

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 0 3
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TITLE (4)
BIT Heaters Not Verified Operable Every 31 Days Due To Procedural Inadequacy

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 2	1 7	8 7	8 7	0 1 4	0 0	0 3	1 8	8 7	Sequoyah, Unit 2		0 5 0 0 0 3 2 8
											0 5 0 0 0

OPERATING MODE (9) 5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)																																															
POWER LEVEL (10) 0 0 0	20.402(b)			20.405(a)(1)(i)			20.405(a)(1)(ii)			20.405(a)(1)(iii)			20.405(a)(1)(iv)			20.405(a)(1)(v)			20.405(c)			50.73(a)(2)(iv)			50.73(a)(2)(v)			50.73(a)(2)(vii)			50.73(a)(2)(viii)(A)			50.73(a)(2)(viii)(B)			50.73(a)(2)(ix)			73.71(b)			73.71(c)			OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
							XX																																									

LICENSEE CONTACT FOR THIS LER (12)									
NAME J. D. Smith, Plant Operations Review Staff							TELEPHONE NUMBER		
							AREA CODE 6 1 5		
							8 7 0 - 6 6 7 2		

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

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)

On discovery of this condition, both units 1 and 2 were in mode 5 at zero percent power. As a part of the continuing surveillance instruction (SI) review program it has been determined that SI-16 has not fully implemented Technical Specification (TS) Surveillance Requirement (SR) 4.5.4.2.a. More specifically, the boron injection tank (BIT) heaters were not verified operable every 31 days by energizing each heat tracing channel. No immediate actions were required as the BIT and its heat tracing are not required while in mode 5. In addition, daily performance of SI-3 as required by TS SRs 4.5.4.2.b and 4.5.4.1.c ensure that a minimum temperature of 145 degrees F is maintained in the BIT and its associated flow paths. Thus, a high degree of confidence exists that the heaters were operable. This procedural inadequacy is applicable to both units 1 and 2 and is reportable in accordance with 10 CFR 50.73.a.2.i.B. SI-16 is being revised to include the BIT heaters in the surveillance.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		— 0 1 4	— 0 0	0 2	OF	0 3

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

DESCRIPTION OF EVENT

On discovery of this condition on February 17, 1987, unit 1 was in mode 5 (0 percent power, atmospheric pressure, 115 degrees F), and unit 2 was in mode 5 (0 percent power, 250 psig, 140 degrees F).

As a part of the continuing surveillance instruction (SI) review program at the Sequoyah Nuclear Plant (SQN), it has been determined that SI-16, "BIT Heat Tracing," has not fully implemented Technical Specification (TS) Surveillance Requirement (SR) 4.5.4.2.a. More specifically, the boron injection tank (BIT) redundant tank heaters have not been verified operable every 31 days by energizing each heat tracing (EIIS System FE) channel. The associated flow paths heat tracing has been verified by energization of each heat tracing channel. However, the BIT heaters had not previously been considered as a part of the heat trace circuitry and, therefore, were not included within the SI.

A revision has been submitted to SI-16 to include surveillance of the BIT heaters. SI-16 is applicable to both units 1 and 2. No immediate actions were required as the BIT and its associated heat tracing and heaters are not required while in mode 5.

CAUSE OF EVENT

The root cause for this condition has been determined to be a procedural inadequacy. This procedural inadequacy was due to a misunderstanding because the heat source on the BIT was labeled "heaters" and was therefore not considered as "heat tracing." However, TS 3.5.4.2 indicates that this heat source should be considered within the scope of the SR.

ANALYSIS OF EVENT

This procedural inadequacy resulted in operation prohibited by TSs and is reportable in accordance with 10 CFR 50.73, paragraph a.2.i.B for both units 1 and 2.

The purpose of the heat tracing and heaters is to maintain the 12 weight percent concentrated boric acid solution at a temperature in excess of its solubility limit (135 degrees F at a nominal 12 weight percent concentration of 21,000 ppm boron). If this temperature is not maintained, the solution may crystallize and thus become unavailable for injection. In addition, the crystals may block the high head injection system (EIIS System BQ) flow path making it unavailable for core cooling and reactivity control. However, SI-3, "Daily, Weekly, and Monthly Logs," ensures that TS SR 4.5.4.2.b and 4.5.4.1.c is completed every 24 hours. These SRs require that the BIT and its associated flow paths have a minimum temperature of 145 degrees F, and that this temperature is verified every 24 hours. In addition, the BIT associated flow paths heat tracing has been verified operable by SI-16 by energization of each heat tracing channel.

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

The verification of this minimum temperature every 24 hours provides a high degree of assurance that the BIT heaters have been operable. Thus there was no undue threat on the health and safety of the general public or site personnel.

CORRECTIVE ACTION

SI-16 is being revised to include the BIT heaters in the surveillance before unit 2 restart.

The SI review program should identify other errors of this nature.

ADDITIONAL INFORMATION

Previous reports as a result of findings from the current SI review program - 18 - SQRO-50-327/86011, 86013, 86028, 86030, 86035, 86039, 86040, 86042, 86044, 86050, 87002, 87004, 87006, 87007, 87008, and SQRO-50-328/86006, 86007, and 87002.

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TENNESSEE VALLEY AUTHORITY
Sequoyah Nuclear Plant
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March 20, 1987

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

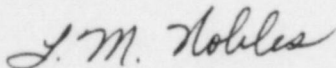
Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 1 - DOCKET NO.
20-327 - FACILITY OPERATING LICENSE DPR-77 - REPORTABLE OCCURRENCE REPORT
SQRO-50-327/87014

The enclosed licensee event report provides details concerning BIT heaters which were not verified operable every 31 days due to a procedural inadequacy. This event is reported in accordance with 10 CFR 50.73, paragraph a.2.i.B.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Nobles
Acting Plant Manager

Enclosure
cc (Enclosure):

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