block Walls SB-27-0-6, 7, and 4</u>  | 1 & 2 |
| To ensure that Masonry Walls SB-27-0-6, 7, and 4 meet ballistic requirements and seismic criteria, the following design change(s) were made in response to IE Bulletin 80-11: |       |
| a. Installed ballistic shielding (Level 4)  |       |
| b. Relocated safety related equipment   |       |
| c. Reinforced wall by the addition of steel members.  |       |

FACILITY CHANGES THAT  
DID NOT REQUIRE NRC APPROVAL

March, 1982

|  |   | <u>Unit</u> |
|--|---|-------------|
| <u>D/C 81-08</u>   | <u>Ballistic Protection and Modification of Masonry Block Walls SB-27-0-6, 7, and 4 (continued)</u> | 1 & 2       |
| <u>SUMMARY OF SAFETY ANALYSIS</u>  |   |             |
| The modifications associated with this design change support the FSAR commitments. The structural steel added by this modification does not adversely affect the structural capability of the existing floor slabs.  |   |             |
| <u>D/C 81-19</u>   | <u>Machine Shop Replacement Facility</u>  | 1 & 2       |
|  | <u>D/C 81-19B Structural Steel Frame for Machine Shop Replacement Facility, was implemented.</u>    |             |
| <u>SUMMARY OF SAFETY ANALYSIS</u>  |   |             |
| The addition of the Machine Shop Replacement Facility does not minimize the safety of operating units or effect the operation of safety related equipment.   |   |             |
| <u>D/C 81-31</u>   | <u>Installing Indicating Light for Valve Position</u>   | 1 & 2       |
| This design change installed indicating lights on the vertical board of control room for AOV-IA-103 (Unit 1) and AOV-IA-203 (Unit 2) to verify if the valves are positioned open or closed. These valves open to supply suction to air compressors upon containment isolation. |   |             |
| <u>SUMMARY OF SAFETY ANALYSIS</u>  |   |             |
| This modification does not effect the operation of any safety related equipment. It will improve the operational ability of containment Instrument Air System.   |   |             |
| <u>D/C 81-57</u>   | <u>Fuel Pool Inspection Light Receptacles</u>   | 1 & 2       |
| This design change installed four receptacles on the pool side of the crane well for fuel inspection flood lights. This was accomplished by installing a 480/120 1φ transformer and four water tight electrical outlets.   |   |             |
| <u>SUMMARY OF SAFETY ANALYSIS</u>  |   |             |
| This modification does not effect the operation of any safety related equipment.   |   |             |
| <u>D/C 81-101</u>  | <u>Replace Impellers in Radiation Monitoring Sample Pumps</u>                                       | 2           |
| This design change replaces the existing impellers with larger impellers to provide the required TDH. The TDH was increased due to D/C 80-56.  |   |             |

FACILITY CHANGES THAT  
DID NOT REQUIRE NRC APPROVAL

March, 1982

|  | <u>Unit</u> |
|--|-------------|
| <u>D/C 81-101</u> <u>Replace Impellers in Radiation Monitoring Sample Pumps</u><br>(continued) | 2           |

SUMMARY OF SAFETY ANALYSIS

This modification does not affect station operations or operations of the radiation monitoring sample pumps. It does provide the increased TDH requirements.

TESTS AND EXPERIMENTS REQUIRING  
NRC APPROVAL

March, 1982

None during this reporting period.

TESTS AND EXPERIMENTS THAT  
DID NOT REQUIRE NRC APPROVAL

March, 1982

| <u>Special Test No.</u> | <u>Unit</u> | <u>Title</u>                                   | <u>Date Completed</u> |
|-------------------------|-------------|--|-----------------------|
| ST-52                   | 2           | Reactor Coolant System Flow Measurement Test   | 03-08-82              |
| ST-36                   | 2           | Steam Generator Moisture Carryover Measurement | 03-16-82              |

OTHER CHANGES, TESTS AND EXPERIMENTS

March, 1982

None during this reporting period.

