VIRGINIA ELECTRIC AND POWER COMPANY

SURRY POWER STATION

MONTHLY OPERATING REPORT

REPORT NO. 81-08

AUGUST, 1981

APPROVED: J. Wilson

CONTENTS

Section	Page
Operating Data Report - Unit #1	1
Operating Data Report - Unit #2	2, 2a
Unit Shutdowns and Power Reductions - Unit #1	3
Unit Shutdowns and Power Reductions - Unit #2	4
Load Reductions Due to Environmental Restrictions - Unit #1	5
Load Reductions Due to Environmental Restrictions - Unit #2	6
Average Daily Unit Power Level - Unit #1	7
Average Daily Unit Power Level - Unit #2	8
Summary of Operating Experience	9, 10
Amendments to Facility License or Technical Specifications	11
Facility Changes Requiring NRC Approval	12
Facility Changes That Did Not Require NRC Approval	12
Tests and Experiments Requiring NRC Approval	13
Tests and Experiments That Did Not Require NRC Approval	13
Other Changes, Tests and Experiments	14
Chemistry Report	15
Description of All Instances Where Thermal Discharge Limits Were Exceeded	16, 17
Fuel Handling (Units One and Two)	18, 19
Procedure Revisions That Changed the Operating Mode Described in the FSAR	20
Description of Periodic Tests Which Were Not Completed Within the Time Limits Specified in Technical Specifications	21
Inservice Inspection	22
Reportable Occurances Pertaining to Any Outage or Power Reductions	23
Maintenarce of Safety Related Systems During Outage or Reduced Power Periods - Unit #1 - Mechanical Maintenance	24, 25
Maintenance of Safety Related Systems During Outage or Reduced Power Periods - Unit #2 - Mechanical Maintenance	26, 27

OPERATING DATA REPORT

DOCKET NO. 50-280
DATE 10 SEP 81
COMPLETED BY SUE D. DUNN
TELEPHONE 804-357-3184

OPERATING STATUS

1. UNIT NAME	SURRY UNIT 1	
2. REPORTING PERIOD	80181 TO 83181	
3. LICENSED THERMAL POWER (MWT)	2441	NOTES
4. NAMEPLATE RATING (GROSS MWE)	847.5	
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	5831.0	76190.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	725.2	1281.3	43819.8
13. REACTOR RESERVE SHUTDOWN HOURS	0.0	0.0	3731.5
14. HOURS GENERATOR ON-LINE	720.9	1225.9	42894.7
15. UNIT RESERVE SHUTDOWN HOURS	0.0	0.0	3736.2
16. GROSS THERMAL ENERGY GENERATED (MWH)	1740954.1	2802334.1	99191735.1
17. GROSS ELECTRICAL ENERGY GENERATED (MWH)	559940.0	902420.0	32204163.0
18. NET ELECTRICAL ENERGY GENERATED (MWH)	528777.0	849328.0	30549252.0
19. UNIT SERVICE FACTOR	96.9 %/%	21.0 %/%	56.3 %/%
20. UNIT AVAILABILITY FACTOR	96.9 %/%	21.0 %/%	61.2 %/%
21. UNIT CAPACITY FACTOR (USING MDC NET)	91.7 %/%	18.8 %/%	51.7 %/%
22. UNIT CAPACITY FACTOR (USING DER NET)	90.2 %/%	18.5 %/%	50.9 %/%
23. UNIT FORCED OUTAGE RATE	3.1 %/%	6.0 %/%	25.9 %/%

24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH)
Sept. 20, 1981 - 5 days - Maintenance
Feb. 18, 1982 - approx. 10 days - Spring Maint.

