

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

W. L. STEWART  
VICE PRESIDENT  
NUCLEAR OPERATIONS

March 15, 1984

Mr. N. M. Haller, Director  
Office of Management and Program Analysis  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Serial No. 142  
NO/WDC:acm  
Docket Nos. 50-280  
50-281  
License Nos. DPR-32  
DPR-37

Dear Mr. Haller:

Enclosed is the Monthly Operating Report for Surry Power Station Unit Nos. 1 and 2 for the month of February, 1984. Also, attached are the corrected pages of the Unit Shutdowns and Power Reductions for the Monthly Operating Report of January, 1984.

Very truly yours,

*W. L. Stewart*  
W. L. Stewart

Enclosure (3 copies)

cc: Mr. R. C. DeYoung, Director (12 copies)  
Office of Inspection and Enforcement

Mr. James P. O'Reilly (1 copy)  
Regional Administrator  
Region II

Mr. D. J. Burke  
NRC Resident Inspector  
Surry Power Station

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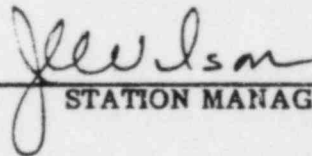
VIRGINIA ELECTRIC AND POWER COMPANY

SURRY POWER STATION

MONTHLY OPERATING REPORT

REPORT NO. 84-02

APPROVED BY:



STATION MANAGER

IE24

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# OPERATING DATA REPORT

DOCKET NO. 50-280  
DATE 07 MAR 84  
COMPLETED BY V. H. Jones  
TELEPHONE 804-357-3184

## OPERATING STATUS

1. UNIT NAME SURRY UNIT 1  
2. REPORTING PERIOD 20184 TO 22984  
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 N/A  
(ITEMS 3 THROUGH 7) SINCE LAST  
REPORT, GIVE REASONS

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	696.0	1440.0	98088.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	571.8	1310.7	60413.6
13. REACTOR RESERVE SHUTDOWN HOURS	4.2	9.3	3774.5
14. HOURS GENERATOR ON-LINE	566.5	1280.0	59147.2
15. UNIT RESERVE SHUTDOWN HOURS	0.0	0.0	3736.2
16. GROSS THERMAL ENERGY GENERATED (MWH)	1342137.5	3026287.4	137952591.7
17. GROSS ELECTRICAL ENERGY GENERATED (MWH)	433030.0	972425.0	44292268.0
18. NET ELECTRICAL ENERGY GENERATED (MWH)	411451.0	923876.0	42001612.0
19. UNIT SERVICE FACTOR	81.4 %	88.9 %	60.3 %
20. UNIT AVAILABILITY FACTOR	81.4 %	88.9 %	64.1 %
21. UNIT CAPACITY FACTOR (USING MDC NET)	76.3 %	82.8 %	55.3 %
22. UNIT CAPACITY FACTOR (USING DER NET)	75.0 %	81.4 %	54.3 %
23. UNIT FORCED OUTAGE RATE	1.6 %	3.0 %	21.3 %
24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS	WINTER MAINTENANCE - 2-24-84 - 14DA		
(TYPE, DATE, AND DURATION OF EACH)			

25. IF SHUT DOWN AT END OF REPORT PERIOD, 03-09-84  
ESTIMATE DATE OF STARTUP

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

INITIAL CRITICALITY  
INITIAL ELECTRICITY  
COMMERCIAL OPERATION

# OPERATING DATA REPORT

DOCKET NO. 50-281  
DATE 07 MAR 84  
COMPLETED BY V. H. Jones  
TELEPHONE 804-357-3184

## OPERATING STATUS

1. UNIT NAME SURRY UNIT 2  
2. REPORTING PERIOD 20184 TO 22984  
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 N/A  
(ITEMS 3 THROUGH 7) SINCE LAST  
REPORT, GIVE REASONS

