



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

December 15, 1995

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) - NOVEMBER 1995 MONTHLY OPERATING REPORT

Enclosed is the November 1995 Monthly Operating Report as required by SQN  
Technical Specification 6.9.1.10.

If you have any questions concerning this matter, please call  
J. W. Proffitt at (615) 843-6651.

Sincerely,

*R. H. Shell*

R. H. Shell  
Manager  
SQN Site Licensing

Enclosure  
cc: See page 2

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*JEH*

U.S. Nuclear Regulatory Commission

Page 2

December 15, 1995

cc (Enclosure):

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TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT

MONTHLY OPERATING REPORT

TO THE

NUCLEAR REGULATORY COMMISSION

NOVEMBER 1995

UNIT 1

DOCKET NUMBER 50-327

LICENSE NUMBER DPR-77

UNIT 2

DOCKET NUMBER 50-328

LICENSE NUMBER DPR-79

OPERATIONAL SUMMARY  
NOVEMBER 1995

UNIT 1

Unit 1 generated 254,475 megawatthours (MWh) (gross) electrical power during November with a capacity factor of 30.7 percent. The Unit 1 Cycle 7 refueling outage was still in progress at the beginning of November.

Unit 1 was initially taken critical on November 9 at 2327 EST and tied to the grid on November 11 at 2205 EST, ending the refueling outage. The Unit 1 turbine was taken off-line on November 12 at 1058 EST for turbine overspeed testing and was back on-line at 2030 EST that day.

On November 18 at approximately 2049 EST, with Unit 1 operating at approximately 89 percent power, Unit 1 experienced a secondary plant transient. The transient began when a spurious close signal to the main turbine intercept valves was generated. The 'A' and 'B' intercept valves closed which resulted in swings in the secondary plant. These swings resulted in a turbine runback. After observing continued swings in the main feedwater pumps and determining that the intercept valves had closed, the decision was made to further reduce power and trip the main turbine. This was accomplished at 2106 EST. The reactor was stabilized at 2 percent power.

Troubleshooting determined that a failed circuit card in the analog electro-hydraulic control system had generated a close intercept valve signal. Corrective actions for this event include disabling this circuit. Power increase was initiated on November 20 at 0503 EST, and the generator was tied on-line at 1320 EST that day.

On November 27 at approximately 1340 EST, intermittent swings started on the secondary plant instrumentation channels. At 1512 EST, power decrease was initiated, and the turbine was manually tripped at 1527 EST. Reactor power was decreased to approximately 2 percent. Arcing was reported inside the exciter housing. The arcing observed before shutdown was identified to be a manufacturer-supplied jumper cable on the current-limiting resistors. The cable lug was in contact with the metal support for the resistor, and the insulation had worn through. The cable lug was replaced.

Power increase was initiated on November 30 at 0625 EST, and the generator was tied on-line at 1433 EST that day. Unit 1 was at approximately 30 percent power at the end of November.

UNIT 2

Unit 2 generated 852,070 megawatthours (MWh) (gross) electrical power during November with a capacity factor of 103.3 percent. There were no outages or power reductions of greater than 20 percent to report during November. Unit 2 was operating at 100 percent at the end of November.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-327      UNIT No. One      DATE: 12-01-95  
 COMPLETED BY: T. J. Hollomon      TELEPHONE: (615) 843-7528  
 MONTH: NOVEMBER 1995

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	-23	17	776
2	-11	18	753
3	-11	19	-30
4	-11	20	124
5	-18	21	757
6	-23	22	1020
7	-32	23	1144
8	-37	24	1149
9	-34	25	1146
10	-34	26	1156
11	-22	27	660
12	83	28	-30
13	248	29	-32
14	251	30	88
15	251	31	NA
16	352		

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-328      UNIT No. Two      DATE: 12-01-95  
 COMPLETED BY: T. J. Hollomon      TELEPHONE: (615) 843-7528  
 MONTH: NOVEMBER 1995

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	1145	17	1146
2	1144	18	1147
3	1143	19	1148
4	1143	20	1146
5	1144	21	1147
6	1144	22	1149
7	1144	23	1149
8	1140	24	1151
9	1144	25	1149
10	1144	26	1149
11	1145	27	1152
12	1144	28	1148
13	1143	29	1147
14	1143	30	1147
15	1143	31	NA
16	1144		

OPERATING DATA REPORT

DOCKET NO. 50-327  
 DATE 12/01/95  
 COMPLETED BY T. J. Hollomon  
 TELEPHONE (615) 843-7528

OPERATING STATUS

1. Unit Name: Sequoyah Unit One
2. Reporting Period: November 1995
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): 1151.0
7. Maximum Dependable Capacity (Net MWe): 1111.0
8. If Changes Occur in Capacity Ratings (Item Numbers 3 Through 7) Since Last Report, Give Reasons:

