



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379-2000

Robert A. Fenech  
Vice President, Sequoyah Nuclear Plant

March 15, 1993

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

In the Matter of	)	Docket Nos. 50-327
Tennessee Valley Authority	)	50-328

SEQUOYAH NUCLEAR PLANT (SQN) - FEBRUARY 1993 MONTHLY OPERATING REPORT

Enclosed is the February 1993 Monthly Operating Report as required by SQN  
Technical Specification 6.9.1.10.

If you have any questions concerning this matter, please call  
M. A. Cooper at (615) 843-8924.

Sincerely,

Robert A. Fenech

Enclosure  
cc: See page 2

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U.S. Nuclear Regulatory Commission  
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TENNESSEE VALLEY AUTHORITY

NUCLEAR POWER GROUP  
SEQUOYAH NUCLEAR PLANT

MONTHLY OPERATING REPORT

TO THE

NUCLEAR REGULATORY COMMISSION

FEBRUARY 1993

UNIT 1

DOCKET NUMBER 50-327

LICENSE NUMBER DPR-77

UNIT 2

DOCKET NUMBER 50-328

LICENSE NUMBER DPR-79

OPERATIONAL SUMMARY  
FEBRUARY 1993

UNIT 1

Unit 1 generated 562,870 megawatthours (MWh) (gross) electrical power during February with a capacity factor of 72.1 percent. On February 4 at 1400 Eastern Standard Time (EST), a shutdown of Unit 1 was initiated to facilitate repairs to small bore extraction steam target tees and operating vent lines as a result of pipe wall thinning. Unit 1 was removed from the grid at 0446 EST on February 5. On February 5 at 0615 EST, the unit was manually tripped. Before the reactor trip, a rod urgent alarm annunciated, preventing further reductions in power. The cause of the rod control system rod urgent alarm was determined to be in the rod control system timing circuitry. The most likely component to have caused the rod control system problem was the input/output alternating current amplifier board which was replaced.

The Unit 1 reactor was taken critical again at 1740 EST on February 8 and tied online at 0627 EST on February 9. On February 10 at 0515, reactor power increase was stopped at approximately 75 percent power because of problems with the No. 3 heater drain tank (HDT) bypass valves. The operating air pressure on the valve controller was increased and the valve was returned to service. Unit 1 reached 100 percent reactor power on February 13 at 1117 EST.

On February 18 at 1336 EST, with Unit 1 operating at approximately 100 percent reactor power, a reactor trip occurred as a result of the exciter field breaker opening. The breaker opened when a senior reactor operator training instructor inadvertently actuated the trip latch on the exciter field breaker during a training exercise. The unit was stabilized in hot standby.

On February 19 at 2227, the Unit 1 reactor was taken critical. Unit 1 tied online on February 20 at 1158 EST and reached 100 percent reactor power on February 21 at 1500 EST. Unit 1 continued to operate at approximately 100 percent reactor power through the end of February.

UNIT 2

Unit 2 generated 761,563 MWh (gross) electrical power during February with a capacity factor of 97.5 percent. Unit 2 was operating at 43 percent reactor power at the beginning of February and reached 100 percent reactor power on February 2 at 0324 EST.

On February 10, after problems with the Unit 1 No. 3 HDT bypass valve were identified on Unit 1, Unit 2 reactor power was reduced to 73 percent to evaluate the Unit 2 valve. The operating air pressure on the valve controller was increased and the valve was returned to service.

Unit 2 reactor power increase was initiated on February 13 at 1020 EST. The Unit 2 reactor reached 100 percent power at 1650 EST and continued to operate at approximately 100 percent power through the end of February.

POWER-OPERATED RELIEF VALVES (PORVs) AND SAFETY VALVES SUMMARY

There were no challenges to PORVs or safety valves in February.

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-327 UNIT No. One DATE: 03-01-93

COMPLETED BY: T. J. Holloman TELEPHONE: (615) 843-7528

MONTH: FEBRUARY 1993

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>1152</u>	17	<u>1152</u>
2	<u>1152</u>	18	<u>518</u>
3	<u>1152</u>	19	<u>-22</u>
4	<u>1028</u>	20	<u>125</u>
5	<u>67</u>	21	<u>950</u>
6	<u>-29</u>	22	<u>1149</u>
7	<u>-18</u>	23	<u>1151</u>
8	<u>-25</u>	24	<u>1152</u>
9	<u>151</u>	25	<u>1153</u>
10	<u>762</u>	26	<u>1152</u>
11	<u>825</u>	27	<u>1153</u>
12	<u>899</u>	28	<u>1153</u>
13	<u>1106</u>	29	<u>N/A</u>
14	<u>1152</u>	30	<u>N/A</u>
15	<u>1151</u>	31	<u>N/A</u>
16	<u>1151</u>		

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-328

UNIT No. Two

DATE: 03-01-93

COMPLETED BY: T. J. Hollomon

TELEPHONE: (615) 843-7528

MONTE: FEBRUARY 1993

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	715
2	1125
3	1133
4	1134
5	1134
6	1133
7	1132
8	1132
9	1132
10	996
11	868
12	856
13	989
14	1132
15	1132
16	1132

