

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Sequoyah, Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 3 2 7					PAGE (3) 1 OF 2										
TITLE (4) Inoperable Auxiliary Control Air Compressors																									
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)															
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER(S)												
0	7	0	9	8	4	8	4	0	4	5	0	1	0	8	0	6	8	5	Sequoyah, Unit 2				0 5 0 0 0 3 2 8		
OPERATING MODE (9) 1			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)																						
POWER LEVEL (10) 110.0			20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)										
			20.405(a)(1)(i)				50.36(c)(1)				XX 50.73(a)(2)(v)				73.71(c)										
			20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)										
			20.405(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(viii)(A)														
			20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)														
			20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)														
LICENSEE CONTACT FOR THIS LER (12)																									
NAME Robert C. Birchell, Compliance Section Engineer										TELEPHONE NUMBER 6 1 5 8 7 0 - 6 6 4 4															
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC															
X	LIE	CIMP1	I10715	Yes																					
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR									
YES (If yes, complete EXPECTED SUBMISSION DATE) XX NO																									

ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines) (16)

Unit 1 - Mode 1, 100 percent reactor power, 578 degrees F, 2235 psig.
Unit 2 - Mode 1, 100 percent reactor power, 578 degrees F, 2235 psig.

On June 25, 1984, the A-A auxiliary control air compressor was taken out of service for maintenance. Due to insufficient spare parts, it was not returned to service. On July 9, 1984, at 0750 CST, the B-B auxiliary control air compressor was removed from service. These compressors are not technical specification equipment but are attendant equipment for various safety systems (auxiliary feedwater being the most limiting with respect to action times). With both trains inoperable, it was determined that entry into LCO 3.0.3 should be made, and 3.0.3 was entered at 0750 CST on July 9, 1984. Power reduction to mode 3 was initiated but was stopped at 88 percent when the B-B compressor was returned to service.

There was no effect on public health or safety.

Previous occurrences - none.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Sequoyah, Unit 1	0 5 0 0 0 3 2 7	8 4	— 0 4 5	— 0 1	0 2	OF	0 2

TEXT (If more space is required, use additional NRC Form 366A's) (17)

On June 25, 1984, the A-A auxiliary control air compressor became inoperable. A broken crankshaft was found during the teardown. A spare shaft was not available in Power Stores, so a new shaft was ordered on emergency basis. On July 9, 1984, at 0750 CST with the A-A compressor still inoperable, the B-B compressor began making a knocking noise and was removed from service. The NRC Resident Inspector, during a plant walk-down, noticed both compressors out of service and notified Operations of a potential technical specification problem with both air compressors out of service. A meeting was held by plant management, and it was determined (at 1350 CST) that both units should enter LCO 3.0.3. Both units entered 3.0.3, and a late log entry of 0750 CST was made for the 3.0.3 entry time. Power reduction was initiated and continued down to 88 percent. At that point (1448 CST), the B-B auxiliary control air compressor was returned to service and 3.0.3 was exited. Parts for the A-A compressor arrived on July 10, and the compressor was returned to service on July 11, 1984.

The auxiliary control air compressors are not technical specification equipment but are attendant equipment for various safety systems. This system is designed to remain operable during a maximum probable flood, and the design basis earthquake following a service air isolation.

This system supplies air to the following safety-related equipment:

1. Control bay heating and ventilation system
2. Auxiliary Building gas treatment system
3. Containment vacuum relief isolation valves
4. Emergency gas treatment system
5. Auxiliary feedwater system
6. Steam generator pressure relief valves
7. Pressurizer spray valves

Component Information

The compressors involved are Model No. 4-ESV-NL manufactured by Inger-Sol Rand. The cause of failure of the A-A compressor was unknown on the initial reporting date. A failure analysis for compressor A-A has been performed by the TVA Metallurgy Staff. The examination of the failed A-A air compressor pieces indicated that the piston and crankshaft failure resulted from an overload due to the compressor failure. It appears that the piston was stopped before completing its full stroke which broke the crankshaft and bent the connecting rod. A lubrication problem, a slug of water in the intake, or other mechanical problems could have resulted in the A-A air compressor failure, but there is insufficient information to positively identify the cause.

The B-B compressor's problem has been attributed to a broken lock-tab washer which allowed a locknut to back off. The piston rod then became disconnected from the cross-head.

Corrective Action

A review of the spare parts inventory has been performed, and the maximum/minimum levels have been adjusted to ensure adequate spare parts are available for future repairs. The Mechanical Maintenance Section has prepared a detailed maintenance instruction specifically for compressor repairs. Sequoyah's Design Services Section and Office of Engineering are continuing to investigate ways to improve compressor reliability.

TENNESSEE VALLEY AUTHORITY
Sequoyah Nuclear Plant
Post Office Box 2000
Soddy Daisy, Tennessee 37379

August 7, 1985

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

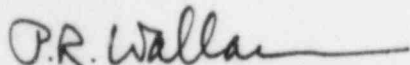
Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 1 - DOCKET NO.
50-327 - FACILITY OPERATING LICENSE DPR-77 - REPORTABLE OCCURRENCE REPORT
SQRO-50-327/84045 REVISION 1

The enclosed revised licensee event report provides additional details concerning plant operation with both auxiliary control air compressors inoperable. This event was previously reported on August 7, 1984.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



P. R. Wallace
Plant Manager

Enclosure
cc (Enclosure):

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NRC Inspector, NUC PR, Sequoyah

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