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		

VALUE ERROR
-OPDATA
^

Section	Page
Maintenance of Safety Related Systems During Outage or Reduced Power Periods - Unit #1 - Electrical Maintenance	28, 29
Maintenance of Safety Related Systems During Outage or Reduced Power Periods - Unit #2 - Electrical Maintenance	30, 31
Maintenance of Safety Related Systems During Outage or Reduced Power Periods - Unit #1 - Instrument Maintenance	32, 33
Maintenance of Safety Related Systems During Outage or Reduced Power Periods - Unit #2 - Instrument Maintenance	34, 35
Health Physics Summary	36
Procedure Deviations reviewed by Station Nuclear Safety and Operating Committee after Time Limits Specified in T. S.	37

CORRECTED PAGE

*INDICATES CORRECTION

OPERATING DATA REPORT

DOCKET NO. 50-280
DATE 10 SEP 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	NOTES
4. NAMEPLATE RATING (GROSS MWE)	847.5	
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	5087.0	75455.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	556.1	* 556.1	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 09 SEP 81
COMPLETED BY SUE D. DUNN
TELEPHONE 804-357-3184

OPERATING STATUS

1. UNIT NAME	SURRY UNIT 2	
2. REPORTING PERIOD	80181 TO 83181	
3. LICENSED THERMAL POWER (MWT)	2441	NOTES
4. NAMEPLATE RATING (GROSS MWE)	847.5	
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	5831.0	73079.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	744.0	5567.8	43351.8
13. REACTOR RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
14. HOURS GENERATOR ON-LINE	744.0	5529.3	42665.9
15. UNIT RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED (MWH)	1798048.1	13389275.6	99843936.6
17. GROSS ELECTRICAL ENERGY GENERATED (MWH)	574105.0	4329155.0	32568149.0
18. NET ELECTRICAL ENERGY GENERATED (MWH)	543191.0	4102081.0	30880569.0
19. UNIT SERVICE FACTOR	100.0 %/%	94.8 %/%	58.4 %/%
20. UNIT AVAILABILITY FACTOR	100.0 %/%	94.8 %/%	58.4 %/%
21. UNIT CAPACITY FACTOR (USING MDC NET)	94.2 %/%	90.8 %/%	54.5 %/%
22. UNIT CAPACITY FACTOR (USING DER NET)	92.7 %/%	89.3 %/%	53.6 %/%
23. UNIT FORCED OUTAGE RATE	0.0	1.2 %/%	17.8 %/%

24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH)

Refueling - 11/13/81 - 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 August, 1981

DOCKET NO. 50-280
UNIT NAME Surry One
DATE Sept. 9, 1981
COMPLETED BY Sue D. Dunn
TELEPHONE (804) 357-3184 Ext.477

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	08-22-81	F	23.1	H	3				A reactor trip occurred on a pressurizer high pressure signal as a result of a turbine runback without steam dump actuation or automatic rod insertion. The control room operators have been instructed to minimize time steam dumps are disabled and control rods are operated in manual.
81-12	08-26-81	F	-0-	H	4				A Turbine runback occurred at 0959 as a result of a loss of control power to Power Range Detector N-41 while the instrument technicians were testing it. Power Range Detector N-41 was repaired and returned to service.

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

(-777)

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-281
UNIT NAME Surry Two
DATE Sept. 9, 1981
COMPLETED BY Sue D. Dunn
TELEPHONE (804) 357-3184 Ext. 477

REPORT MONTH August, 1981

No.	Date	Type[1]	Duration (Hours)	Reason[2]	Method of Shutting Down Reactor	Licensee Event Report #	System Code[4]	Component Code[5]	Cause & Corrective Action to Prevent Recurrence
81-11	08-13-81	F	- 0 -	H	4				Reduced power to remove "B" MFP from service for repairs. Repaired "B" MFP and returned it to service.

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

(9/77)

LOAD REDUCTIONS DUE TO ENVIRONMENTAL RESTRICTIONS

UNIT NO. 1 MONTH: August, 1981

DATE	TIME	HOURS	LOAD, MW	REDUCTIONS, MW	MWH	REASON
NONE DURING THIS OPERATING PERIOD.						
				MONTHLY TOTAL		

LOAD REDUCTIONS DUE TO ENVIRONMENTAL RESTRICTIONS

UNIT NO. 2 MONTH: August, 1981

DATE	TIME	HOURS	LOAD, MW	REDUCTIONS, MW	MWH	REASON
NONE DURING THIS OPERATING PERIOD.						
				MONTHLY TOTAL		

UNIT SURRY I
DATE 9-1-81
COMPLETED BY S. D. Dunn

AVERAGE DAILY UNIT POWER LEVEL

MONTH: AUGUST 81

DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)	DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)
1	746.7	17	740.8
2	746.3	18	741.0
3	746.1	19	742.7
4	744.4	20	741.7
5	742.2	21	743.9
6	743.7	22	90.8
7	743.0	23	498.9
8	744.0	24	743.6
9	742.8	25	743.0
10	737.3	26	670.2
11	740.4	27	738.5
12	743.0	28	741.6
13	738.6	29	741.0
14	738.4	30	740.3
15	739.1	31	739.9
16	738.8		