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	696.0	1440.0	94968.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	696.0	1416.2	59987.1
13. REACTOR RESERVE SHUTDOWN HOURS	0.0	23.8	328.1
14. HOURS GENERATOR ON-LINE	696.0	1407.1	58983.1
15. UNIT RESERVE SHUTDOWN HOURS	0 0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED (MWH)	1659218.2	3375408.7	138091281.6
17. GROSS ELECTRICAL ENERGY GENERATED (MWH)	530760.0	1083220.0	44878079.0
18. NET ELECTRICAL ENERGY GENERATED (MWH)	503388.0	1027846.0	42534906.0
19. UNIT SERVICE FACTOR	100.0 %	97.7 %	62.1 %
20. UNIT AVAILABILITY FACTOR	100.0 %	97.7 %	62.1 %
21. UNIT CAPACITY FACTOR (USING MDC NET)	93.3 %	92.1 %	57.8 %
22. UNIT CAPACITY FACTOR (USING DER NET)	91.8 %	90.6 %	56.8 %
23. UNIT FORCED OUTAGE RATE	0.0	2.3 %	13.8 %
24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS	SPRING MAINTENANCE		
(TYPE, DATE, AND DURATION OF EACH)	3-16-84 - 14 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 January

DOCKET NO. 50-280  
 UNIT NAME Surry 1  
 DATE Feb. 06, 1984  
 COMPLETED BY Vivian Jones  
 TELEPHONE 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
84-1	01-06-84	F	23.0	G	3	84-001/003-0	SJ	FCV	Reactor trip caused by a voltage spike from vital bus I while Ch. II OTΔ T was in trip for periodic testing. The voltage spike was caused when Gaitronics was re-energized after maintenance was performed. Future Gaitronics Maintenance will be restricted.
84-2	01-18-84	F	7.5	B	2	84-002/003-0	SJ 1G	FCV RI	Reactor was manually tripped due to loss of various instrumentation caused by the semi-vital bus sporatically grounding out. This was caused by a loose wire in the breaker cubicle grounding out while another wire was being pulled out of cubicle. The loose wire was tightened.

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

<sup>2</sup> 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)

<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 Sheet for Licensee Event Report (LER) File (NUREG-0161)

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



# UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH FEB., 1984

DOCKET NO. 50-280  
UNIT NAME Surry 1  
DATE 03-05-84  
COMPLETED BY Vivian H. Jones  
TELEPHONE 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
84-3	02-06-84	F	9.3	A	3	84-003-06	LD	PSF	Reactor trip caused by "A" S/G low level with a steam flow/feed flow mismatch. The initiating event was a loss of control power to Unit 1 polishers and the subsequent re-energizing of the tripped breaker. Re-energizing control power caused the AOV's for the polish beds to go closed causing a reduction in feedwater flow. The corrective action was to replace the breaker that tripped causing a loss of control power. Also a sign will be posted by the breaker stating that "Do not re-energize breaker until polish bldg. is bypassed."
84-4	02-24-84	S	120.2	H	1				Shutdown for snubber outage and 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



## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH January

DOCKET NO. 50-281  
 UNIT NAME Surry II  
 DATE Feb. 06, 1984  
 COMPLETED BY Vivian Jones  
 TELEPHONE 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
84-1	01-13-84	F	25.2	A	2	84-001/003-0	BA 1G	NCV RI	The reactor was manually tripped when "A" main steam trip valve failed closed due to a broken air line. The air line was replaced.
84-2	01-14-84	F	7.7	A	3	84-002/003-0 84-003/003-0	LD 1G	PSF RI	Reactor trip caused by a high-high level in "A" S/G due to "A" feed regulating valve failing open. It failed open due to a broken air line. The air line was replaced

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

<sup>2</sup>  
 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)

