

TENNESSEE VALLEY AUTHORITY  
DIVISION OF NUCLEAR POWER  
SEQUOYAH NUCLEAR PLANT

MONTHLY OPERATING REPORT  
TO THE  
NUCLEAR REGULATORY COMMISSION  
APRIL 1, 1984 - APRIL 30, 1984

UNIT 1

DOCKET NUMBER 50-327


LICENSE NUMBER DPR-77

UNIT 2

DOCKET NUMBER 50-328

LICENSE NUMBER DPR-79

Submitted By:

  
Power Plant Superintendent

8406070260 840430  
PDR ADOCK 05000327  
R PIR

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## Operations Summary

April, 1984

The following summary describes the significant operational activities for the month of April. In support of this summary, a chronological log of significant events is included in this report.

### Unit 1

Unit 1 was critical for 86.9 hours, produced 11,540 MWH (gross), resulting in an average hourly gross load of 297,193 kW during the month. There are 369.45 full power days estimated remaining until the end of cycle 3 fuel. With a capacity factor of 85 percent, the target EOC exposure would be reached July 10, 1985. The capacity factor for the month was 1.4 percent.

There were 1 reactor scrams, no manual shutdowns, and no power reductions.

### Unit 2

Unit 2 was critical for 719.0 hours, produced 855,590 MWH (gross), resulting in an average hourly gross load of 1,182,419 kW during the month. There are 108.37 full power days estimated remaining until the end of cycle 2 fuel. With a capacity factor of 85 percent, the target EOC exposure would be reached September 5, 1984. The capacity factor for the month was 99.2 percent.

There were no reactor scrams, no manual shutdowns, and no power reductions during April.

### Significant Operational Events

#### Unit 1

<u>Date</u>	<u>Time</u>	<u>Event</u>
04/01/84	0001	The reactor was in mode 5. The refueling/modification outage continuing.
04/10/84	1454	The reactor entered mode 4.
04/12/84	0905	The reactor entered mode 3.
04/15/84	1817	The reactor was taken critical.
04/17/84	0254	The reactor entered mode 1.
	0515	The turbine tripped due to generator relay problems (the unit was not on-line).
	0600	The reactor entered mode 2.
	1158	The reactor entered mode 1 and was holding at 6% reactor power.

## Significant Operational Events

### Unit 1

(Continued)

<u>Date</u>	<u>Time</u>	<u>Event</u>
04/17/84	1546	The unit was tied on-line.
	2117	The turbine tripped when the stator cooling water pump burned up.
	2148	The reactor tripped due to a Lo-Lo #3 steam generator level. (Mode 3)
04/18/84	1012	The reactor was taken critical.
	1118	The reactor entered mode 1.
	1214	The unit was tied on-line.
	1700	The reactor was in mode 1 at 30% power, producing 316 MWe.
04/19/84	2100	A thimble plug in the seal table started leaking.
	2117	Began reducing load.
	2133	The reactor tripped on a Lo-Lo #1 steam generator level.
04/20/84	0655	The reactor entered mode 4.
	0932	The reactor entered mode 5.
04/30/84	2359	The reactor was in mode 5. The forced outage due to the thimble plug leak continues.

### Unit 2

<u>Date</u>	<u>Time</u>	<u>Event</u>
04/01/84	0001	The reactor was in mode 1 at 100% power, producing 1183 MWe.
04/30/84	2359	

### PORV'S and Safety Valves Summary

No PORV's or safety valves were challenged during the month.

Licensee Events and Special Reports

The following Licensee Event Reports (LER's) were sent during April 1984, to the Nuclear Regulatory Commission.

<u>LER</u>	<u>DATE</u>	<u>TIME</u>	<u>UNIT</u>	<u>MODE</u>	<u>DESCRIPTION OF EVENT</u>
SQRO-50-327/1-84019	03/07/84	-	1	5	Analysis of the ice condenser basket weights obtained during surveillance testing in accordance with T.S.3.6.5.1 indicated that the group 3 - row 1 average basket weight was below the design limit of 1080 pounds with a 95% level of confidence.
SQRO-50-327/1-84020	03/09/84	0339	1	6	A high radiation alarm was actuated which caused a containment ventilation isolation (CVI) to occur. Investigation revealed that a voltage spike occurred as a result of EMI generated by switch actuation of the low flow alarm and by the opening of the motor-operated disconnects (MOD) in the switch yard due to a breaker failure.
	03/26/84	0854	1	6	
SQRO-50-327/1-84021	03/22/84	0255	1	6	A high radiation alarm was actuated which caused an ABI to occur. Investigation revealed that the spent fuel pit radiation monitor had alarmed due to the movement of contaminated C-zone clothing and trash by the monitor.
	03/30/84	0219	1	5	
	03/31/84	0215	1	5	
	04/01/84	0624	1	5	
	04/03/84	0731	1	5	
SQRO-50-327/1-84022	03/30/84	0730	1	5	A high radiation alarm was actuated which caused a CVI to occur. Investigation revealed that a voltage spike occurred as a result of EMI and another incident was caused by a personnel error during a modification of the CVI circuit.
	04/09/84	0740	1	5	
SQRO-50-328/2-84004	03/26/84	0854	1	6	The loss of a 5.9kV unit board causing undervoltage on a 6.9kV shutdown board, resulting in the standby diesel generators starting. Investigation revealed that unit board 1A and 1C lost power due to a C-phase to ground fault on a 500kV breaker which cleared the 500kV switchyard bus section 2.
			2	1	
	04/02/84	1026	1	5	
	04/03/84	0836	1	5	
2			1		

## Licensee Events and Special Reports

(Continued)

<u>LER</u>	<u>DATE</u>	<u>TIME</u>	<u>UNIT</u>	<u>MODE</u>	<u>DESCRIPTION OF EVENT</u>
SQRO-50-328/2-84005	03/29/84	1015	2	1	SI-269, "Channel Function Test of ESF Instrumentation for Automatic Switchover to Containment Sump," was not completed within the 1.25 surveillance interval allowed by the T.S.
SQRO-50-328/2-84006	04/06/84	0110	2	1	A high radiation alarm was actuated which caused a CVI to occur. Investigation revealed that a voltage spike occurred as a result of EMI which was spurious in one incident and caused by personnel error in the other incident.
	04/08/84	0439	2	1	

### Diesel Generator Failure Reports

There were no diesel generator failure reports transmitted during the month.

