TENNESSEE VALLEY AUTHORITY

DIVISION OF NUCLEAR POWER

SEQUOYAH NUCLEAR PLANT

MONTHLY OPERATING REPORT

FEBRUARY 1, 1982 - FEBRUARY 28, 1982

UNIT 1

DOCKET NUMBER 50-327

LICENSE NUMBER DPR-77

UNIT 2

DOCKET NUMBER 50-328

LICENSE NUMBER DPR-79

Submitted By: C. M. Mason

Power Plant Superintendent

TABLE OF CONTENTS

Operations Summary

February 1982

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

Unit 1

Unit 1 was critical for 48.8 hours, produced 7,400 MWH (gross) with an average hourly gross load of 40,474 KW during the month. There are 168.4 full power days estimated remaining until the end of cycle 1 fuel. With a capacity factor of 85 percent the target EOC exposure would be reached September 14, 1982. The capacity factor for the month was 0.95 percent.

There were no reactor scrams, one manual shutdown, and no power reductions during February.

Unit 2

Unit 2 was critical for 415.7 hours, produced 170,250 MWH (gross) with 12.97 percent station service use, resulting in an average hourly gross load of 415,244 kW during the month. The net heat rate for the month was 12,820 BTU/KWH. There are 373.08 full power days estimated remaining until the end of cycle 1 fuel. With a capacity factor of 85 percent the target EOC exposure would be reached May 13, 1983. The capacity factor for the month was 21.42 percent.

There were two reactor scrams, no manual shutdowns, and one power reduction during February.

Significant Operational Events

Unit 1

Date	Time	Event
02/01/82	0001	Reactor in mode 5. Outage continuing for repair to the transformer and generator. Ice weighing in progress.
02/04/82	1600	The reactor entered mode 4.
02/05/82	1550	The reactor entered mode 3.
02/08/82	1300	Reactor taken critical
	1520	The reactor entered mode 2 at 1% power.

Significant Operational Events

(Continued)

Unit 1

Date	Time	Event
02/08/82	1638	The reactor entered mode 1.
	1757	The turbine was tied on line but tripped on reverse power.
	1948	Tied on line again at 7% turbine power.
	2200	Reactor power 28%.
02/09/82	0628	Reactor power 42%.
	0821	Began power ascension.
	1230	Stopped power ascension at 52% reactor power due to high vibration on #11 bearing.
	1330	Began reducing power to take the turbine off line due to the vibration problem on #11 bearing.
	1405	Turbine off line.
02/10/82	1348	The reactor entered mode 3.
02/17/82	2218	The reactor entered mode 4.
02/20/82	0620	The reactor entered mode 3.
02/25/82	1700	Began cooldown to take the reactor to mode 5 to replace the motor on reactor coolant pump #2.
02/26/82	0500	The reactor entered mode 4.
	1335	The reactor entered mode 5.
02/28/82	2359	The reactor in mode 5, outage continuing for turbine vibration problems and replacement of reactor coolant pump #2 motor.

Unit 2

02/01/82	0001	The reactor was in mode 1 at 30% power producing 290 MWe.

Significant Operational Events

(Continued)

Unit 2

Date	Time	Event
02/01/82	1245	Dropped load to 200 MWe to put full condensate flow thru the condensate demineralizer plant.
	2000	Reactor power dropped 1% to maintain demineralizer ΔP while isolating A condensate booster pump.
	2225	The reactor in mode 1 at 23% power producing 180 MWe.
02/02/82	1530	The reactor in mode 1 at 30% power producing 280 MWe.
02/03/82	1330	Cation conductivity within specifications on all four steam generators, increasing reactor power to 33%.
	2224	The reactor in mode 1 at 32% power producing 335 MWe.
02/04/82	1430	The reactor in mode 1 at 35% power producing 350 MWe.
	1500	All MSR's in service, reactor power increased to 37%. Dropped load to decrease reactor power to 34%.
	2230	Reactor at 33% power.
02/05/82	0315	MSR C-2 high pressure drain valve 2-6-840 was found open and blowing air to the condenser. The valve was isolated and turbine load increased ≅ 35 MWe.
	0320	Increased turbine load to 345 MWe, reactor power 33%.
	1059	Performed 10% load reduction, SU-9.1.
	1125	Performed 10% load increase, SU-9.1.
	1430	Reactor in mode 1, reactor power 34% producing 350 MWe.