<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 FEB. 1984

DOCKET NO. 50-281  
 UNIT NAME Surry 2  
 DATE 03-05-84  
 COMPLETED BY Vivian H. Jones  
 TELEPHONE 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
84-3	02-11-84	S	0	H	1				Power was reduced to 65% (505 MW's) for load following.
84-4	02-12-84	S	0	H	1				Power was reduced to 76% (615 MW's) for load following.
84-5	02-14-84	S	0	H	1				Power was reduced to 64% (500 MW's) for load following.
84-6	02-15-84	S	0	H	1				Power was reduced to 64% (500 MW's) for load following.
84-7	02-17-84	S	0	H	1				Power was reduced to 64% (500 MW's) for load following.
84-8	02-18-84	S	0	H	1				Power was reduced to 64% (500 MW's) for load following.
84-9	02-19-84	S	0	H	1				Power was reduced to 64% (500 MW's) for load following.

<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

LOAD REDUCTIONS DUE TO ENVIRONMENTAL RESTRICTIONS

UNIT NO. 1

MONTH: February, 1984

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



DOCKET NO 50-280  
UNIT SURRY I  
DATE 3-1-81  
COMPLETED BY V. H. Jones

AVERAGE DAILY UNIT POWER LEVEL

MONTH: FEBRUARY 84

DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)	DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)
1	745.7	16	746.6
2	746.3	17	748.5
3	745.8	18	747.1
4	748.6	19	743.7
5	750.8	20	745.5
6	586.3	21	744.7
7	249.6	22	744.6
8	715.6	23	743.7
9	746.0	24	662.8
10	747.6	25	0.0
11	745.3	26	0.0
12	746.2	27	0.0
13	746.2	28	0.0
14	749.4	29	0.0
15	747.1		

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.

DOCKET NO 50-281  
UNIT SURRY II  
DATE 3-1-84  
COMPLETED BY V. H. Jones

AVERAGE DAILY UNIT POWER LEVEL

MONTH: FEBRUARY 84

DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)	DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)
1	741.0	16	682.4
2	738.4	17	695.2
3	739.3	18	722.9
4	740.2	19	657.5
5	740.7	20	668.5
6	739.5	21	735.0
7	736.8	22	737.3
8	738.0	23	735.0
9	738.6	24	737.6
10	738.2	25	736.3
11	738.2	26	739.3
12	679.8	27	735.6
13	723.8	28	738.3
14	707.0	29	738.5
15	675.8		

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.



## SUMMARY OF OPERATING EXPERIENCE

### FEBRUARY, 1984

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

02-01-84	0000	This reporting period begins with the Unit at 100% power (785 MW's).
02-06-84	1847	Reactor trip caused by "A" S/G low level with a steam flow/feed flow mismatch. The initiating event was the condensate polishing demineralizer AOV's closing when control power was restored following a spurious breaker trip.
	2300	Reactor critical.
02-07-84	0404	Generator on the line, increasing power at 3%/hour.
02-08-84	0815	Unit at 100% power (785 MW's).
02-24-84	1800	Commenced unit ramp down for snubber outage.
	2347	Generator off the line.
02-25-84	0000	Reactor shutdown.
	0623	RCS < 350°F/450 psig.
	1358	RCS < 200°F.
	2250	Declared an "Unusual Event" due to vent-vent activity > 100% of T.S.
	2320	Secured from "Unusual Event," actual release was 79% of T.S., release was from overhead gas system into the auxiliary building while draining stripper.
02-28-84	0650	RCS is degassed, depressurized RCS, commenced draining to mid-nozzle.
	1551	RCS is at mid-nozzle.
02-29-84	1350	Commenced RCS head evacuation.
	2400	This reporting period ends with the unit at cold shutdown and at mid-nozzle with head evacuation in progress.