CHEMISTRY REPORT

March , 1982

T.S. 6.6.3.d

| PRIMARY COOLANT ANALYSIS           | UNIT NO. 1 (B)      |                     |                     | UNIT NO. 2 (C)      |                     |                     |
|------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                    | MAXIMUM             | MINIMUM             | AVERAGE             | MAXIMUM             | MINIMUM             | AVERAGE             |
| Gross Radioact., $\mu\text{Ci/ml}$ | 4.27 (A)            | 1.70 (A)            | 2.51 (A)            | 3.60E <sup>-1</sup> | 5.41E <sup>-2</sup> | 1.73E <sup>-1</sup> |
| Suspended Solids, ppm              | 0.1                 | 0.1                 | 0.1                 | 0.1                 | 0.1                 | 0.1                 |
| Gross Tritium, $\mu\text{Ci/ml}$   | 1.50E <sup>-1</sup> | 6.65E <sup>-2</sup> | 1.04E <sup>-1</sup> | 1.23E <sup>-1</sup> | 7.71E <sup>-2</sup> | 9.94E <sup>-2</sup> |
| Iodine-131, $\mu\text{Ci/ml}$      | 5.58 (A)            | 7.33E <sup>-2</sup> | 7.33E <sup>-2</sup> | 7.63E <sup>-2</sup> | 9.58E <sup>-4</sup> | 1.38E <sup>-2</sup> |
| I-131/I-133                        | 1.2214              | .3708               | .8673               | .8955               | .4808               | .7358               |
| Hydrogen, cc/kg                    | 38.1                | 21.5                | 29.1                | 49.8                | 27.6                | 36.8                |
| Lithium, ppm                       | 1.35                | .86                 | 1.10                | 1.38                | .55                 | .99                 |
| Boron-10, ppm +                    | 204                 | 109                 | 133                 | 456                 | 162                 | 246.                |
| Oxygen-16, ppm                     | .000                | .000                | .000                | .005 (D)            | .000                | .000                |
| Chloride, ppm                      | <.05                | <.05                | <.05                | <.05                | <.05                | <.05                |
| pH @ 25°C                          | 6.88                | 6.43                | 6.66                | 6.66                | 5.66                | 6.26                |

+ Boron-10 = Total Boron x 0.196

NON-RADIOACTIVE CHEMICAL (D)

RELEASES, POUNDS

T.S. 4.13.A.6

|           |   |          |      |
|-----------|---|----------|------|
| Phosphate | - | Boron    | 1055 |
| Sulfate   | - | Chromate | .15  |
| 50% NaOH  | - | Chlorine | -    |

Remarks: (A) Indicates possible failed fuel elements (B) Unit trip @ 1035 3-25-82 on line @ 0300 3-26-82 (C) Unit shutdown condition 3-1-82 ~ 3-6-82; on line 2 0045 3-6-82; 3-11-82 @ 1355 commenced ramp-down due to low boron injection tank concentration - Rx trip 1735; Rx on line 3-12-82 @ 1742; Rx 3-20-82 @ 0454, on line @ 1540 3-20-82 (D) These levels of chemicals should create no adverse environmental impact.