### Special Reports

There were no special reports transmitted during the month.

### Offsite Dose Calculation Manual Changes

There were not any changes to the Sequoyah Nuclear Plant ODCM during the month.

OPERATING DATA REPORT

DOCKET NO. 50-327  
 DATE MAY 10 1984  
 COMPLETED BY M. G. EDDINGS  
 TELEPHONE (615) 870-6248

OPERATING STATUS

1. UNIT NAME: SEQUOYAH NUCLEAR PLANT, UNIT 1  
 2. REPORT PERIOD: APRIL 1984  
 3. LICENSED THERMAL POWER(MWT): 3411.0  
 4. NAMEPLATE RATING (GROSS MWE): 1220.6  
 5. DESIGN ELECTRICAL RATING (NET MWE): 1148.0  
 6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWE): 1183.0  
 7. MAXIMUM DEPENDABLE CAPACITY (NET MWE): 1148.0  
 8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS NUMBERS 3 THROUGH 7) SINCE LAST REPORT, GIVE REASONS:  
 -----  
 -----  
 9. POWER LEVEL TO WHICH RESTRICTED, IF ANY (NET MWE):  
 -----  
 10. REASONS FOR RESTRICTIONS, IF ANY:  
 -----  
 -----

NOTES:

	THIS MONTH	YR.-TO-DATE	CUMULATIVE
11. HOURS IN REPORTING PERIOD	719.00	2903.00	24840.00
12. NUMBER OF HOURS REACTOR WAS CRITICAL	86.90	1101.80	15543.36
13. REACTOR RESERVE SHUTDOWN HOURS	0.00	0.00	0.00
14. HOURS GENERATOR ON-LINE	38.80	1000.10	15113.25
15. UNIT RESERVE SHUTDOWN HOURS	0.00	0.00	0.00
16. GROSS THERMAL ENERGY GENERATED (MWH)	44926.96	2915234.67	48407084.97
17. GROSS ELECTRICAL ENERGY GEN. (MWH)	11540.00	967690.00	16346826.00
18. NET ELECTRICAL ENERGY GENERATED (MWH)	7084.00	922151.00	15699079.00
19. UNIT SERVICE FACTOR	5.40	34.45	60.84
20. UNIT AVAILABILITY FACTOR	5.40	34.45	60.84
21. UNIT CAPACITY FACTOR (USING MDC NET)	0.86	27.67	55.05
22. UNIT CAPACITY FACTOR (USING DER NET)	0.86	27.67	55.05
23. UNIT FORCED OUTAGE RATE	87.84	35.17	19.37
24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH):			
25. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP:			
May 12, 1984			

NOTE THAT THE THE YR.-TO-DATE AND CUMULATIVE VALUES HAVE BEEN UPDATED.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-327  
 UNIT One  
 DATE May 10, 1984  
 COMPLETED BY Mike G. Eddings  
 TELEPHONE (615)870-6248

MONTH APRIL

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	N/A	17	0177
2	N/A	18	0236
3	N/A	19	0287
4	N/A	20	N/A
5	N/A	21	N/A
6	N/A	22	N/A
7	N/A	23	N/A
8	N/A	24	N/A
9	N/A	25	N/A
10	N/A	26	N/A
11	N/A	27	N/A
12	N/A	28	N/A
13	N/A	29	N/A
14	N/A	30	N/A
15	N/A	31	
16	N/A		

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

(9/77)



UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-327

UNIT NAME Sequoyah One

DATE May 10, 1984

COMPLETED BY M. G. Eddings

TELEPHONE (615)870-6248

REPORT MONTH APRIL

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
5	840220	S	399.8	C	4	.			Refueling Outage Core #2
6	840417	F	15.0	A	3				Stator Cooling Water Pump Failure
7	840419	F	265.4	A	3				Thimble Guide Tube Leak at Seal Table

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-Cont. of Existing Outage  
5-Reduction  
9-Other

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

5  
Exhibit I-Same Source

OPERATING DATA REPORT

DUCKET NO. 50-328  
 DATE MAY 10, 1984  
 COMPLETED BY D.C. DUPREE  
 TELEPHONE (615)870-6248

OPERATING STATUS

1. UNIT NAME: SEQUOYAH NUCLEAR PLANT, UNIT 2 NOTES:  
 2. REPORT PERIOD: APRIL 1-30, 1984  
 3. LICENSED THERMAL POWER (MWT): 3411.0  
 4. NAMEPLATE RATING (GROSS MWE): 1220.6  
 5. DESIGN ELECTRICAL RATING (NET MWE): 1148.0  
 6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWE): 1183.0  
 7. MAXIMUM DEPENDABLE CAPACITY (NET MWE): 1148.0  
 8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS NUMBERS 3 THROUGH 7) SINCE LAST REPORT, GIVE REASONS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 9. POWER LEVEL TO WHICH RESTRICTED, IF ANY (NET MWE): \_\_\_\_\_  
 \_\_\_\_\_  
 10. REASONS FOR RESTRICTIONS, IF ANY: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