#### Unit Two

02-01-84	0000	This reporting period begins with the unit at 100% power (785 MW's).
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02-11-84	2355	Commenced power reduction for load following.
02-12-84	0225	Stopped ramp at 69% power (505 MW's).
	0508	Commenced power increase.
	0740	Unit at 100% power (780 MW's).
	2340	Commenced power reduction for load following.
02-13-84	0125	Stopped ramp at 76% (615 MW's) due to vibrations in feedwater system, increasing power to stabilize plant.
	0258	Unit at 92% power (730 MW's), plant stabilized and holding.
	0340	Commenced power increase.
	0429	Unit at 100% power (780 MW's).
02-14-84	0030	Commenced power reduction for load following.
	0202	Stopped ramp at 76% power (615 MW's) due to oscillations in feedwater system.
	0220	Commenced power increase.
	0258	Stopped ramp at 84% power (658 MW's), plant stabilized, tightened packing on "B" FRV.
	0308	Commenced power reduction to check for vibrations.
	0340	Stopped ramp at 74% power (588 MW's), no vibrations.
	0436	Commenced power increase.
	0639	Unit at 100% power (780 MW's).
	2328	Commenced power reduction for load following.
02-15-84	0155	Stopped ramp at 64% power (500 MW's).
	0509	Commenced power increase.
	0750	Unit at 100% power (780 MW's).
	2341	Commenced power reduction for load following.
02-16-84	0155	Stopped ramp at 64% power (500 MW's).
	0424	Commenced power increase.
	0648	Unit at 100% power (780 MW's).
	1430	Commenced power reduction due to 2-II inverter removed from service for repair and vital busses II and IV are cross-tied.

	1509	Stopped ramp at 88% power (740 MW's), inverter returned to service.
	1700	Unit at 100% power (780 MW's).
02-17-84	0008	Commenced power reduction for load following.
	0227	Stopped ramp at 64% power (500 MW's).
	0405	Commenced power increase.
	0627	Unit at 100% power (780 MW's).
02-18-84	0145	Commenced power reduction for load following.
	0245	Stopped ramp at 84% power (680 MW's).
	0448	Commenced power increase.
	0555	Unit at 100% power (780 MW's).
	2305	Commenced power reduction for load following.
02-19-84	0116	Stopped ramp at 64% power (500 MW's).
	0530	Commenced power increase.
	0750	Unit at 100% power (780 MW's).
	2255	Commenced power reduction for load following.
02-20-84	0105	Stopped ramp at 64% power (500 MW's).
	0515	Commenced power increase.
	0731	Unit at 100% power (780 MW's).
02-21-84	0130	Commenced power reduction for load following.
	0203	Stopped ramp at 92% power (730 MW's).
	0226	Commenced power increase.
	0316	Unit at 100% power (780 MW's).
02-23-84	0052	Commenced power reduction for load following.
	0150	Stopped ramp at 84% (680 MW's).
	0156	Commenced power increase.
	0300	Unit at 100% power (780 MW's).
02-29-84	2400	This reporting period ends with the unit at 100% power (780 MW's).

AMENDMENTS TO FACILITY LICENSE OR TECHNICAL SPECIFICATIONS

NONE DURING THIS REPORTING PERIOD

**FACILITY CHANGES REQUIRING**  
**NRC APPROVAL**

**NONE DURING THIS REPORTING PERIOD**

FACILITY CHANGES THAT  
DID NOT REQUIRE NRC APPROVAL

		<u>UNIT</u>
<u>DC82-02</u>	<u>Control Room Exhaust Fan Circuit Modification</u>  This design change modified the circuitry for Control Room Exhaust Fan VS-F-15 to prevent the fan from starting after a Safety Injection signal reset until it is started manually.  <u>Summary of Safety Analysis</u>  The modification prevents the exhaust fan from running against the closed exhaust valve MOV-VS-103B. The change makes the operation of this fan consistent with the design basis of ESF equipment.	1 & 2
<u>DC82-11D</u>	<u>Sodium Analyzers - Control Room Habitability</u>  This design change replaced four sodium analyzers which do not require dimethylamine gas or any other toxic reagents. The replacement analyzers also have identical power and signal ratings as the original analyzers.  <u>Summary of Safety Analysis</u>  The modification does not affect the operation of any safety-related equipment. This replacement eliminates the probability of a hazard due to the leakage of dimethylamine gas.	1 & 2



TESTS AND EXPERIMENTS REQUIRING  
NRC APPROVAL

NONE DURING THIS REPORTING PERIOD.