Significant Operational Events

(Continued)

Unit 2

Date	Time	Event
02/06/82	0523	Began power ascension.
	1500	Reactor in mode 1, reactor power 40% producing 410 MWe.
02/07/82	1718	Began power ascension.
02/08/82	0630	Reactor in mode 1, reactor power 49% producing 540 MWe.
	2150	Reduced reactor power from 48% to 44% for SU Test 8.1.
	2220	Increased reactor power to 49% - SU-8.1.
	2240	Decreased reactor power to 44% - SU-8.1.
	2300	Increased reactor power to 49%, producing 540 MWe.
02/11/82	1454	Reactor tripped manually for SU Test 1.2A.
	1505	Reactor in mode 3.
02/12/82	0235	Began cooling down to the low end of mode 4 for repairs on FE-3-163.
	0900	Reactor entered mode 4.
02/14/82	0738	Reactor entered mode 5 for repairs to RPI on P-4 shutdown rod.
02/16/82	1115	Reactor entered mode 4.
02/17/82	0240	Reactor entered mode 3.
02/18/82	0418	The reactor was taken critical.
	0710	Turbine tied on line.
	1000	Reactor at 30% power and holding for steam generator chemistry to come into specifications.

Significant Operational Events

(Continued)

Unit 2

Date	Time	Event
02/18/82	1520	Began reducing power for overspeed trip.
	1600	Turbine taken off line.
	1618	Overspeed test performed.
	1621	Turbine tied back on line.
	2200	Reactor at 30% power producing 250 MWe.
02/21/82	0620	Reactor at 33% power producing 295 MWe.
02/22/82	0340	Began power ascension.
	0620	Reactor at 38% power and increasing.
	1135	Reactor at 50% power producing 528 MWe.
02/23/82	2140	Reactor power 75% and holding.
02/24/82	0224	Began reducing load to 30% reactor power due to high steam generator cation conductivity.
	0610	Stop load decrease - holding reactor power at 54%.
	0925	Began power ascension.
	1400	Reactor power at 75%.
	1721	Decreased load to 63.5% for Start-Up Test 9.1.
	1746	Increased load 10% for SU-9.1.
	1906	50% load reduction at 200%/minute for Start-Up Test 9.3 in progress.
	1907	Reactor tripped as the result of low injection water pressure tripping the MFPT's.
	2230	Reactor entered mode 3.

Significant Operational Events

(Continued)

Unit 2

Date	Time	Event
02/28/82	2030	Reactor taken critical.
	2223	Control rod M-4 in control bank D dropped in as indicated on the rod position indicator.
	2235	Reactor entered mode 3.
	2359	Reactor in mode 3 investigating the control rod problem.

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 February 1982, to the Assistant Director of Nuclear Power (Operations) for reporting to the Nuclear Regulatory Commission.

LER	SUBJECT
SQRO-50-327/82-003	Pressurizer level channel 1-LT-68-320 reads high due to the loss of the filled leg caused by evaporation.
SQRO-50-327/82-006	The turbine driven AFW pump failed to obtain normal operating speed due controller 1-FIC-46-57 malfunction.
SQRO-50-327/82-007	Rod position indicator P-4 (shutdown bank A) indicating greater than 12 steps below counter.
SQRO-50-327/82-008	AFW level control valve, 1-LCV-3-156 would not operate due to a fault valve position controller.
SQRO-50-327/82-012	Divider barrier equipment hatch #3 seal gasket missing due to personnel failing to re-install.
SQRO-50-327/82-017	Snubbers 47A053-272 (ERCW), 47A053-300 (WD), 1-CVCH-914 (CVCS) inoperable due to bent retaining nut guide rods and corrosion.