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	1134
18	1141
19	1140
20	1142
21	1142
22	1141
23	1142
24	1141
25	1140
26	1141
27	1141
28	1141
29	N/A
30	N/A
31	N/A



## OPERATING DATA REPORT

DOCKET NO. 50-327  
DATE 03/08/93  
COMPLETED BY T. J. Holloman  
TELEPHONE (615) 843-7528

### OPERATING STATUS

- |   |                   |
|---|-------------------|
| 1. Unit Name:   | Sequoyah Unit One |
| 2. Reporting Period:  | February 1993     |
| 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):   | 1162.0            |
| 7. Maximum Dependable Capacity (Net MWe):   | 1122.0            |
| 8. If Changes Occur in Capacity Ratings (Item Numbers 3 Through 7) Since Last Report, Give Reasons: |                   |

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	672	1,416	102,265
12. Number of Hours Reactor Was Critical	555.8	1,249.9	55,998
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	527.9	1,189.3	54,797.2
15. Unit Reserve Shutdown Hours	0.0	0	0
16. Gross Thermal Energy Generated (MWH)	1,622,943.6	3,818,543.2	178,796,388
17. Gross Electrical Energy Generated (MWH)	562,870	1,325,860	60,669,974
18. Net Electrical Energy Generated (MWH)	539,718	1,273,066	58,195,288
19. Unit Service Factor	78.6	84.0	53.6
20. Unit Availability Factor	78.6	84.0	53.6
21. Unit Capacity Factor (Using MDC Net)	71.6	80.1	50.7
22. Unit Capacity Factor (Using DER Net)	70.0	78.3	49.6
23. Unit Forced Outage Rate	21.4	16.0	38.2

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

Unit 1 was shutdown on March 2, 1993, as a result of a failure of an extraction steam line on Unit 2 on March 1, 1993. Unit 1 will restart following the Cycle 6 refueling outage scheduled to be complete on June 1, 1993.

25. If Shut Down At End Of Report Period, Estimated Date of Startup: N/A

## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: FEBRUARY 1993DOCKET NO: 50-327UNIT NAME: OneDATE: 03/08/93COMPLETED BY: T. J. HollomanTELEPHONE: (615) 843-7528

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report No.	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause and Corrective Action to Prevent Recurrence
1	930204	F	97.7	B A	2	327/93002	AA	AMP	Unit 1 was being shut down on February 4 to facilitate repairs to target tees and operating vent lines as a result of wall thinning. On February 5 at 0615 EST, the unit was manually tripped. Before the reactor trip, a rod urgent alarm annunciated, preventing further reductions in power. A decision was made to manually trip the reactor. The cause of the rod control system rod urgent alarm was determined to be in the rod control system timing circuitry. The most likely component to have caused the rod control system problem was the input/output alternating current amplifier board which was replaced. Piping and other fittings identified as subject to excessive thinning were replaced. Unit 1 was returned to service on February 9.

<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 and License Examination  
F-Administrative  
G-Operational Error (Explain)  
H-Other (Explain)

<sup>3</sup>Method:  
1-Manual  
2-Manual Scram  
3-Automatic Scram  
4-Continuation of Existing Outage  
5-Reduction  
9-Other

<sup>4</sup>Exhibit G-Instructions  
for Preparation of Data  
Entry sheets for Licensee  
Event Report (LER) File  
(NUREG-1022)

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



## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: FEBRUARY 1993DOCKET NO: 50-327UNIT NAME: OneDATE: 03/08/93COMPLETED BY: T. J. HollomonTELEPHONE: (615) 843-7528

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report No.	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause and Corrective Action to Prevent Recurrence
2	930218	F	46.4	E	3	327/93003	TB	BKR	At 1336 EST, a reactor trip occurred as a result of the exciter field breaker opening. The reactor trip occurred as a result of the instructor failing to evaluate the risks and consequences associated with conducting training activities using operating plant components. Training on energized and/or sensitive equipment has been stopped until a policy on utilizing energized and/or sensitive equipment for training purposes is established. Unit 1 was returned to service on February 20.

<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 and License Examination  
F-Administrative  
G-Operational Error (Explain)  
H-Other (Explain)

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

## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: FEBRUARY 1993DOCKET NO: 50-328UNIT NAME: TwoDATE: 03/08/93COMPLETED BY: T. J. HollomonTELEPHONE: (615) 843-7528

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report No.	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause and Corrective Action to Prevent Recurrence
1	930128	F		B	4	N/A	SB TK	PSF PSF	Unit 2 was at 43 percent reactor * power at the end of January and increasing power after maintenance was completed on extraction steam line piping and on generator hydrogen leak. Unit 2 reached 100 percent power on February 2.
2	930210	F		B	5				Unit 2 reactor power was reduced to 73 percent after problems were identified on the Unit 1 No. 3 heater drain tank bypass valve. The operating air pressure on the valve controller was determined to be acceptable but was increased to provide better valve operation. The valve was subsequently returned to service. Power increase was initiated on February 13 at 1020 EST, and Unit 2 was returned 100 percent power.

<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 and License Examination  
F-Administrative  
G-Operational Error (Explain)  
H-Other (Explain)

<sup>3</sup>Method:  
1-Manual  
2-Manual Scram  
3-Automatic Scram  
4-Continuation of Existing Outage  
5-Reduction  
9-Other

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