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 9-1-81
COMPLETED BY S. D. Dunn

AVERAGE DAILY UNIT POWER LEVEL

MONTH: AUGUST 81

DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)	DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)
1	731.0	17	738.4
2	735.6	18	738.8
3	742.1	19	724.3
4	739.2	20	739.1
5	729.8	21	742.2
6	736.2	22	735.9
7	739.9	23	733.8
8	739.3	24	738.9
9	735.8	25	735.8
10	726.8	26	737.3
11	725.9	27	740.3
12	727.2	28	741.2
13	552.1	29	740.5
14	735.7	30	739.3
15	736.6	31	736.0
16	738.3		

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

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

August 1 — This reporting period begins with the Unit at 100%.

August 10 — At 1907 the 1G 4160V Screenwell Bus supply breaker tripped causing a loss of power to the Unit One circulating water pumps. This reduced cooling water available to the main condensers. Power was reduced and the condenser outlet valves throttled to maintain canal level. The power decrease was stopped at 1928 at 96% power and 740 MWe. The 1G and 2G Screenwell buses were crosstied and 3 of the 4 circulating water pumps were restarted and power was returned to 100% at 2150.

August 22 — At 0258 a reactor trip occurred on a pressurizer high pressure trip signal. The trip was a result of a turbine runback without steam dump actuation or automatic rod insertion. The runback was caused by Instrument Technicians performing CAL-MI-049 on power range detector N-41. While taking voltages across the control power fuses, they shorted to ground and caused the control power fuses to blow. SV-MS-101C, "C" steam generator secondary safety valve, opened during the transient and failed to reset when secondary pressure decreased below the lift setpoint. At 0323, Safety Injection was initiated manually with pressurizer level at 1% and primary pressure at 1840 psig. At 0411, a cooldown to 480°F primary temperature commenced to allow SV-MS-101C to reseat. By 0830, SV-MS-101C had reseated, the valve linkage had been adjusted to resolve the problem, and PT-13 performed to verify lift and reseat pressures were within tolerance. The reactor was critical at 2248.

August 23 — The generator was synchronized to the line at 0204. At 0520, the power increase was stopped 70% power and 540 MWe to allow securing "B" Main Feed Pump for seal repairs. At 1339, started decreasing power to start "B" MFP and place it in service. Stopped power decrease at 1349 and started "B" MFP at 1408. Started increasing power at 1414 and reached 100% power at 1645.

August 26 — At 0959, a turbine runback occurred at a result of loss of control power to power range detector N-41. Power was stabilized at 72% and 500 MWe following the runback. Power was raised to 75% and held to run a flux map. Started a power increase at 1445 and 1506 another turbine runback occurred. This runback was a result of having failed to clear the previous signal. Stabilized and commenced increasing power. Stopped power increase at 85% power after resetting runback signal at 1641 to run a flux map. Started a power increase at 1810 and reached 100% at 1900.

August 27 — Started to decrease power at 1512 to allow isolating a blown gage line on the "D" generator hydrogen cooler. Stopped the power decrease at 91% power at 1522, isolated "D" hydrogen cooler, plugged the gage line fitting and unisolated "D" hydrogen cooler. Started to increase power at 1524 and reached 100% at 1700.

SUMMARY OF OPERATING EXPERIENCE

August, 1981

(continued)

August 31 This reporting ends with the Unit at 100% power.

Unit Two

August 1 This reporting period begins with the Unit at 100%.

August 10 At 1907, the 1G screenwell transformer supply breaker tripped causing a loss of four circulating water pumps. The unit power was reduced to 98% and 740 MWe to allow the main condenser water box outlet valves to be throttled. At 2247, after the recovery of three of the circulating water pumps, a power increase was commenced and power reached 100% at 2321.