Licensee Events and Special Reports

(Continued)

LER	SUBJECT
SQRO-50-328/82-002	Turbine driven AFW pump failed to start on safety injection due to overspeed trip latch function to stop valve 2-FCV-1-51 not rest.
SQRO-50-328/82-004	Vital battery bank II AVE cell temperature below 60°F due to two exhaust fans being open.
SQRO-50-328/82-005	Remote shutdown instrument channel for the pressurizer relief tank level 2-LI-68-312C inoperable due to faulty resistor.
SQRO-50-328/82-009	Steam generator blowdown containment isolation valve 2-FCV-1-7 operator diaphragm ruptured due to wear.
SQRO-50-328/82-010	Steam generator pressure transmitters 2-PT-1-20A and -2A, RWST level indicator 2-LI-63-50 and feedwater flow transmitter 2-FT-3-103B inoperable due to frozen sense lines.
SQRO-50-327/82-011	SI-16 does not include check of heat tracing on Unit 2 BIT.
SQRO-50-327/82-013	Steam generator #3 feedwater flow transmitter loop 2-FT-3-90A inoperable due to frozen sense lines.
SQRO-50-328/82-014	Vital battery bank II inoperable when terminal to cell 1 connection resistance found > 150 micro-ohms due to corrosion.
SQRO-50-328/82-015	Safety injection pump 2B-B tripped following start after SI signal due to bent contact finger on 1X start relay.
SQRO-50-328/82-016	Steam generator loop 3 and 4 pressure channels to remote shutdowns instrumentation inoperable. 2-PI-1-19C due to open circuit and 2-PI-1-26C due to damaged transmitter caused by excessive heat.

Special Reports

There were no special reports sent during the month of February.

Offsite Dose Calculation Manual Changes

There were no changes to the Sequoyah Nuclear Plant ODCM during the month of February.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-327
UNIT One
DATE March 1, 1982
COMPLETED BY M. Eddings
TELEPHONE (615) 751-0343

MONTH February 1982

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	0	17	0
2	0	18	0
3	0	19	0
4	0	20	0
5	0	21	0
6	0	22	0
7	0	23	0
8	35	24	0
9	234	25	0
10	0	26	0
11	0	27	0
12	0	28	0
13	0	29	---
14	0	30	---
15	0	31	---
16	0		

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 March 1, 1982
COMPLETED BY M. Eddings
TELEPHONE (615) 751-0343

REPORT MONTH February 1982

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
7	82-01-19	S	187.8	A	3				Generator transformer repair and tech. spec. ice weighing.
2	82-02-09	F	465.9	A	1				Turbine #11 bearing excessive vibration. #2 reactor coolant pump replacement due to electrical problems.

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)

OPERATING DATA REPORT

DOCKET NO. 50-327
DATE March 1, 1982
COMPLETED BY M. Eddings
TELEPHONE (615) 751-0343

OPERATING STATUS

1. Unit Name: Sequoyah One
2. Reporting Period: February 1982
3. Licensed Thermal Power (MWt): 3411
4. Nameplate Rating (Gross MWe): 1220.58
5. Design Electrical Rating (Net MWe): 1148
6. Maximum Dependable Capacity (Gross MWe): 1163
7. Maximum Dependable Capacity (Net MWe): 1128
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:

Notes

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	672	1416	5833
12.	Number of Hours Reactor Was Critical	48.8	381.7	3183
13.	Reactor Reserve Shutdown Hours	0	0	0
14.	Hours Generator On-Line	18.3	344.9	3035.3
15.	Unit Reserve Shutdown Hours	0	0	0
16.	Gross Thermal Energy Generated (MWH)	25,622	855,737	8,920,691
17.	Gross Electrical Energy Generated (MWH)	7,400	294,160	2,940,110
18.	Net Electrical Energy Generated (MWH)	-864	266,748	2,793,773
19.	Unit Service Factor	2.7	24.4	52.0
20.	Unit Availability Factor	2.7	24.4	52.0
21.	Unit Capacity Factor (Using MDC Net)	0.0	16.7	42.5
22.	Unit Capacity Factor (Using DER Net)	0.0	16.7	42.5
23.	Unit Forced Outage Rate	96.2	58.2	34.3

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):

25. If Shut Down At End Of Report Period, Estimated Date of Startup: March 10, 1982
26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY	7-4-80	7-5-80
INITIAL ELECTRICITY	8-21-80	7-22-80
COMMERCIAL OPERATION	7-1-81	7-1-81

(9/77)

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-328
UNIT Two
DATE March 1, 1982
COMPLETED BY David Dupree
TELEPHONE (615) 751-0343

MONTH February, 1972

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	209	17	0
2	233	18	123
3	272	19	212
4	296	20	499
5	310	21	499
6	357	22	472
7	392	23	668
8	490	24	540
9	489	25	0
10	626	26	0
11	290	27	0
12	0	28	0
13	0	29	NA
14	0	30	NA
15	0	31	NA
16	0		

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 Two
DATE March 1, 1982
COMPLETED BY David Dupree
TELEPHONE (615) 751-0343

REPORT MONTH February

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
6	82-02-11	S	161.1	B	2				Start-Up Test 1.2A: Shutdown Unit Outside Control Room
7	82-02-18	S	.9	B	1				Came off line to perform turbine overspeed test.
8	82-02-24	F	100	A	3				Unit tripped while attempting to perform SU-9.3 (50% load reduction).