TESTS AND EXPERIMENTS THAT  
DID NOT REQUIRE NRC APPROVAL

NONE DURING THIS REPORTING PERIOD

OTHER CHANGES, TESTS AND EXPERIMENTS

NONE DURING THIS REPORTING PERIOD

VIRGINIA ELECTRIC AND POWER COMPANY  
SURRY POWER STATION  
CHEMISTRY REPORT

February 19 84

T.S. 6.6.3.d

PRIMARY COOLANT ANALYSIS	UNIT NO. 1			UNIT NO. 2		
	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM	AVERAGE
Gross Radioact., $\mu\text{Ci/ml}$	$3.18^{+0}$	$2.07^{-1}$	$1.45^{+0}$	$4.28^{-1}$	$3.26^{-2}$	$1.28^{-1}$
Suspended Solids, ppm	0.0	0.0	0.0	0.0	0.0	0.0
Gross Tritium, $\mu\text{Ci/ml}$	$1.34^{-1}$	$6.70^{-2}$	$9.05^{-2}$	$3.50^{-1}$	$1.78^{-1}$	$2.71^{-1}$
Iodine <sup>131</sup> , $\mu\text{Ci/ml}$	$1.44^{+0}$	$4.27^{-2}$	$4.08^{-1}$	$5.83^{-4}$	$6.47^{-5}$	$1.93^{-4}$
I <sup>131</sup> /I <sup>133</sup>	.82	.44	.63	0.41	.07	0.18
Hydrogen, cc/kg	32.8	4.3(A)	18.3	49.3	33.2	40.5
Lithium, ppm	1.95	.59	.89	1.48	1.26	1.36
Boron-10, ppm*	307	59	99	145	130	138
Oxygen, (D.O.), ppm	<.005	<.005	<.005	<.005	<.005	<.005
Chloride, ppm	<.02	<.02	<.02	<.02	<.02	<.02
pH @ 25°C	6.88	6.21	6.72	6.81	6.56	6.65

\* Boron-10 = Total Boron x 0.196

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

Phosphate	-	Boron	156
Sulfate	-	Chromate	0.1
50% NaOH	-	Chlorine	0.0

REMARKS: (A) Unit shutdown on 2/24/84 for spring outage. Degassing completed on 2/28/84  
 (B) Lithium additions made to Unit 1: 2/60qms. 2/1 200qms. 2/3; 220qms. 2/4 1123qms.  
 2/7; 165qms. 2/8; 160qms. 2/9; 210qms. 2/24; 2065qms. 2/25; Cation Bed placed in service  
 on Unit 1 for Lithium removal: 2/14; 2/18; 2/19; 2/20; 2/21; 2/23. Unit 2 Lithium add-  
 itions; 115qms. 2/12; 225qms. 2/14; 178qms. 2/15; 200qms. 2/16; 150qms. 2/17; 220qms.  
 2/19; Cation Bed in service on Unit 2 for Lithium Removal: 2/2; 2/11; 2/26. (C) The levels of  
 these chemicals should produce no adverse environmental impact.