DESCRIPTION OF ALL INSTANCES WHERE  
THERMAL DISCHARGE LIMITS WERE EXCEEDED

March, 1982

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

|                |   |
|----------------|---|
| March 6, 1982  | Exceeded 17.5 <sup>o</sup> F ΔT across station* |
| March 7, 1982  | Exceeded 17.5 <sup>o</sup> F ΔT across station  |
| March 8, 1982  | Exceeded 15 <sup>o</sup> F ΔT across station*   |
| March 9, 1982  | Exceeded 17.5 <sup>o</sup> F ΔT across station* |
| March 10, 1982 | Exceeded 17.5 <sup>o</sup> F ΔT across station  |
| March 11, 1982 | Exceeded 17.5 <sup>o</sup> F ΔT across station* |
| March 13, 1982 | Exceeded 17.5 <sup>o</sup> F ΔT across station  |
| March 14, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station    |
| March 15, 1982 | Exceeded 17.5 <sup>o</sup> F ΔT across station  |
| March 16, 1982 | Exceeded 17.5 <sup>o</sup> F ΔT across station  |
| March 17, 1982 | Exceeded 17.5 <sup>o</sup> F ΔT across station  |
| March 18, 1982 | Exceeded 17.5 <sup>o</sup> F ΔT across station  |
| March 19, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station    |
| March 20, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station*   |
| March 21, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station*   |
| March 22, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station    |
| March 23, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station*   |
| March 24, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station    |
| March 25, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station*   |
| March 27, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station*   |
| March 28, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station*   |
| March 29, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station*   |
| March 30, 1982 | Exceeded 15 <sup>o</sup> F ΔT across station*   |
| March 31, 1982 | Exceeded 17.5 <sup>o</sup> F ΔT across station* |

\*Indicates dates where station ΔT was less than or equal to 15.0<sup>o</sup>F across station for some time 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<sup>o</sup>F per hour on the following dates and for the noted reasons:

On March 20, 1982, due to a Unit 2 reactor trip;  
On March 25, 1982, due to a Unit 1 reactor trip; and  
On March 28, 1982, due to natural causes (2.5<sup>o</sup>F increase in station inlet water temperature).

These events were allowable in accordance with Technical Specification 4.14.B.1. There were no reported instances of adverse environmental impact.

The temperature change at the station discharge exceeded 3<sup>o</sup>F per hour on March 12, 1982, due to a rapid increase in circulating water flow through Unit 2 main condenser. This event was reported in accordance with Technical Specification 4.14.C.1.

FUEL HANDLING

March, 1982

UNIT ONE

Twenty four (24) new fuel assemblies and twenty four (24) new BPRA's were received in March, 1982 for Unit one refueling.

UNIT TWO

None during this reporting period.

FUEL HANDLING

March, 1982

UNIT ONE

| DATE SHIPPED/RECEIVED | NO. OF ASSEMBLIES PER SHIPMENT | ANSI NO. INITIAL ENRICHMENT | NEW OR SPENT FUEL SHIPPING CASK ACTIVITY LEVEL |
|-----------------------|--------------------------------|-----------------------------|--|
| 03-04-82              | 12                             | LMOAM3/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOALF/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAMN/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAL5/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOALG/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAML/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAMH/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOALW/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOALJ/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAME/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOALU/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAMK/3.6%                 | <2.5 MR/HR                                     |
|                       |                                |                             |  |
| 03-11-82              | 12                             | LMOAMP/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOALP/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOALL/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAMQ/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOALN/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAM2/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAM1/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOALM/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOALQ/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAMJ/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAM5/3.6%                 | <2.5 MR/HR                                     |
|                       |                                | LMOAMO/3.6%                 | <2.5 MR/HR                                     |
|                       |                                |                             |  |
|                       |                                |                             |  |



PROCEDURE REVISIONS THAT CHANGED THE  
OPERATING MODE DESCRIBED IN THE FSAR

March, 1982

None during this reporting period.

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

March, 1982

None during this reporting period.

INSERVICE INSPECTION

MARCH, 1982

UNITS ONE AND TWO

No Inservice Inspection work was conducted.

REPORTABLE OCCURENCES PERTAINING  
TO ANY OUTAGE OR POWER REDUCTIONS

March, 1982

None during this reporting period.



MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 1

MECHANICAL MAINTENANCE

MARCH, 1982

DEPT-NECH

UNITI-  
(MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REVISED POWER PERIODS)

| REFSERV#   | STS | COND | MARKED    | SUMMARY                         | MARKER                            | U | MR        | TOTIMB7 |
|------------|-----|------|-----------|---------------------------------|-----------------------------------|---|-----------|---------|
| 03/27/82   | CC  | BT   | 1-CC-B-1B | TUBE LEAK INDICATED BY MOES1.1B | INSP CLEANED TUBES FOUND NO LEAKS | 1 | 203260745 | 25      |
| DEPT TOTAL |     |      |           |                                 |                                   |   |           | 25      |

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 2

MECHANICAL MAINTENANCE

MARCH, 1982

UNIT2-  
(MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS)

| DATE     | SY# | COMP    | MARKNO         | SUMMARY                              | WRITEP                               | U | NR        | TOTLWTRM |
|----------|-----|---------|----------------|--------------------------------------|--------------------------------------|---|-----------|----------|
| 03/01/92 | MS  | FLANGE  | 2-MS-1         | FLANGE LEAKS                         | REPLACED BONNET GASKET AND REPACKED  | 2 | 201310135 | 698      |
| 03/02/92 | MS  | VALVE   | MSV-MS-201C    | REPACK NON-RETURNED VALVE            | REPACKED                             | 2 | 201201040 | 24       |
| 03/02/92 | SI  | VALVE   | 2-SI-232       | BODY TO BONNET                       | TIGHTENED BONNET                     | 2 | 202090504 | 24       |
| 03/02/92 | FW  | VALVE   | 2-FW-89        | REPAIR FURMANITE REPAIR              | INSTALLED NEW BONNET RING GASKET     | 2 | 203011630 | 696      |
| 03/03/92 | MS  | VALVE   | 2-MS-378       | REPACK VALVE                         | REPACKED VALVE                       | 2 | 202021046 | 24       |
| 03/03/92 | MS  | VALVE   | 2-MS-168       | ROOT VALVE LEAKING                   | TIGHTEN GLAND TIGHTEN BONNET REPACK  | 2 | 202141836 | 48       |
| 03/03/92 | BD  | VALVE   | 2-BD-212       | VALVE LEAKS                          | INSTALLED CAP                        | 2 | 202160210 | 18       |
| 03/03/92 | KC  | VALVE   | 2-KC-11        | REPACK OR ADJ AS REQ A LOOP RM       | ADJUSTED PACKING                     | 2 | 203030830 | 3        |
| 03/03/92 | KC  | VALVE   | 2-KC-56        | REPACK OR ADJ B LOOP ROOM            | ADJUSTED PACKING                     | 2 | 203030831 | 2        |
| 03/03/92 | KC  | VALVE   | 2-KC-82        | REPACK OR ADJ C LOOP DRAIN TH DRAIN  | ADJUSTED PACKING                     | 2 | 203030833 | 2        |
| 03/03/92 | RH  | VALVE   | MOV-RH-2700    | REPACK                               | REPACKED WITH GARLOCK 98             | 2 | 203030839 | 2        |
| 03/03/92 | RD  | SNUBBER | 2-WCCR-HSS-003 | FILL SNUBBER TO 80 PERCENT           | FILLED TO WOPERC WITH 115% FLUID     | 2 | 203031413 | 6        |
| 03/03/92 | MS  | SNUBBER | 2-SHE-HSS-48   | FILL SNUBBER TO 80 PERCENT           | FILLED SNUBBER TO 80 PERC WITH 115%  | 2 | 203031414 | 6        |
| 03/04/92 | MS  | VALVE   | TV-MS-201A     | REPACK TRIP VALVE                    | REPACKED VALVE                       | 2 | 201201050 | 72       |
| 03/04/92 | MS  | VALVE   | TV-MS-201C     | STUFFING BOX GASKET LEAK             | TIGHTEN DOWN ON GASKET               | 2 | 201201054 | 315      |
| 03/04/92 | MS  | VALVE   | 2-MS-8         | BODY TO BONNET LEAK                  | REPLACED VALVE                       | 2 | 201310130 | 720      |