	THIS MONTH	YR.-TO-DATE	CUMULATIVE
11. HOURS IN REPORTING PERIOD	719.00	2903.00	16800.00
12. NUMBER OF HOURS REACTOR WAS CRITICAL	719.00	2842.80	13203.87
13. REACTOR RESERVE SHUTDOWN HOURS	0.00	0.00	0.00
14. HOURS GENERATOR ON-LINE	719.00	2838.60	12992.92
15. UNIT RESERVE SHUTDOWN HOURS	0.00	0.00	0.00
16. GROSS THERMAL ENERGY GENERATED (MWH)	2449814.48	9598159.93	42016227.74
17. GROSS ELECTRICAL ENERGY GEN. (MWH)	844050.00	3321520.00	14353460.00
18. NET ELECTRICAL ENERGY GENERATED (MWH)	811190.00	3203403.00	13821140.60
19. UNIT SERVICE FACTOR	100.00	97.78	77.34
20. UNIT AVAILABILITY FACTOR	100.00	97.78	77.34
21. UNIT CAPACITY FACTOR (USING MDC NET)	98.28	96.12	71.66
22. UNIT CAPACITY FACTOR (USING DER NET)	98.28	96.12	71.66
23. UNIT FORCED OUTAGE RATE	0.00	2.22	7.81
24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH): <u>September 5, 1984 Refueling/Modification</u>			
25. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: _____			

NOTE THAT THE THE YR.-TO-DATE AND CUMULATIVE VALUES HAVE BEEN UPDATED.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-328  
 UNIT Two  
 DATE May 10, 1984  
 COMPLETED BY D. C. Dupree  
 TELEPHONE (615)870-6248

MONTH APRIL

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	1138
2	1136
3	1136
4	1136
5	1135
6	1136
7	1136
8	1133
9	1137
10	1138
11	1135
12	1136
13	1137
14	1136
15	1136
16	1135

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	1134
18	1135
19	1134
20	1133
21	1133
22	1133
23	1133
24	1133
25	1134
26	1136
27	1136
28	1136
29	1135
30	1133
31	

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-328  
 UNIT NAME Sequoyah Two  
 DATE May 10, 1984  
 COMPLETED BY D. C. Dupree  
 TELEPHONE (615)870-6248

REPORT MONTH APRIL

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
						NONE			

-10-

- 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-Cont. of Existing Outage  
 5-Reduction  
 9-Other

- 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)

## Plant Maintenance Summary

The following significant maintenance items were completed during the month of April 1984:

### Mechanical Maintenance

1. Welded scab plates on the ERCW piping downstream of valves 67-551A and 67-146.
2. Seal welded a hinge pin on 1-VLV-5-820 "A" MDAFWP discharge check valve.
3. Disassembled the RTD manifold flow element 1-FE-68-7 for orifice plate inspection. No problems were found.
4. Replaced the steam traps on the TDAFWP turbine.
5. Set the stroke on 1-PCV-68-340B.
6. Assisted in the recovery and replacement of the D-R incore thimble.
7. Per EN DES direction disconnected the hangers from loops 3 & 4 FW lines.
8. Replaced the 1-FCV-62-70 operator diaphragm.
9. Balanced RCP's 1-3 and 1-4.

### Electrical Maintenance

#### Unit 1

1. Unit 1 incore flux mapping system was found to have insufficient paths for a complete flux map. The detector drives were suspected of having loose clutches; this was checked out and found to be in error. The problem was determined to be blocked thimble tubes which would not allow the detectors to be driven fully into the reactor core. In the process of cleaning the thimble tubes a failure of the seal resulted in ejecting the thimble tube into the incore instrument room. The thimble tube was very hot radiologically and exposed the incore instrument room to a high radiation field. In addition, the seal table leak introduced abnormally high temperatures and steam into the incore instrument room.

The hot thimble was removed, the incore instrument room decontaminated and the electrical equipment was inspected for possible problems. The thimble tubes were cleaned by an outside vendor. The class 1E equipment environmental qualifications were reviewed for possible detriments to qualified life and the equipment was deemed suitable for service. The incore drives were inspected and the drive motor overload relays and detector cables were replaced, and the drive units were returned to service after the inspection and repairs.

2. The unit 1 main generator tripped on generator differential. Investigation determined that the actual problem was a trip from the volts per hertz relays. The possible cause was an excessively fast rate of voltage buildup as the operator ramped the voltage up following exciter field breaker closure. Additional exciter control problems were attributed to the misalignment of the exciter field breaker. The generator exciter breaker was correctly racked in and the generator was returned to service.

## Plant Maintenance Summary

(Continued)

### Electrical Maintenance

(Continued)

#### Unit 1 (Continued)

3. Unit 1 feedwater isolation valve 1-FCV-3-47 motor failed due to the geared limits being disengaged for maintenance and a sticking auxiliary contact on the open contactor. The motor and auxiliary contact were replaced, the limits were set, and the valve was returned to service.
4. Unit 1 CRDM's and RPI's were reconnected for unit 1 startup. Several RPI problems were encountered due to bad connector pins and moisture introduced into the connectors during decontamination of the reactor cavity. CRDM and RPI systems were successfully returned to service.
5. Unit 1 1C 6.9kV unit board tripped during ungrounding procedures. The most probable cause is accidental actuation of the alternate feeder breaker cell switch while removing the grounding barrier. The board was returned to service with no problems.
6. Adjusted and/or replaced as required the limit switches on: 1-FCV-1-7, 1-LCV-62-118A, 1-FCV-3-156A, 1-PCV-65-87, 1-FCV-62-77, 1-FCV-1-4, and 1-FCV-3-47.
7. Removed the unit 1 #3 heater drain tank pump motors. The motors were rewound to higher temperature insulation grade and reinstalled.
8. The 1B main transformer low voltage bushing circulation oil pump motor tripped due to a bad breaker. The breaker was replaced and the pump was returned to service.
9. Performed routine maintenance of the unit 1 reactor trip breakers during the refueling outage.
10. Repaired an oil leak on the unit 1 #3 RCP MTR oil lift system.
11. Repaired 10 unit 1 ice condenser air handling units.