DESCRIPTION OF ALL INSTANCES WHERE  
THERMAL DISCHARGE LIMITS WERE EXCEEDED

NONE DURING THIS REPORTING PERIOD

FUEL HANDLING

Unit 1

NONE DURING THIS REPORTING PERIOD

FUEL HANDLING

Unit 2

NONE DURING THIS REPORTING PERIOD



PROCEDURE REVISIONS THAT CHANGED THE  
OPERATING MODE DESCRIBED IN THE PSAR

NONE DURING THIS REPORTING PERIOD

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

NONE DURING THIS REPORTING PERIOD

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 1

MECHANICAL MAINTENANCE

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS  
UNIT: 1

DEPT: MECH	RETSERVDT	SYS CONF	MARKNO	SUMMARY	UNIT: 1
02/08/84	CC	PUMP	1 CC-P-1C	UNCOUPLE MOTOR TO PUMP	
NO PROBLEM FOUND				402013650	
02/08/84	CH	PUMP	1 CH P 1B	PUMP HAS RAD OUTBOARD SEAL LEAK	
REFUILT OUTBOARD END				401200545	
02/08/84	CH	PUMP	1-CH-P-1A	GEARBOX OIL IS CONTAMINATED	
INSTALLED NEW HEAT EXCHANGER				402020451	
02/08/84	CH	VALVE	MOV CH-1370	ADJUST PACKING	
ADJUSTED PACKING				401031320	
02/08/84	CH	PUMP	1-CH-P-1B	OUTRD PMP BRG OIL LEAKS	
STORED REAKING COVER				401091145	
02/08/84	CH	COMPL	1-CH-P-2B	PUMP COUPLING	
INSTALLED PROPERLY				307131052	
02/08/84	EE	UNION	N/A	FUEL OIL LEAK AT UNION	
TIGHTENED FITTING				311191555	
02/08/84	EE	UNION	N/A	FUEL OIL LEAK AT UNION	
TIGHTENED FITTING				311191556	
02/24/84	RR	VALVE	PCV BR-130A	LEAKS BY	
TIGHTENED GLAND				402181735	
02/24/84	FP	VALVE	1-FP-10	REPLACE PACKING	
TIGHTENED PACKING GLAND				402180135	
02/24/84	SV	VALVE	MOV SV-103B	LEVER WILL NOT CATCH PROPERLY	
OUT OF ADJUSTMENT				312130737	
02/24/84	CH	ISOL	1-CH 174	PI CONNECTION LEAK	
TIGHTENED SWAGelok FITTING				402197000	

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MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE ON REDUCED POWER PERIODS

UNIT: 1

DEPT: MECH

RETSERVDT SYS COMP MARKNO SUMMARY  
WXPEN HP

02/28/84	VS	FAN	1 VS-F NR	ADJUST BELTS FOR FAN	
ADJUSTED BELTS				402261545	
02/28/84	RR	COMPRESS 1-RR-C 1D		SIGHT GLASS LEAK	
REPAIRED LEAK ON SIGHT GLASS				402121935	
02/28/84	RR	GLASS 1-RR-C-1A		OIL SIGHTGLASS LEAKS	
REBUILT CHECK VALVE				401271835	
02/28/84	RR	COMPRESS 1-RR-C 1R		COMPRESSOR INOPERATIVE	
REBUILT CHECK VALVE				401281342	
02/28/84	MS	FITTING 1 MS 338		STEAM TRAP LEAK	
MS ALREADY WORKED				401112301	
02/29/84	MS	VALVE 1-MS 84		REPACK VALVE	
INSTALLED 19 RINGS				401051015	
02/29/84	CH	PUMP	CH-P 2D	OIL LEAK- INVESTIGATE	
REPLACED WITH SPARE PUMP				402182247	
02/29/84	MS	VALVE 1-MS 347		VALVE LEAKS THROUGH	
REPAIRED VALVE 1 MS 347				310271431	
02/29/84	MS	VALVE 1-MS 120		PACKING LEAK	
REPACKED VALVE				310260719	