August 13 At 0001, Start decreasing power to remove "B" Main Feed Pump from service for repairs. Stopped power decrease at 60% power and 480 MWe and secured "B" MFP at 0136. Started "B" MFP at 1308 and started increasing power at 1325. Power reached 100% at 1800.

August 20 At 0610, it was determined both charging pump service water pumps (2-SW-P-10A & 10B) were inoperable. In accordance with Technical Specification 3.0 it was determined the Unit would have to be at hot shutdown in 6 hours unless at least one SW pump was returned to service in the interim. At 0856, the decision was made to commence a normal unit shutdown. 2-SW-P-10B was returned to service, the power decrease halted and a power increase commenced from 85% at 0943. Power reached 100% at 1200.

August 31 This reporting period ends with the Unit at 100% power.

AMENDMENTS TO FACILITY LICENSE OR TECHNICAL SPECIFICATIONS

AUGUST, 1981

The Nuclear Regulatory Commission issued, on June 23, 1981, Amendment No. 71 to the Operating License for Surry Power Station, Units No. 1 and No. 2. The changes have been designated as Technical Specification Change No. 79

Of significance are the following changes:

1. Revision of the figure relating containment air partial pressure, containment temperature, and service water temperature.
2. Revision of the Refueling Water Storage Tank required level to 387,100 gallons for Unit 1.
3. Addition of a requirement for specific limits for Safety Injection System leakage outside containment.

In addition to the requirements of the Technical Specifications, paragraph 3.F of the Operating License for Unit No. 1 has been deleted and paragraph 3.B of the Operating License for Units No. 1 and No. 2 is amended as follows:

"B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 71, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications."

The Nuclear Regulatory Commission issued, on July 9, 1981, Amendment No. 72 to the Operating License for Surry Power Station, Unit No. 2. The changes have been designated as Technical Specification Change No. 80.

Of Significance, the changes provide a one time 60 day extension for the visual inspection surveillance requirement for inaccessible snubbers. In addition to the requirements of the Technical Specifications, paragraph 3.B of the Operating License for Unit No. 2 is amended as follows:

"B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 72, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications."

The Nuclear Regulatory Commission issued, on July 10, 1981, an Order for Surry Power Station, Units No. 1 and No. 2. The Order is discussed below and has been designated as Technical Specification Change No. 81.

The Order is issued to encourage implementation of NUREG - 0737 items consistent with the NRC Staff's schedule. The Order requires the following:

"The licensee shall satisfy the specific requirements described in the Attachment to this Order (as appropriate to the licensee's facility) as early as practicable but no later than 60 days after the effective date of the ORDER."

FACILITY CHANGES REQUIRING NRC APPROVAL

AUGUST, 1981

NONE DURING THIS REPORTING PERIOD.

FACILITY CHANGES THAT DID NOT REQUIRE NRC APPROVAL

AUGUST, 1981

NONE DURING THIS REPORTING PERIOD.

TESTS AND EXPERIMENTS REQUIRING NRC APPROVAL

AUGUST, 1981

None during this reporting period.

TEST AND EXPERIMENTS THAT DID NOT REQUIRE NRC APPROVAL

AUGUST, 1981

		Unit
ST-111 -	Flow Coastdown Measurement was completed on August 5, 1981.	1
ST-114 -	Reactor Coolant Pump Vibration was completed on August 6, 1981	1

OTHER CHANGES, TESTS AND EXPERIMENTS

AUGUST, 1981

NONE DURING THIS REPORTING PERIOD.