#### Unit 2

1. Adjusted and/or replaced as required the limit switches on: 2-FCV-1-25, 2-FCV-62-48, and 2-FCV-30-14.
2. Repaired the auxiliary switch on the unit 2 reactor trip breaker.
3. Replaced a shorted coil on 2-FSV-67-338 which caused the EGTS A train to be out of service.

Plant Maintenance Summary

(Continued)

Electrical Maintenance

(Continued)

Unit 0 (Common)

1. 1B-B diesel generator was inoperable due to shorted winding in the soak-back pump motor control transformer. The transformer was replaced. The DG was returned to service with no problems. The remaining control transformers will be inspected.
2. Replaced the low jacket water indicating light on 1B-B DG.
3. 2B-B diesel generator (DG) accidentally started while troubleshooting the 2B-B diesel generator room exhaust fans. The DG was returned to standby condition.
4. Replaced the compressor motor on I glycol chiller.

Plant Maintenance Summary  
Electrical Maintenance

LIST M. REPORT BY @ID LPTR 12:54:49 05-04-84 PAGE 1

DATE.	COMPONENT.....	FAILURE DESCRIPTION.....	CAUSE OF FAILURE.....	CORRECTIVE ACTION.....	PROH.....
04-01	2-MTRB-30-207	EGT RM COOLER FAN MOTOR WOULD NOT START	SHORTED COIL ON FSV-67-338 BLOWING FUSES IN BREAKER CONTROL CIRCUIT	REPLACED COIL ON FLOW SOL VALVE	NONE
04-05	1-MTRB-82-18/2-B	LUBE OIL PUMP 1 CONTROL TRANSFORMER WOULD NOT OPERATE	CONTROL TRANSFORMER HAD BURNED UP	REPLACED TRANSFORMER AND BLOWN FUSES	1-84-133
03-23	2-FCV-1-25	VALVE LIGHTS WERE SHOWING INCORRECT VALVE POSITION	LIMIT SWITCH WAS DEFECTIVE	REPLACED LIMIT SWITCH	NONE
02-22	1-FCV-1-7-B	VALVE LIMIT LIGHTS WERE NOT SHOWING ACTUAL VALVE POSITION	LIMIT SWITCH WAS DEFECTIVE DUE TO HEAT	REPLACED LIMIT SWITCH	NONE
04-04	2-GE8-82-28-B	GOVERNOR ON ENGINE 1 WOULD NOT OPERATE	OIL WAS FOUND IN PLUG, ACTUAL CAUSE IS UNKNOWN	CLEANED PLUG AND ADJUSTED GOVERNOR LEVER	2-84-59
03-28	0-MTRB-311-156-A-A	OIL PUMP MOTOR RUNS FOR ABOUT 9 MINUTES THEN TRIPS	WATER DID NOT HAVE PROPER DISCHARGE PRESSURE	ADJUSTED COOLING WATER CONTROL VALVE	NONE
02-03	2-FCV-1-25-B	FLOW CONTROL VALVE LIGHTS WERE NOT SHOWING ACTUAL VALVE POSITION	LIMIT SWITCH ARM WAS LOOSE ON SHAFT PREVENTING LIMIT SWITCH FROM MAKING UP	TIGHTENED LIMIT SWITCH ARM	NONE
03-13	1-LCV-62-18A-A	HOLDUP TANK LIMIT SWITCHES WERE NOT SHOWING ACTUAL VALVE POSITION	ACTUATOR ARM HAD TURNED ON VALVE SHAFT DUE TO NORMAL WEAR	ADJUSTED LIMIT SWITCH ACTUATOR ARM	NONE
03-21	1-GEN8-82-18-B	DIESEL GENERATOR 18-B WOULD NOT STABILIZE AT 400 RPM	POSSIBLY, GOVERNOR MAY NOT HAVE BEEN RUN BACK ALL THE WAY	LINED UP DIESEL AND RESTARTED	NONE
03-24	1-H6-3-173A-B	RAMP CONTROL SWITCH FOR SG#2V LEVEL CONTROL VALVE WAS BROKEN	SWITCH HAD BROKEN DURING OPERATION FOR UNKNOWN REASON	REPLACED BROKEN RAMP SWITCH	NONE
03-22	1-MTRB-74-10-A	RHR PUMP 1A-A MOTOR WOULD NOT START	DIRTY CONTACTS CAUSING ARCHING AND MISALIGNMENT	CLEANED AND RESET CONTACTS ON PUMP RUN	1-84-132



Plant Maintenance Summary

Electrical Maintenance

LIST M. REPORT BY @ID LPTR 12:54:49 05-04-84 PAGE  
 DATE, COMPONENT,..... FAILURE DESCRIPTION,.....