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 2

MECHANICAL MAINTENANCE



MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS  
UNIT: 2

DEPT: MECH

RETSERVDG SYS COMP MARKED SUMMARY  
WXPENR

DATE	DESCRIPTION	MARKED	SUMMARY
02/15/84	CH FILTER	2 CH-FL-4A	TOP FLANGE SEAL ORING LEAKS
02/15/84	REPLACED ORING	2 CH-FL-4A	31211124
02/15/84	CH FILTER	2 CH-FL-4A	TOP CAP LEAKS
02/17/84	RECTORGUED BOLTS	2 CH-290	31117212
02/17/84	CH VALVE	2 CH-290	PACKING LEAK
02/17/84	ADJUSTED PACKING	2 SI-MOV-2467D	402121107
02/17/84	SI MOV	2 SI-MOV-2467D	PACKING LEAK
02/17/84	ADJUSTED PACKING	2 CH-295	402121105
02/17/84	CH VALVE	2 CH-295	PACKING LEAK
02/17/84	ADJUSTED PACKING	2 CH-MOV-2370	402121104
02/17/84	CH VALVE	2 CH-MOV-2370	PACKING LEAK
02/17/84	ADJUSTED PACKING	2 SI-171	402121103
02/17/84	SI VALVE	2 SI-171	PACKING LEAK
02/17/84	ADJUSTED PACKING		402121100

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 1

ELECTRICAL MAINTENANCE

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE ON REDUCED POWER PERIODS  
UNIT: 1

DEPT: ELEC

45TSERVDT SYS COMP MARKNO  
WKPBRP

SUMMARY  
MR

02/08/84 CH HT 2A3-11  
REPLACED RTD AND CHECKED  
02/24/84 RS BARRIER  
FILLED AND SEALED PENET  
02/25/84 RP INPI N-9  
READS OHMS OF COILS CK SAT

MONIT DISPLAY TEMPERATURE  
401300454  
PERFECTION NOT PROPERLY SEALED  
402220319  
ERRATIC READING  
401201200

-29-

02/27/84 GW VALVE SOV-GW-101  
REPLACED TERMINAL BLOCKS  
02/27/84 GW VALVE SOV-GW-100  
REPLACED TERMINAL BLOCK+ORING  
02/27/84 EI CARD C51-52  
FOUND BROKEN WIRE  
02/27/84 CH PUMP 1-CH P-2B  
INSTALLED SPARE PUMP MOTOR  
02/28/84 GW VALVE SOV-GW-104  
REPLACED TERMINAL BLOCK  
02/28/84 CV VALVE TV-GW-111B  
REMOVE COVER INSPECT VALVE  
02/28/84 CH PUMP 1-CH-P-2B  
NO PROBLEM FOUND  
02/28/84 RP SWITCH P10  
NO PROBLEM FOUND  
02/28/84 RH MOTOR 1 RH-P-1A  
NO LEAK FOUND  
02/28/84 RH MOTOR 1 RH-P-1B  
NO LEAK FOUND  
02/29/84 SW GREENFLD PS SW-105  
PS SW-105 CHANGED ON DC 81-41  
02/29/84 RS VIBR 1-RS-P-2A  
ADJUST DETECTOR

REPLACE TERMINAL BLOCK  
401111137  
REPLACE TERMINAL BLOCK  
401111136  
ALARMS BLINK WHEN TESTED  
402022036  
BAD MOTOR BEARING  
402122332  
REPLACE TERMINAL BLOCK  
401111135  
REPLACE TERMINAL BLOCK  
401111138  
ELECTRICAL SPARKS  
402232152  
P10 FAILED TO PERFORM  
313061457  
INVESTIGATE LEAK  
304261416  
INVESTIGATE OIL LEAK  
304261415  
GREENFLD NEEDS TO BE RECHG  
307190700  
HIGH VIB ALARM  
307170619

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MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS  
UNIT: 1