| 03/04/92 | SI  | VALVE   | TV-2884B       | LEAKAGE REDUCTION MAINT ITEM         | ADJUSTED PACKING                     | 2 | 202081931 | 189      |
| 03/04/92 | MS  | VALVE   | 2-MS-145       | VALVE LEAKS BY SEAT                  | LAPPED VALVE DISC AND SEAT           | 2 | 202120200 | 72       |
| 03/04/92 | MS  | VALVE   | 2-LS-176       | INSPECT VALVE                        | INSPECTED VALVE INTERNALS            | 2 | 202241851 | 45       |
| 03/04/92 | MS  | VALVE   | 2-MS-182       | INSPECT VALVE                        | INSPECTED VALVE INTERNALS            | 2 | 202241852 | 45       |
| 03/04/92 | MS  | VALVE   | 2-MS-178       | INSPECT VALVE                        | INSPECTED VALVE INTERNALS            | 2 | 202241853 | 45       |
| 03/04/92 | CH  | VALVE   | HCV-2310       | LEAK OUT OF FURMANITE HOLE AND LEAK  | REPLACED GASKETS AND ADJUSTED PACKIN | 2 | 203020346 | 50       |
| 03/04/92 | IA  | PIPING  | 2-IA-516       | REPAIR BROKEN PIPE TO TV-CC-205B     | REPLACED APPROX 6' PIPE AND 2 90DEG  | 2 | 203020730 | 49       |
| 03/04/92 | RC  | VALVE   | HCV-2556C      | REPACK OR AIR LOOP FAIL GET PUMP     | ADJUSTED PACKING                     | 2 | 203030836 | 18       |
| 03/04/92 | CH  | VALVE   | HCV-2311       | REPACK OR AIR                        | ADJUSTED PACKING                     | 2 | 203030840 | 19       |
| 03/04/92 | SI  | SNUBBER | 2-SI-HSS-20    | REPAIR TEST AND REINSTALL            | REPLACED PACKING SEAL                | 2 | 203031412 | 18       |
| 03/04/92 | HSS | SNUBBER |                | SIGHT GLASS BROKEN                   | REPAIRED SIGHT GLASS                 | 2 | 203032055 | 2        |
| 03/04/92 | CH  | VALVE   | 2-CH-170       | VALVE HAS LEAK                       | PT ON UPESTREAM SIDE OF 2-CH-170     | 2 | 203040301 | 7        |
| 03/08/92 | MS  | SV      | SOV-MS-202A    | AIR LEAKING OUT OF TOP HALF          | PERFORMED TEMP REPAIR TO DIAPH       | 2 | 202041435 | 119      |
| 03/11/92 | FW  | PUMP    | 2-FW-P-3B      | CASING LEAK                          | TIGHTENED BOLTING                    | 2 | 202090531 | 145      |
| 03/11/92 | FW  | PUMP    | 2-FW-P-3B      | NO GUARD ON COUPLING                 | INSTALLED COUPLING GUARD             | 2 | 202092532 | 145      |
| 03/12/92 | MS  | PIPING  |                | LINE BETWEEN 2-MS-145 FLANGE HAS A H | WELD REPAIR                          | 2 | 212020158 | 269      |
| 03/13/92 | CH  | VALVE   | RV-2382        | BOLT MISSING                         | INSTALLED STUD +2 NUTS               | 2 | 203041003 | 192      |
| 03/13/92 | SV  | PUMP    | 2-SV-P-10A     | INSPECT PUMP IMPELLERS               | REMOVED PUMP AND CHECKED             | 2 | 203041157 | 8        |
| 03/14/92 | SV  | PUMP    | 1-SV-P10B      | INSPECT IMPELLER NUT                 | IMPELLER NUT TIGHT                   | 2 | 203041154 | 3        |
| 03/21/92 | CH  | PIPE    | 1-CH-356-152   | LAG PIPE TO INLET OF FCV 2113A       | LAGGED PIPE TO INLET ON 2113A        | 2 | 203171353 | 95       |
| 03/22/92 | CC  | HX      | 1-CC-E-1D      | CLEAN HEAT EXCHANGER                 | CLEAN HEAT EXCHANGE                  | 2 | 203182000 | 3        |
| 03/24/92 | SS  | VALVE   | 2-EG-40        | CHECK VALVE ON DISCH                 | REPAIRED LEAK                        | 2 | 203122043 | 216      |
| 03/31/92 | SV  | PUMP    | 2-SV-P-10B     | PACKING LEAK ON PUMP                 | REPACKED PUMP                        | 2 | 203220307 | 4        |