2  
 CAUSE OF FAILURE..... CORRECTIVE ACTION..... PRG.....

DATE	COMPONENT	FAILURE DESCRIPTION	CAUSE OF FAILURE	CORRECTIVE ACTION	PRG
04-15	1-TR-61-138	TEMPERATURE RECORDER WAS PRINTING OFF SCALE	HIGH RESISTANCE OF CABLE 1R/3.22 AT ELECTRICAL PENETRATION 22	RECRIMPED WIRE CONNECTIONS AT PEN 22	1-84-137
03-20	2-BKRC-99-KH/3 19-C	BREAKER 52H CONTACT SOMETIMES FAILS TO MAKE UP PREVENTING BKR FROM TRIPPING FROM MAIN CONTROL RM HANDSWITCHES	ANGLE IRON HOLDING 52H SWITCH WAS TOO THIN CAUSING ANGLE IRON TO BEND OUT OF POSITION	BENT THIN ANGLE IRON BACK TO CORRECT POSITION. WE ARE PURSUING A THICKER ANGLE IRON	NONE
01-24	1-ZS-3-156A	AUX FW VALVE POSITION LIGHTS WERE NOT SHOWING ACTUAL VALVE POSITION	LIMIT SWITCH WAS LOOSE DUE TO NORMAL WEAR PREVENTING LIMITS FROM MAKING UP	ADJUSTED LIMIT SWITCHES	NONE
04-06	1-PSV-65-81	HAND SWITCH WOULD NOT OPERATE	CRYDOM RELAY HAD INTERNAL DEFECT	REPLACED CRYDOM RELAY	NONE
04-06	1-PCV-65-87	PRESSURE CONTROL VALVE STAYS OPEN REGARDLESS OF VLV POSITION	LIMIT SWITCH WAS REPLACED PREVIOUSLY WITHOUT BEING FUNCTIONALLY TESTED OR ADJUSTED	ADJUSTED LIMITS	NONE
03-21	1-GENB-62-18-B	D/GEN 18-B INDICATING LIGHT WOULD NOT COME ON	18-B WATER TEMP LIGHT SOCKET HAD STOPPED WORKING DUE TO AGE AND NORMAL WEAR	REPLACED LIGHT SOCKET ON LOW JACKET WATER TEMP ANNUNTIATOR	NONE
04-09	1-ZS-1-4-T	VALVE LIMIT LIGHTS WERE NOT SHOWING ACTUAL VALVE POSITION	LIMITS WOULD NOT MOVE DUE TO MATERIAL DEFECT OF LIMIT SWITCH	REPLACED LIMIT SWITCH	NONE
04-06	1-FSV-3-47-B	LIMIT SWITCHES WERE OUT OF ADJUSTMENT	NORMAL WEAR OF SWITCHES, TORQUE SWITCH HAD BROKEN	REPLACED DEFECTIVE TORQUE SWITCH AND ADJUSTED LIMIT SWITCHES	NONE
04-01	1-IGN-268-517	U-1 ICE CONDENSOR HYDROGEN IGNITOR WAS BROKEN	PROBABLY BROKE WHILE MAINTENANCE WORK WAS BEING PERFORMED AROUND IGNITOR	REPLACED HYDROGEN IGNITOR	NONE

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Plant Maintenance Summary

Electrical Maintenance

LIST M. REPORT BY @ID LPT#	12:54:49	05-04-84	PAGE	3	CAUSE OF FAILURE.....	CORRECTIVE ACTION.....	PROH.....
DATE.	COMPONENT.....	FAILURE DESCRIPTION.....					
04-07	1-CABL-361-429 42	MAIN STEAM ISOL VLV ANNUNTIATOR CIRCUIT INDICATED GROUND			CABLE SHORTED TO GROUND IN CONDUIT	REPULLED CABLE	NONE
04-07	1-CABL-361-429 44	MAIN STEAM ISOL VLV ANNUNTIATOR CIRCUIT INDICATED GROUND			CABLE SHORTED TO GROUND IN CONDUIT	REPULLED CABLE	NONE
04-07	1-CABL-361-429 43	ISOL VLV ANNUNTIATOR CIRCUIT INDICATED A GROUND			CABLE SHORTED TO GROUND IN CONDUIT	REPULLED CABLE	NONE
04-02	2-FCV-62-48	FLOW CONTROL VLV LIGHTS WERE NOT SHOWING ACTUAL VLV POSITION			ACTUATOR ARM WAS LOOSE ON SHAFT PREVENTING LIMIT SWITCH FROM MAKING UP	TIGHTENED ACTUATOR ARM TO SHAFT AND SET LIMIT SWITCH	NONE
04-02	2-FCV-30-45-40- 8	NEITHER OF THE TWO EXHAUST FANS WOULD START WHEN D/G 28-B STARTED AUTOMATICALLY			POSSIBLY, HAND SWITCH WAS IN WRONG POSITION	PLACED JUMPER FROM 125V POSITIVE SUPPLY TO TERMINAL #2 ON RELAY R1X2 AND STARTED BOTH FANS	2-84-58
04-05	2-FCV-30-14-A	FLOW CONTROL VALVE WOULD NOT OPEN			LIMIT SWITCH WAS OUT OF MECHANICAL ADJUSTMENT	ADJUSTED OPEN LIMIT SWITCH	2-84-62
02-28	1-FCV-77-127-1 -B	REPLACE LIMIT SWITCH PER NUREG 0588 QUALIFIED LIFE			NORMAL WEAR IN THAT PARTICULAR ENVIRONMENT	REPLACED LIMIT SWITCH AND ADJUSTED LIMITS	NONE
02-28	1-FCV-63-71	REPLACE LIMIT SWITCH PER NUREG 0588 QUALIFIED LIFE			NORMAL WEAR IN THAT PARTICULAR ENVIRONMENT	REPLACED LIMIT SWITCH AND ADJUSTED LIMITS	NONE
02-28	1-FCV-63-71-2- A	REPLACE LIMIT SWITCH PER NUREG 0588 QUALIFIED LIFE			NORMAL WEAR IN THAT PARTICULAR ENVIRONMENT	REPLACED LIMIT SWITCH AND ADJUSTED LIMITS	NONE
02-28	1-FCV-77-127-2 -B	REPLACE LIMIT SWITCH PER NUREG 0588 QUALIFIED LIFE			NORMAL WEAR IN A PARTICULAR ENVIRONMENT	REPLACED LIMIT SWITCH AND ADJUSTED LIMITS	NONE
04-07	1-FCV-62-77	LETDOWN LINE ISOL VLV FLOW CONTROL WAS NOT WITHIN 1 SECOND LIMIT WHEN STROKED			VALVE STEM DID NOT HAVE ENOUGH LUBRICATION TO MOVE PROPERLY	LUBRICATED VALVE STEM	NONE