SURRY POWER STATION

CHEMISTRY REPORT

August , 19 81

T.S. 6.6.3.d

PRIMARY COOLANT ANALYSIS	UNIT NO. 1 (A)			UNIT NO. 2 (C)		
	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	AVERAGE
Gross Radioact., µCi/ml	(B) 1.38E+0	3.97E-1	7.97E-1	3.38E-1	1.26E-1	2.34E-1
Suspended Solids, ppm	0.20	0.10	0.11	0.10	0.10	0.10
Gross Tritium, µCi/ml	2.46E-1	1.16E-1	1.67E-1	1.49E-1	7.73E-2	1.06E-1
Iodine-131, µCi/ml	(B) 1.99+0	5.44E-2	(B) 2.77E-1	9.01E-3	2.99E-3	5.33E-3
I-131/I-133	.7439	.3789	.4964	(D) 1.9609	0.6494	(D) 1.2167
Hydrogen, cc/kg	42.7	21.2	33.4	48.3	31.5	41.0
Lithium, ppm	2.50	1.55	2.11	1.00	0.75	0.88
Boron-10, ppm +	277	176	193	48	33	41
Oxygen-16, ppm	.000	.000	.000	.000	.000	.000
Chloride, ppm	<.05	<.05	<.05	<.05	<.05	<.05
pH @ 25°C	6.90	6.41	6.73	7.39	6.99	7.20

+ Boron-10 = Total Boron x 0.196

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

Phosphate	0	Boron	932
Sulfate	0	Chromate	0.0
50% NaOH	0	Chlorine	0

Remarks: (A) Rx trip on 8/22 at 0300, unit runback to 70% power on 8/26 0959.

(B) High Values due to suspected fuel failure. Val s appeared high during Rx trip.

(C) Unit Rampdown to 60% power for feed pump repair.

(D) High Values due to suspected pin-hole leaks is fuel.

(E) These levels of Chemicals should represent no major adverse environmental impact.

DESCRIPTION OF ALL INSTANCES WHERE THERMAL DISCHARGE LIMITS WERE EXCEEDED

August, 1981

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

August 1, 1981	Exceeded 15°F ΔT across station*
August 2, 1981	Exceeded 15°F ΔT across station*
August 3, 1981	Exceeded 15°F ΔT across station*
August 4, 1981	Exceeded 15°F ΔT across station
August 5, 1981	Exceeded 15°F ΔT across station
August 6, 1981	Exceeded 17.5°F ΔT across station*
August 7, 1981	Exceeded 15°F ΔT across station*
August 8, 1981	Exceeded 15°F ΔT across station*
August 9, 1981	Exceeded 15°F ΔT across station*
August 10, 1981	Exceeded 17.5°F ΔT across station**
August 11, 1981	Exceeded 17.5°F ΔT across station**
August 12, 1981	Exceeded 17.5°F ΔT across station**
August 13, 1981	Exceeded 15°F ΔT across station*
August 14, 1981	Exceeded 15°F ΔT across station*
August 15, 1981	Exceeded 15°F ΔT across station*
August 16, 1981	Exceeded 15°F ΔT across station*
August 17, 1981	Exceeded 15°F ΔT across station*
August 18, 1981	Exceeded 15°F ΔT across station*
August 19, 1981	Exceeded 15°F ΔT across station
August 20, 1981	Exceeded 15°F ΔT across station*
August 21, 1981	Exceeded 15°F ΔT across station*
August 22, 1981	Exceeded 15°F ΔT across station*
August 23, 1981	Exceeded 15°F ΔT across station*
August 24, 1981	Exceeded 15°F ΔT across station*
August 25, 1981	Exceeded 15°F ΔT across station*
August 26, 1981	Exceeded 15°F ΔT across station*
August 27, 1981	Exceeded 15°F ΔT across station*
August 28, 1981	Exceeded 15°F ΔT across station*
August 29, 1981	Exceeded 15°F ΔT across station*
August 30, 1981	Exceeded 15°F ΔT across station
August 31, 1981	Exceeded 15°F ΔT across station

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

**Indicates station ΔT was less than 17.5°F across 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.

JULY REPORT
CORRECTED PAGE
*INDICATES CORRECTION

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 blowdown systems. The overall effects of radiological releases to the environment will be significantly reduced by removal of activity in the demineralizers.

* DC-79-48 - 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 E2400X 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.

DESCRIPTION OF ALL INSTANCES WHERE
THERMAL DISCHARGE LIMITS WERE EXCEEDED

August, 1981

(continued)

The Temperature change at the station discharge exceeded 3°F per hour and the Station discharge temperature exceeded 105.5°F on August 10, 1981 as a result of a loss of 4 of 8 circulating water pumps due to a power failure. This was reported in a letter to the NRC dated August 25, 1981 and assigned serial number 516.