OSET TOTAL

4368

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 1

ELECTRICAL MAINTENANCE

MARCH, 1982

DEIT=EL3C

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

| RTS#       | W/DY | SYS | COMP  | MARKNO      | SUMMARY                      | WKPERS             | U | MR        | TOTLW/HZ |
|------------|------|-----|-------|-------------|------------------------------|--------------------|---|-----------|----------|
| 03720      | 82   | FW  | MOTOR | 1-FW-P-3A   | MOTOR WAS SPRAYED WITH STEAM | PERFORMED PI CURVE | 1 | 203200519 | 5        |
| 03725      | 82   | SW  | MOV   | MOV-SW-105D | ZERO GROUND                  | MOTOR REPAIRED     | 1 | 203251000 | 8        |
| DRTY TOTAL |      |     |       |             |                              |                    |   |           | 13       |

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 2

ELECTRICAL MAINTENANCE

MARCH, 1982

UNIT2-  
(MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS)

| RETSEVIRT  | SYS  | COMP    | MARKNO      | SUMMARY                              | WKTRF                                | U | NR        | TOTLWNTN |
|------------|------|---------|-------------|--------------------------------------|--------------------------------------|---|-----------|----------|
| 03/01/82   | SI   | VALVE   | TV-SI-2884B | BIT RECIRC OUTLET ISOLATION DOES NOT | CYCLED VALVE SAT                     | 2 | 203011853 | 3        |
| 03/02/82   | CH   | VALVE   | HCV-2303B   | VALVE INDICATES INTERMEDIATE POSITIO | CLEANED OUT LIMIT CYCLE SAT          | 2 | 201281216 | 26       |
| 03/02/82   | RC   | RTD     |             | ERRATIC READING                      | CHECKED TIGHTENED CONNECTIONS        | 2 | 202130840 | 26       |
| 03/02/82   | RC   | MOTOR   | 2-RC-P-1A   | INSPECT COOLERS                      | INSPECTED COOLERS                    | 2 | 202221105 | 24       |
| 03/02/82   | RC   | MOTOR   | 2-RC-P-1B   | INSPECT COOLERS                      | INSPECTED COOLERS                    | 2 | 202221106 | 26       |
| 03/02/82   | RC   | MOTOR   | 2-RC-P-1C   | INSPECT COOLERS                      | INSPECTED COOLERS                    | 2 | 202221107 | 24       |
| 03/02/82   | EP   | WIRE    |             | ASSIST OPERATIONS                    | ASSISTED OPS ON DC BQ-S96 SAT        | 2 | 203021195 | 5        |
| 03/03/82   | RC   | MOV     | RC-2535     | CHECK TORQUE SWITCHES                | CHECKED TORQUE SWITCHES OPERATED SAT | 2 | 202011100 | 57       |
| 03/04/82   | RC   | VALVE   | HCV-2557B   | VALVE SHOWS INTERM. INDICATION       | ADJ LIMITS CYCLE                     | 2 | 202142259 | 82       |
| 03/04/82   | CH   | HT      | PWL11CK4C   | BAD HEAT TAPE                        | CIRCUIT REPLACED                     | 2 | 203091030 | 3        |
| 03/05/82   | CS   | MOTOR   | 2-CS-P-1A   | BRIDGE MEGGER + RUN PI CURVE         | BRIDGE AND MEGGERED OK               | 2 | 203050930 | 1        |