## Plant Maintenance Summary

(Continued)

### Instrument Maintenance

1. During the month there were three (3) auxiliary building isolations. Two were initiated because of high background levels of the spent fuel pit and the other was because of airborne activity. There were no spurious actuations. Earlier in the month, the auxiliary building vent rad monitor was modified to replace air flow  $\Delta P$  switches with a model having reset deadband and to install an EMI filter on AC power cables to the monitor.
2. During the month there were three (3) Unit 1 containment vent isolations (CVI) and 2 Unit 2 CVIs. Two of the Unit 1 and one of the Unit 2 CVIs were contributed to EMI.
3. Containment sump level transmitter 1 LT-63-179 drifted high during the period the incore thimble guidetube was leaking. The transmitter was topped off and returned to service. This is only the second transmitter on the unit 1 which has been topped off since they have been filled with silicon oil. The transmitters on unit 2 have been topped off a total of 13 times.
4. Instruments in the incore instrument room were inspected and recalibrated following the leak caused by the failure of the incore thimble tube. Five qualified transmitters and six other transmitters were subjected to the transient and all were found to have drifted high. The qualified transmitters were from +.35% to +2.37% high. The non-qualified transmitters were from +.75% to 5.27% high.
5. Tested and verified operation of unit 1 and unit 2 PORV auxiliary control room channels after a wiring error was discovered and corrected. Details are available in LER-084-023.
6. During monthly testing of UHI level switches, found 1 switch on unit 1 out of technical specifications tolerance. All other switches on unit 1 and all unit 2 switches were within tolerance. All switches had been within tolerance for the preceding five months.
7. Began a quarterly surveillance program for units 1 and 2 to check calibration of the reactor coolant system RTD bypass manifold flow switches. This is a result of the switches being found out of calibration numerous times during calibration at refueling outages, from other calibrations done by MRs, and NRC IE Information Notice No. 83-65.

#### Unit 1

1. Recalibrated set points and TACF'd pressurizer tailpipe temperature instrument channels to clear alarms which were in due to elevated temperature caused by safety valve problems. Setpoints will be re-evaluated during the current startup.

Plant Maintenance Summary

(Continued)

Instrument Maintenance

(Continued)

Unit 1 (Continued)

2. Piping associated with the root valve and condensate pot for pressurizer level channel 1 LT-68-320 were straightened to reduce the difference in indicated level with the other channels.
3. Replaced the pressure switches for the suction supply to the motor driven auxiliary feedwater pumps with qualified switches for 0588.
4. Recorded data during heatup needed by Westinghouse to complete the scaling on the reactor vessel level measurement system. They are currently scheduled to be on site May 14 for 10 days to calibrate the system to the final values.

Unit 2

1. RPI channel L-3 showed signs of a high resistance connection inside containment. High voltage was applied to the field cable following IMI-85 to correct the problem.
2. Performed response time test of both reactor trip breakers as a result of maintenance which is now scheduled to be done on the breakers every six months.

INSTRUMENT MAINTENANCE SUMMARY  
FOR THE MONTH OF APRIL 1984

Page 1 of 6

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
04/05	85	Z-XX-85	Rod position erratic.	None	Bad cable connection.	None	Repaired cable connection A-239271.
04/08	1	1-PCV-1-5	PORV won't open with loop 1 controls.	None	Bad positioner.	None	Replaced positioner & Cal I/P. A-239301
04/09	63	1-LI-63-60	Lvl ind. reads higher than others.	None	Xmtr out of cal.	None	Recal Xmtr. A-086991
04/24	30	2-TS-30-156	Htrs won't come on.	None	Hole in sense line.	None	Replaced sense line & recal TS. A-247375.
04/18	03	1-FY-3-35A	Pegged low.	None	Air in sense line.	None	Bled xmtr & recal. A-247197.
04/19	03	1-LM-3-156A	Replace I/P.	None	I/P housing cracked.	None	Replaced I/P & recal. A-282083.
04/17	68	1-TI-68-309	Check Temp Loop Cal	None	None, Verifying.	None	Verified Cal. A-285322.
04/20	61	1-TR-61-138	Check recorder erratic readings.	None	Leak at seal table.	None	Verified recorder. A-238085.

INSTRUMENT MAINTENANCE SUMMARY  
FOR THE MONTH OF APRIL 1984

Page 2 of 6

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
04/18	68	1-FIS-68-7	Check alm switch.	None	Out of cal.	None	Recal FIS. A-239755.
04/14	90	1-RR-90-106A	Recorder & indicator differ.	None	Bad cable & amp bd.	None	Repair & recal recorder. A-247190.
04/18	68	1-FIS-68-49	Check alm switch.	None	Out of cal.	None	Recal FIS. A-239756
04/09	03	1-LCV-3-175	Replace relay.	None	Heat	None	Replaced relay. A-247657.
04/09	03	1-LCV-3-174	Replace relay.	None	Heat	None	Replaced relay. A-247658.
05/03	01	1-PCV-1-5	Vlv opens in auto.	None	Vlv gasket leaks.	None	Replace gasket. A-238091.
05/03	01	1-PCV-1-12	Vlv pos. leaks air.	None	Air leak	None	Replace gasket. A-245631.
04/23	01	2-FT-1-3A	Hi stm flow alm.	None.	Out of cal.	None.	Cal FM-1-3A & FS-1-3A. A-242316.
04/23	68	2-LT-68-367 2-LT-68-370	Funct. test of ind.	None	Unacceptable ind.	None	Replace & cal ind. A-285251.