DEPT: ELEC

RETSERVDT SYS COMP

MARKNO

SUMMARY

WFFHHP

THURSDAY 5 MAR 84 • 7:00 AM PAGE 9

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS  
UNIT: 2

DEPT: ELEC

PERFORMED BY: CMMB

WAKHO

CONVANCY  
MR

02/16/84 EPOC INVERTER 2 - EPPC II  
REPLACED COIL

REPLACE INDUCTOR COIL  
902150036

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 2

ELECTRICAL MAINTENANCE

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 1

INSTRUMENT MAINTENANCE



MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS  
UNIT: 1

DEPT: INST

RETSERVDT SYS COMP HARKNO  
WKPERF

SUMMARY  
MR

02/08/84 P250 T/C T2016A  
REINSTALLED BROKEN WIRE

UNRELIABLE READING  
401211101

02/24/84 RM RECORDER  
ADJUST CHART TAKEUP SPRING

CHART BROKEN  
402190026

02/28/84 RM MONITOR 1-RM-RI-159 RM 159 READING ONLY 20 COUNTS  
ADJUSTED T 402261117  
02/28/84 VG VENT 1-VG-RM-109 NOT ENOUGH FLOW RATE  
INSPECTED SYSTEM-FOUND NO PROBLEM 402260540  
02/28/84 NI CABLE 1-NI-IR N-36 CONNECTOR IS LOOSE  
REWORKED CONNECTOR ON SIGNAL CABLE 402211221  
02/28/84 SS VALVE 1-SS-V-113 REPLACE VALVES  
REPLACED WITH A NEW VALVE 402231009  
02/29/84 CC MONITOR 1-CC-RM-105 CHANGE SETPOINT  
RESET NEW SETPOINTS 402270145  
02/29/84 IC DETECTOR MD-3 DETECTOR STICKS  
REPLACED INCORE DETECTOR 312291152  
02/29/84 IC DETECTOR MD-5 REPLACE DETECTOR  
REPLACED INCORE DETECTOR 311221018  
03/01/84 CH INDICATOR TI-I-140 INDICATOR FAILED HIGH  
CHECKED FIELD WIRING 310210206  
03/01/84 CS INSTE LT-CS-101 CALIBRATE  
LOW LEVEL ALARM COMING IN 308291132  
03/01/84 EPDC METER 102 CALIBRATE METER  
REPAIRED METER 312771200  
03/01/84 CH PUMP 1 CH-P-20 GAGE LINE LEAKING  
WELDING LEAK FIXED BY WELDERS 402222359

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING  
OUTAGE OR REDUCED POWER PERIODS

UNIT NO. 2

INSTRUMENT MAINTENANCE

MAINTENANCE OF SAFETY RELATED SYSTEMS DURING OUTAGE OR REDUCED POWER PERIODS  
UNIT: 2

DEPT: 100T

RETSERVDT SYS COMP MARKNO SUMMARY  
WTFSEF

02/12/84 FV VALVE 2 FM FGV-255C AIR LINE IS BROKEN  
REPAIRED BROKEN AIR LINES 402120015  
02/14/84 CS TANK 2 CE TX 2 LO LEVEL ALARM  
MANUALLY RESET THE ALARM 402090716  
02/14/84 RP MONITOR 2-RP VES-2004 INDICATION SPIKING  
CAL. CHANNEL 2004 402082300  
02/14/84 FV RECORDER 2-FV-REC INSTALL TEMPORARY RECORDER  
CONNECTED TEMP RECORDER AS REC 402131520  
02/15/84 RC MONITOR 2 RC GOV-2551R LEFT PAB FLASHES  
ADJUSTED RANGE SWITCH 402111443

## HEALTH PHYSICS

February, 1984

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 10CFT20.

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

<u>NO.</u>	<u>UNIT</u>	<u>TITLE</u>	<u>DATE DEVIATED</u>	<u>DATE SNSOC REVIEW</u>
TOP 2000	1,2	Spent Resin Catch Tank Resin Removal	11/02/83	02/02/84
MOP 48.2	1	Return of "A" Condenser Water Box to Service	01/03/84	02/02/84