-13-

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)

OPERATING DATA REPORT

DOCKET NO. 50-328
DATE March 1, 1982
COMPLETED BY David Dupree
TELEPHONE (615) 751-0343

OPERATING STATUS

1. Unit Name: Sequoyah Two
2. Reporting Period: February, 1982
3. Licensed Thermal Power (MWt): 3411
4. Nameplate Rating (Gross MWe): 1220.5
5. Design Electrical Rating (Net MWe): 1148
6. Maximum Dependable Capacity (Gross MWe): 1183
7. Maximum Dependable Capacity (Net MWe): 1148
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:

Notes

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	672	1416	2880
12.	Number of Hours Reactor Was Critical	415.7	751.9	1009.1
13.	Reactor Reserve Shutdown Hours	0	0	0
14.	Hours Generator On-Line	410	661.4	675
15.	Unit Reserve Shutdown Hours	0	0	0
16.	Gross Thermal Energy Generated (MWH)	554,636.8	799,237.8	815,151.8
17.	Gross Electrical Energy Generated (MWH)	170,250	235,460	237,364
18.	Net Electrical Energy Generated (MWH)	148,168	196,280	196,280
19.	Unit Service Factor	61.0	46.7	23.4
20.	Unit Availability Factor	61.0	46.7	23.4
21.	Unit Capacity Factor (Using MDC Net)	11.2	12.1	5.9
22.	Unit Capacity Factor (Using DER Net)	11.2	12.1	5.9
23.	Unit Forced Outage Rate	38.9	53.3	76.6

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
Ice weighing per tech specs May 5, 1982

25. If Shut Down At End Of Report Period, Estimated Date of Startup: 4-3-82
26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY	11-5-81	11-5-81
INITIAL ELECTRICITY	12-31-81	12-23-81
COMMERCIAL OPERATION	4-1-82	NA

(9/77)

Plant Maintenance Summary

The following significant maintenance items were completed during the month of February 1982:

Mechanical Maintenance

1. Replaced the rotating element in centrifugal charging pump 2A-A.

2. Worked various MR's to reduce air inleakage to the Unit 2 main condenser.

Electrical Maintenance

1. Repairs were completed on the neutral ground transformer.

2. Repairs began on the Unit 1 reactor coolant pump #2 motor.

Instrument Maintenance

None reportable.

Field Services Maintenance

Work continues on the following items.

1. A post accident sample system for Unit 1 is being installed to obtain designated liquid and gas samples during and after a postulated event.

2. IE Bulletin 79-14 - Hanger Repairs - 454 repairs are completed and 59 identified repairs remaining.

3. The 4-inch piping on the HVAC equipment (Trains A and B) serving the electric board rooms and main control room is being replaced.

4. Exposed cables, in areas outside primary containment, containing one or both safety related divisions are being coated with Flamastic.

5. To achieve positive access accountability, door A-183 is being replaced and a card reader is being installed.

6. A reactor vessel head venting system is being installed on Unit 1.

7. Conduit is being installed to facilitate high range area radiation monitors near effluent release points, Unit 1 residual heat removal lines and inside containment.

8. Solenoids are being replaced on valves in accordance with NUREG 0588.

9. Containment sump level transmitter 2-LT-63-176 is being relocated outside the crane wall.

10. Cables are being pulled for radiation monitors in the turbine and control buildings.

11. An air flow limit device is being installed in line with the discharge of fire pump 2B air release valve.

12. Security barriers are being installed to the vent grills located at the ERCW pumping station.

The following work was completed during the month.

1. The neutral buss transformer was changed out.

2. Thirty-seven snubbers were inspected.

3. An air flow rate limit device was installed in line with the discharge of fire pump 2A air release valve.