INSTRUMENT MAINTENANCE SUMMARY  
FOR THE MONTH OF APRIL 1984

Page 3 of 6

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
04/09	68	1-TE-68-324	Cable broken.	None	OM&MM broke cable.	None	Replaced RTD. A-234724.
03/31	90	0-RM-90-225	Lo flo alm won't come in.	None	Flo switch.	None	Cleaned flow switch. A-241589.
04/19	63	2-LI-63-179	Lvl ind. reads high.	None	Xmtr out of cal.	None	Recal xmtr. A-244890.
04/18	77	2-LT-77-410	Lvl ind. reads Hi.	None	Xmtr out of cal.	None	Recal xmtr. A-117950.
04/10	03	1-LCV-3-174	Air supply builds too slow.	None	No problem found.	None	No problem found. A-239461.
04/10	03	1-LI-3-38	LI reads zero.	None	Isol vlv plug stuck.	None	Pressure opened vlv. A-239370.
04/10	63	1-LI-63-109	Reads higher than other channels.	None	No problem found.	None	No problem found. A-239388.
04/09	63	1-LI-63-99	Xmtr failed Hi.	None	Xmtr out of cal.	None	Recal xmtr. A-120423.

INSTRUMENT MAINTENANCE SUMMARY  
FOR THE MONTH OF APRIL 1984

Page 4 of 6

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
04/09	63	1-LT-63-129	Not ind same as others.	None	Instr out of cal.	None	Recal xmtr. A-092572.
04/11	43	1-H2AN-43-210	Flo status lite is on with analyzer in standby.	None	Shorted/grounded wire.	None	Corrected ground. A-244129.
04/14	68	1-LI-68-320	7% diff between channels.	None	Lost filled leg.	None	Back filled sense line. A-285316.
04/16	68	1-LR-68-339	Reads Hi.	None	1-TC-68-2 out of Cal.	None.	Recal, 1-TC-68-2. A-247472.
04/18	68	2-TS-68-316	Perform loop check.	None	R/I out of cal.	None	Recal R/I. A-239289
04/03	85	1-ZS-85	Replace rod bottom bistable.	None	Bad bistable.	None	Replaced & recaled bistable A-244109.
04/10	68	1-PIC-68-340B	Spray cont. not responding correctly.	None	Vlv stem out of alignment.	None	Aligned stem & stroked vlv. A-243074.
04/11	68	1-TI-68-316	Ind pegged hi.	None	TM out of cal.	None	Recal TM. A-239467



INSTRUMENT MAINTENANCE SUMMARY  
FOR THE MONTH OF APRIL 1984

Page 5 of 6

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
04/06	30	2-FE-30-242	Low flo with fan on.	None	Loose connection.	None	Tightened wire. A-239282.
04/06	90	2-RE-90-106C	Alms with valve opened.	None	Closed valve.	None	Opened valve. A-248351.
04/27	68	1-LT-68-325C	Verify cal of xmtr.	None	Seat table leak.	None	Recal. A-247696.
04/27	68	1-LT-68-326C	Verify cal of xmtr.	None	Seat table leak.	None	Recal. A-247695. Recal. A-247695
04/30	63	1-LT-63-179	Top off filled leg.	None	Lost fill.	None	Top off. A-285329.
04/29	68	1-PT-68-334	Verify cal of xmtr.	None	Seal table leak.	None	Recal. A-285328.
04/30	68	1-PT-68-337C	Verify cal of xmtr.	None	Seal table leak.	None	Recal. A-247700.
04/30	68	1-PT-68-336C	Verify cal of xmtr.	None	Seal table leak.	None	Recal. A-247699
04/29	68	1-PT-68-342C	Verify cal of xmtr.	None	Seal table leak.	None.	Recal. A-247694.

INSTRUMENT MAINTENANCE SUMMARY  
FOR THE MONTH OF APRIL 1984

Page 6 of 6

DATE	SYSTEM	COMPONENT	NATURE OF MAINTENANCE	EFFECT ON SAFE OPERATION OF THE REACTOR	CAUSE OF MALFUNCTION	RESULTS OF MALFUNCTION	ACTION TAKEN TO PRECLUDE RECURRENCE
05/02	68	1-LT-68-335	Verify cal of xmtr.	None	Seal table leak.	None	Recal. A-285326.
05/02	68	1-PT-68-340	Verify cal of xmtr.	None	Seal table leak.	None	Recal. A-285327.
05/03	62	1-LCV-62-118	Vlv not oper properly.	None	Doesn't drive properly.	None	Verified proper operation. A-282457.
-24- 04/12	03	1-LCV-3-156A	Vlv won't stroke.	None	Vlv doesn't stroke from NCR.	None	Replace blocking rectifier & recal. A-241048.
04/23	61	2-TR-61-138	Alms when recorder stops.	None	Hi switch hitting to switch.	None	Adjusted & recal switch. A-282407.
04/23	68	1-TI-68-316	TI not indicating.	None	No problem found	None	Verified cal no problem found. A-247192.

Plant Maintenance Summary

(Continued)

Field Services Group

1. ECN 2780--Post Accident Sampling Facility (Unit 2)

Following the unit 1 cycle 2 refueling outage, work continued on the HVAC system with core drilling of the auxiliary building, elevation 714 floor and A-11 wall. Also, installing ductwork, hangers, dampers, and additional equipment continued. Two panels, L-567 and L-569, were raised off floor elevation. The mechanical workplan for the fire protection system is being prepared for the approval cycle. The electrical workplan investigation, preparation, and ordering of materials for conduit, core drilling, and equipment installation is complete.