| 03/05/82   | CS   | MOTOR   | 2-CS-P-1B   | BRIDGE MEGGER                        | BRIDGERED + MEGGERED SAT             | 2 | 203050931 | 1        |
| 03/05/82   | FW   | MOTOR   | 2-FW-P-3B   | BRIDGE MEGGER + RUN PI CURVE         | BRIDGED + MEGGERED MOTOR             | 2 | 203050956 | 4        |
| 03/05/82   | FW   | MOTOR   | 2-FW-P-3A   | BRIDGE MEGGER + RUN PI CURVE         | BRIDGE + MEGGERED MOTOR              | 2 | 203050957 | 4        |
| 03/07/82   | RS   | ALARM   | LS-RS-100B  | ALARM WILL NOT CLEAR TK              | REPAIRED CONTACTS IN FIRED ALARM CLR | 2 | 202252220 | 166      |
| 03/11/82   | ES   | ELEC    |             | INSTALL RAY CHEM                     | WORK HAS BEEN COMPLETED              | 2 | 202271342 | 249      |
| 03/11/82   | CH   | HT      | PWL11CKT6B  | REPAIR CIRCUIT                       | CIRCUIT REPAIRED                     | 2 | 203110846 | 6        |
| 03/12/82   | CH   | HT      | PANEL8      | LOW AMPS                             | REPAIRED HEAT TAPE SAT               | 2 | 203120740 | 5        |
| 03/12/82   | EP   | CARDOX  | ZONE 6      | COIL NEEDS REPLACING                 | COIL REPLACED                        | 2 | 203121130 | 1        |
| 03/13/82   | SW   | MOTOR   | 2-SW-P-10A  | DISC AND RECON FOR MECH              | DISCONNECTED MOTOR                   | 2 | 203130722 | 16       |
| 03/14/82   | FI   | ANNC    | E-G-10      | DOES NOT FLASH                       | ALARM REPAIRED                       | 2 | 203131902 | 19       |
| 03/14/82   | FI   | ANNC    | E-H-10      | DOES NOT FLASH WHEN TESTED           | ALARM REPAIRED                       | 2 | 203131903 | 19       |
| 03/14/82   | SW   | MOTOR   | 2-SW-P-10B  | DISC AND RECON FOR MECH              | DISCONNECTED RECONNECTED MOTOR       | 2 | 203140745 | 6        |
| 03/20/82   | FE   | MOTOR   |             | LUBE OIL. CIRC PUMP MOTOR VERY HOT   | MOTOR CHECKED SAT                    | 2 | 203200140 | 1        |
| 03/20/82   | NS   | NRV     | NRV-NS-201C | VALVE FAILED TO SHUT                 | REPLACED TORQUE SWITCH               | 2 | 203200700 | 4        |
| 03/22/82   | SI   | VALVE   | MOV-2890A   | VALVE FAILED TO OPEN ELEC            | CLEANED TORQUE SW CYCLED SAT         | 2 | 203161200 | 29       |
| 03/22/82   | EPIC | CHARGER | 2R1         | INVESTIGATE CAUSE OF OVERHEATING     | REPLACED DIODE COMPLETE              | 2 | 203192300 | 49       |
| 03/23/82   | EP   | HORN    | HAZ 2       | REPLACE HORN SAFETY ITEM             | REPLACED HORN AND OPERATED SAT       | 2 | 203130836 | 126      |
| 03/23/82   | VS   | VALVE   | 2-VS-104B   | VALVE INDICATES INTERMEDIATE         | READJUSTED ARM ON LIMIT SWITCH       | 2 | 203221549 | 2        |
| DRIT TOTAL |      |         |             |                                      |                                      |   | -----     | 984      |



MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 1

INSTRUMENT MAINTENANCE

MARCH, 1982

DEPT-INST

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

| RTS#       | DATE | SYS | COMP    | MARKNO     | SUMMARY                        | WKPERF               | U | MR        | TOTL | WRTN |
|------------|------|-----|---------|------------|--------------------------------|----------------------|---|-----------|------|------|
| 03/25/82   |      | AV  | MONITOR | DN-RMS-150 | ALARM SETPOINT>THAN 1PERC BAND | RESET ALARM SETPOINT | 1 | 203230805 | 1    |      |
| DEPT TOTAL |      |     |         |            |                                |                      |   |           | 1    |      |

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 2

INSTRUMENT MAINTENANCE

MARCH, 1982

DEPT-INST

UNIT2-  
(MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS)

| RETSEVMT | SYS | COMP   | MARKNO         | SUMMARY                            | WKPERF                               | U | HR        | TOTWNTM |
|----------|-----|--------|----------------|------------------------------------|--------------------------------------|---|-----------|---------|
| 03/02/82 | CV  | INSTR  | FI-150         | INDICATED FLOW                     | PROBLEM CLEARED                      | 2 | 010230295 | 22      |
| 03/02/82 | SI  | INSTR  | PI-931         | TANK APPEARS TO HAVE MORE PRESS    | SIMULATED INPUT ADJUSTED INDICATOR   | 2 | 202102325 | 456     |
| 03/02/82 | SI  | INSTR  | PI-929         | CHECK CALIB                        | VERIFIED INDICATOR WORKS SATISFACTOR | 2 | 202102335 | 456     |
| 03/02/82 | SS  | SWITCH |                | ADJUST PRESSURE SWITCH             | RESET SWITCH                         | 2 | 202282359 | 3       |
| 03/04/82 | SI  | INSTR  | PI-927         | CHANNEL DRIFTED HIGH-CHECK CALIB   | REPLACED TRANSMITTER                 | 2 | 202200201 | 217     |
| 03/04/82 | RV  | VALVE  | HCV-2758       | VALVE WILL NOT FULLY CLOSE         | REPLACED RELAY CASKET UNPLUGGED F/P  | 2 | 202281400 | 46      |
| 03/04/82 | DA  | VALVE  | TV-DA-203B     | AIR LEAK ON VALVE                  | REPAIRED AIR LEAK ON INSTRUMENT LINE | 2 | 203011825 | 44      |
| 03/04/82 | SI  | TRANSM | 2-FI-2934      | FLOW TRANSMITTER INDICATES 30GPM   | FIXED BROKEN POINTER                 | 2 | 203012310 | 43      |
| 03/04/82 | RV  | VALVE  | SOV-RM-200C    | INSTALL TEMPORARY AIR LINE         | TEMPORARY LINE INSTALLED             | 2 | 203030841 | 23      |
| 03/12/82 | SI  | HST    | TIC-2934A/2934 | ALL WIRING CONNECTIONS ARE BRITTLE | NO PROBLEM                           | 2 | 203110253 | 24      |
| 03/21/82 | CH  | INSTR  |                | GAGE NEEDS REPLACED                | CALIBRATED TRANSMITTER               | 2 | 203061347 | 126     |
| 03/21/82 | SW  | INSTR  | PS-SW-203B     | CLEAN SENSING LINE                 | UNCLOGGED LINE                       | 2 | 203150715 | 126     |

DEPT TOTAL

1586

HEALTH PHYSICS

MARCH, 1982

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

MARCH, 1982

| <u>Procedure No.</u>                             | <u>Unit</u> | <u>Title</u>                  | <u>Date Deviated</u> | <u>Date SNSOC Reviewed</u> |
|--|-------------|-------------------------------|----------------------|----------------------------|
| Nuclear Assurance Corp. Document 720, Revision 1 | 1           | Out-of-Core Sipping Procedure | 01/30/82             | 03/11/82                   |