Notes

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	<u>720</u>	<u>8,016</u>	<u>126,385</u>
12. Number of Hours Reactor Was Critical	<u>504.6</u>	<u>6,288.7</u>	<u>68,340</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
14. Hours Generator On-Line	<u>337.1</u>	<u>6,078.3</u>	<u>66,682.6</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>782,272.5</u>	<u>18,962,283.0</u>	<u>216,538,282</u>
17. Gross Electrical Energy Generated (MWH)	<u>254,475</u>	<u>6,496,335</u>	<u>73,547,219</u>
18. Net Electrical Energy Generated (MWH)	<u>232,595</u>	<u>6,229,040</u>	<u>70,492,453</u>
19. Unit Service Factor	<u>46.8</u>	<u>75.8</u>	<u>52.8</u>
20. Unit Availability Factor	<u>46.8</u>	<u>75.8</u>	<u>52.8</u>
21. Unit Capacity Factor (Using MDC Net)	<u>29.1</u>	<u>69.9</u>	<u>50.2</u>
22. Unit Capacity Factor (Using DER Net)	<u>28.1</u>	<u>67.7</u>	<u>48.6</u>
23. Unit Forced Outage Rate	<u>24.8</u>	<u>6.1</u>	<u>34.7</u>
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: \_\_\_\_\_

OPERATING DATA REPORT

DOCKET NO. 50-328  
 DATE 12/01/95  
 COMPLETED BY T. J. Hollomon  
 TELEPHONE (615) 843-7528

OPERATING STATUS

Notes
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1. Unit Name: Sequoyah Unit Two
2. Reporting Period: November 1995
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): 1146.0
7. Maximum Dependable Capacity (Net MWe): 1106.0
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	<u>720</u>	<u>8,016</u>	<u>118,345</u>
12. Number of Hours Reactor Was Critical	<u>720.0</u>	<u>7,518.7</u>	<u>71,875</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
14. Hours Generator On-Line	<u>720.0</u>	<u>7,404.1</u>	<u>70,113.8</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>2,453,022.6</u>	<u>24,786,295.6</u>	<u>222,313,759</u>
17. Gross Electrical Energy Generated (MWH)	<u>852,070</u>	<u>8,449,393</u>	<u>75,457,002</u>
18. Net Electrical Energy Generated (MWH)	<u>824,614</u>	<u>8,148,357</u>	<u>72,262,539</u>
19. Unit Service Factor	<u>100.0</u>	<u>92.4</u>	<u>59.2</u>
20. Unit Availability Factor	<u>100.0</u>	<u>92.4</u>	<u>59.2</u>
21. Unit Capacity Factor (Using MDC Net)	<u>103.6</u>	<u>91.9</u>	<u>55.2</u>
22. Unit Capacity Factor (Using DER Net)	<u>99.8</u>	<u>88.5</u>	<u>53.2</u>
23. Unit Forced Outage Rate	<u>0.0</u>	<u>7.6</u>	<u>33.0</u>

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):  
The Unit 2 Cycle 7 refueling outage is scheduled to begin April 19, 1996, with a duration of 55 days.

25. If Shut Down At End Of Report Period, Estimated Date of Startup: \_\_\_\_\_



UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: November 1995

DOCKET NO: 50-327  
 UNIT NAME: One  
 DATE: 12/08/95  
 COMPLETED BY: T. J. Hollomon  
 TELEPHONE: (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
5	951101	S	262.1	C	4	N/A	N/A	N/A	Unit 1 was removed from the grid at 0123 EDT on September 9 for the Unit 1 Cycle 7 refueling outage. The Unit 1 generator was tied to the grid on November 11 at 2205 EST ending the refueling outage.
6	951112	S	9.5	B	5	N/A	N/A	N/A	Unit 1 was taken off-line on November 12 at 1058 EST for turbine overspeed testing. The Unit 1 generator was tied on-line again at 2030 EST that day.
7	951118	F	40.2	A	5	N/A	N/A	N/A	On November 18 at 2049 EST, with Unit 1 operating at approximately 89 percent power, Unit 1 experienced a secondary plant transient. The transient began when the Unit 1 main turbine intercept valves for low pressure turbines 'A' and 'B' closed because of a spurious signal from a failed circuit card in the electro-hydraulic control system. The cause of the event was a single component failure of the reheat pressure/megawatt comparator card for the close intercept valve. Corrective actions for this event include disabling the protective circuit and replacing the failed card. The Unit 2 circuit was determined to already have been disabled.

<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: November 1995

DOCKET NO: 50-327  
 UNIT NAME: One  
 DATE: 12/08/95  
 COMPLETED BY: T. J. Hollomon  
 TELEPHONE: (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
8	951127	F	71.1	A	5	N/A	N/A	N/A	On November 27 at approximately 1340 EST, intermittent swings started on secondary plant instrumentation channels. At 1512 EST, power decrease was initiated, and the turbine was manually tripped at 1527 EST. Arcing inside the exciter housing was observed. A cable lug was in contact with the metal support for the resistor, and the insulation had worn through. It was determined that the cause of this event was the inadequate installation of the jumper cables during a previous refurbishment of the exciter. The other lugged terminations on the Unit 1 exciter and voltage regulator were inspected for proper clearance to grounded surfaces and were found acceptable. The affected cable was replaced. Power increase was initiated on November 30.

<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: November 1995

DOCKET NO: 50-328  
 UNIT NAME: Two  
 DATE: 12/08/95  
 COMPLETED BY: T. J. Hollomon  
 TELEPHONE: (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
									There were no outages or power reductions of greater than 20 percent to report during November.

<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