2. ECN 5200 --Unit 1 Post Accident Sampling Facility

Final mechanical and electrical modification work for the facility was completed this month. This work included completion of the following items: facility fire protection system, facility ventilation, HEPA filter housing drains and traps, sample tubing, heat trace installation, and the breathing air systems for the facility.

Post modification testing and repairs were completed sufficient enough for facility operation.

3. ECN 5198--Unit 1 Technical Support Center (TSC)

The TSC electrical and instrumentation work was completed this month sufficient to declare the unit 1 facility hardware operable.

4. ECN 5198--Technical Support Center (TSC) (Unit 2)

The conduit installation on elevation 685 of the control building resumed following the unit 1 cycle 2 refueling outage and will be continuing. Also, the modification of the existing status monitoring system (SMS) cabinets to facilitate new interface equipment began.

5. ECN 5106--Unit 1 Reactor Vessel Level Indication System

The remaining work to install and test this system was completed this month during the unit 1 cycle 2 refueling outage. This work included: capillary leak testing, vacuum testing, and filling; completion of the remaining electrical and instrument work; and system testing during unit heat up.

6. ECN 6055 Unit 1 RCS Wide Range Pressure Monitoring

Cable pulling and terminations were completed this month to relocate the pressure transmitters to elevation 690 of the auxiliary building. Instrument calibration and post modification testing were completed this month sufficient to place the system in service.

Plant Maintenance Summary

(Continued)

Field Services Group

(Continued)

7. ECN 6055--Unit 2 Wide Range Pressure Transmitter to the RVLIS Panel  
Conduit installation has resumed in the auxiliary building. Writing of the mechanical workplans is ready to begin.
8. ECN 5773--Pressurizer Power Operated Relief Valve  
All remaining pipe support work was completed this month to complete changeout of the pressurizer power operated relief valves.
9. ECN 5045--RCS Cold Overpressurization System  
The remaining electrical and instrument work for this modification was completed this month as well as post modification testing.
10. ECN 5842--Auxiliary Feedwater Cavitating Venturi  
Final piping support work as well as post modification testing were completed this month during the unit 1 cycle 2 refueling outage returning the auxiliary feedwater system to service with a cavitating venturi serving each motor driven pump.
11. ECN 5196--Primary Containment Wide Range Pressure Monitoring  
All outstanding electrical and instrument work was completed this month and this system was placed in service prior to the unit 1 startup.
12. ECN 5069--Feedwater Flow Element Service Flanges  
Pipe flanges were installed for feedwater flow elements 1-FE-3-35, -48, -90 and -103 in order to enhance service for these components. The flow elements were reinstalled this month. Hydrostatic testing was conducted after the feedwater flow element instrument tubing was reconnected.
13. ECN 5197--Unit 1 Reactor Vessel Vent System  
Final electrical installation work and the remaining pipe supports were installed during the month. Post modification testing was completed during unit 1 startup after the cycle 2 refueling outage.
14. ECN 5194--Particulate, Iodine, and Noble Gas Effluent Radiation Monitoring Facility  
The remaining electrical, mechanical and instrument work for the unit 1 facility was completed this month sufficient to place it in service. Some electrical work remains for the unit 1 facility communication and security.

Plant Maintenance Summary

(Continued)

Field Services Group

(Continued)

15. ECN 5024--Steam Generator Layup Recirculation

The unit 1 piping tie-ins to the steam generator blowdown, chemical addition and main feedwater systems were completed this month as well as their associated pipe supports, heat trace, and insulation. The unit 1 portion of this modification is complete.

16. ECN 5939--Main Feedpump Turbine Condenser Retubing

Restoration of the associated piping and piping supports was completed for the unit 1 portion of this modification.

17. ECN 5856--Pressurizer Loop Seal Drain Piping

The unit 1 piping and pipe supports for this system were installed during refueling outage.

18. ECN 5429--Hydrogen Mitigation System

Installation and post modification testing for four addition hydrogen igniters were completed during the refueling outage. This modification is complete for unit 1.

19. Major Maintenance - Unit 1 Forced Outage

Containment Decontamination - Due to failure of a high pressure seal on The RCS seal table, extensive decontamination of the incore instrument room, became necessary. This work was completed this month prior to repair of equipment in the room.

Pressurizer Safety Valves - Two of the three subject valves were removed this month and will be replaced with two spare safety valves that are undergoing repair and testing.

TENNESSEE VALLEY AUTHORITY

Sequoyah Nuclear Plant  
P. O. Box 2000  
Soddy-Daisy, Tennessee 37379

MAY 15 1984

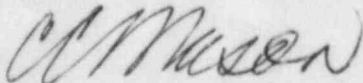
Nuclear Regulatory Commission  
Office of Management Information  
and Program Control  
Washington, DC 20555

Gentlemen:

Enclosed is the April 1984 Monthly Operating Report to the NRC for Sequoyah Nuclear Plant.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



C. C. Mason  
Power Plant Superintendent

Enclosure

cc (Enclosure):

Director, Region II  
Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
101 Marietta Street  
Suite 3100  
Atlanta, GA 30303 (1 copy)

Director, Office of Inspection  
and Enforcement  
Nuclear Regulatory Commission  
Washington, DC 20555 (10 copies)

Mr. A. Rubio, Director  
Electric Power Research Institute  
P. O. Box 10412  
Palo Alto, CA 94304 (1 copy)

Mr. R. C. Goodspeed  
MNC 461  
Westinghouse Electric Corporation  
P. O. Box 355  
Pittsburgh, PA 15230 (1 copy)

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