

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) Number 3 Cold Leg Accumulator Boron Concentration																					
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 NAME			DOCKET NUMBER(S)									
01	09	84	84	005	00	02	06	84				0 5 0 0 0									
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)																					
OPERATING MODE (9)		1		20.402(b)		20.406(c)		50.73(a)(2)(iv)		73.71(b)											
POWER LEVEL (10)		01415		20.406(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)											
				20.406(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vi)		OTHER (Specify in Abstract below and in Text, NRC Form 366A)											
				20.406(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(vii)(A)													
				20.406(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(vii)(B)													
				20.406(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(viii)													
LICENSEE CONTACT FOR THIS LER (12)																					
NAME Glenn B. Kirk, Compliance Engineer								TELEPHONE NUMBER 615 870-6146													
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											
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR							
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO											

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

The number 3 cold leg accumulator was declared inoperable when boron samples indicated the boron concentration of the accumulator was approximately 2130 to 2150 ppm. This event required entry, at 0045 CST on 01/09/84, into LCO 3.5.1.1 which requires the boron concentration be maintained between 1900 and 2100 ppm. The unit was subsequently shut down when the boron concentration in the accumulator could not be restored to the allowable range within the required action time.

The number 3 cold leg accumulator was partially drained and diluted with lower boron concentrated water from the refueling water storage tank. The boron concentration in the accumulator was returned within the allowable range at 0748 CST on 01/09/84.

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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 0 5	— 0 0	0 2	OF	0 2

TEXT (If more space is required, use additional NRC Form 365A's) (17)

With unit 1 in mode 1 (2235 psig and 561 degrees F) at 45% reactor power, the number 3 cold leg accumulator was declared inoperable at 0045 CST on 01/09/84. Analysis of boron samples had indicated the accumulator boron concentration was approximately 2130 to 2150 ppm. LCO 3.5.1.1 requires that the boron concentration in the accumulator be maintained between 1900 and 2100 ppm. Action statement 'a' of LCO 3.5.1.1 was entered which required restoring the boron concentration to the required range within one hour or, otherwise, placing the unit in mode 3 (hot standby) within the next six hours.

The accumulator was partially drained three times and refilled each time with refueling water storage tank water which had a boron concentration of approximately 2070 ppm. At 0632 CST, samples indicated a boron concentration in the accumulator of approximately 2115 ppm and power reduction was initiated from 45% power to place unit 1 in mode 3. Unit 1 entered mode 3 at 0741 CST. The accumulator boron concentration was within the required range at 0748 CST with 2086 ppm.

The cold leg accumulators are a part of the emergency core cooling system (ECCS) and are designed to inject borated water into the reactor coolant system (RCS) in the event the RCS pressure drops to approximately 400 psig during a large break LOCA. The basis for the required boron concentration range is to ensure that the water which would be recirculated inside containment following the LOCA will have a pH value which will minimize the evolution of iodine and minimize the effect of chloride and caustic stress corrosion on mechanical systems and components.

All other ECCS equipment was operable during the condition. There was no effect on public health or safety.

An investigation did not reveal a known cause for the high boron concentration in the number three cold leg accumulator. This event has been considered an isolated event and no additional action will be taken unless the condition recurs.

Previous occurrences - none.

TENNESSEE VALLEY AUTHORITY

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

February 6, 1984

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-50-327/84005

The enclosed licensee event report provides details concerning high boron concentration in the number three cold leg accumulator. This event is reported in accordance with 10 CFR 50.73, paragraph a.2.i.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



C. C. Mason
Power Plant Superintendent

Enclosure
cc (Enclosure):

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NRC Inspector, NUC FR, Sequoyah