The temperature change at the station discharge exceeded 3°F per hour on August 13, 1981 while decreasing power on Unit 2 to remove the "B" main feed pump from service for repairs. This was reported in a leter to the NRC dated August 25, 1981 and assigned serial number 550.

The temperature change at the station discharge exceeded 3°F per hour on August 22, 1981 due to a reactor trip on Unit One.

This event was allowable in accordance with Technical Specification 4.14. There were no reported instances of adverse environmental impact.

FUEL HANDLING

Unit one August, 1981

DATE SHIPPED/RECEIVED	NO. OF ASSEMBLIES PER SHIPMENT	ANSI NO. INITIAL ENRICHMENT	NEW OR SPENT FUEL SHIPPING CASK ACTIVITY LEVEL
	NONE DURING THIS OPERATING	PERIOD.	

FUEL HANDLING

Unit two August, 1981

DATE SHIPPED/RECEIVED	NO. OF ASSEMBLIES PER SHIPMENT	ANSI NO. INITIAL ENRICHMENT	NEW OR SPENT FUEL SHIPPING CASK ACTIVITY LEVE
	NONE DURING THIS OPERATING PERIOD.		

PROCEDURE REVISIONS THAT CHANGED THE OPERATING MODE DESCRIBED IN THE FSAR

AUGUST, 1981

NONE DURING THIS REPORTING PERIOD.

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

AUGUST, 1981

None during this reporting period.

INSERVICE INSPECTION

AUGUST, 1981

No inservice inspections were conducted this month on Unit One or Unit Two.

REPORTABLE OCCURRENCES PERTAINING TO
ANY OUTAGE OR POWER REDUCTIONS

AUGUST, 1981

NONE DURING THIS REPORTING PERIOD.

Maintenance of Safety Related Systems During Outage or Reduced Power Periods

UNIT #1

Mechanical Maintenance

Maintenance of Safety Related Systems During Outage or Reduced Power Periods

August, 1981

Mechanical Maintenance

NONE DURING THIS REPORTING PERIOD.

Maintenance of Safety Related Systems During
Outage or Reduced Power Periods

UNIT #2

Mechanical Maintenance

UNIT2- 9/09/81
(MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS)

RETSERVDT	SYS	COMP	MARKNO	SUMMARY	WKPERF	U	WR	TOTDWNTM
08/13/81	MS	PIPING		SUPPORT BENT IN CENTER ALL 3 ON TURN	VOID DONE BY CONSTR.	2	812081255	0
DEPT TOTAL								0

Maintenance of Safety Related Systems During Outage or Reduced Power Periods

UNIT #1

Electrical Maintenance

UNIT1- 9/09/81
(MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS)

RELSERVDT	SYS	COMP	MARKNO	SUMMARY	WKPERF	U	MR	TOTEQUIV
08/26/81	CS	TANK		CHECK OUT ALL FREEZE PROTECTION	REPLACED OIL CIRCUITS WITH HOW HEAT	1	1012?1400	479
DEPT TOTAL								479

Maintenance of Safety Related Systems During Outage or Reduced Power Periods

UNIT #2

Electrical Maintenance

Maintenance of Safety Related Systems During Outage or Reduced Power Periods

August, 1981

Electrical Maintenance

NONE DURING THIS REPORTING PERIOD.

Maintenance of Safety Related Systems During Outage or Reduced Power Periods

UNIT #1

Instrument Maintenance

Maintenance of Safety Related Systems During Outage or Reduced Power Periods

August, 1981

Instrument Maintenance

NONE DURING THIS REPORTING PERIOD.

Maintenance of Safety Related Systems During Outage or Reduced Power Periods

UNIT #2

Instrument Maintenance

Maintenance of Safety Related Systems During Outage or Reduced Power Periods

August, 1981

Instrument Maintenance

NONE DURING THIS REPORTING PERIOD.

HEALTH PHYSICS

AUGUST, 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

AUGUST, 1981

PROC. NO.	UNIT	TITLE	DATE DEVIATED	DATE SNSOC REVIEWED
ST-120	1	Steam Generator Water Level Stability and Control Demonstration	07-12-81	08-18-81
PT-17.5	2	Containment Subsurface Drain Pumps Performance	07-21-81	08-06-81
PT-22.5	1, 2	Security Emergency Diesel	07-14-81	08-06-81