

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

Sequoyah, Unit 2

DOCKET NUMBER (2)

0 5 0 0 0 3 2 8 1 OF 0 2

PAGE (3)

TITLE (4)

Reactor Trip

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)						
1	2	9	8	4	8	4	0	2	1	0	5	0	0	0		
1	2	9	8	4	8	4	0	2	1	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)	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
1			X	
POWER LEVEL (10)	20.405(a)(1)(i)	50.38(c)(1)	50.73(a)(2)(v)	73.71(c)
0	20.405(a)(1)(ii)	1	50.73(a)(2)(vi)	
1	20.405(a)(1)(iii)	2	50.73(a)(2)(vii)	
6	20.405(a)(1)(iv)	3	50.73(a)(2)(viii)(A)	
	20.405(a)(1)(v)	4	50.73(a)(2)(viii)(B)	
		5	50.73(a)(2)(ix)	

OTHER (Specify in Abstract below and in Text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Heyward R. Rogers, Compliance Engineer	6115 817101-16151418

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	X				

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

During a load reduction to perform a main turbine overspeed test, a reactor trip occurred at 1532 CST on December 29, 1984, on loop 4 low-low steam generator water level. All systems operated as expected and there was no effect on public health and safety.

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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 2	0 5 0 0 0 3 2 8	8	4	0 2 1	0	0	2 OF 0 2

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

On December 29, 1984, with unit 2 at 18 percent power, preparations were being made to reduce load to perform a main turbine overspeed test. While reducing power, the unit tripped from 16 percent power at 1532 CST on December 29, 1984, on low-low water level in steam generator number four. All reactor protection and engineered safeguard systems performed as designed and there were no abnormal conditions subsequent to the trip.

In accordance with System Operating Instruction SOI-47.2, "Main Turbine Overspeed And Oil System Test," a turbine overspeed test was to be performed subsequent to starting up following a recent refueling outage. While backing off on turbine load prior to the overspeed test, the Balance of Plant (BOP) operator was using both the main feedwater regulator and bypass regulator valves to control steam generator water level. At the time of the trip, loops one and two were on the bypass valves with the main valves fully closed, and loops three and four were using both sets of valves to maintain steam generator levels. As load reduced, loops three and four main regulator valves were placed in manual and slowly closed, allowing the automated bypass valves to open. On loop four, however, the operator closed the main valve too fast and the automatic bypass valve could not respond in sufficient time to supply needed flow to the steam generator. Subsequent operator action of reopening the main valves failed to maintain level, and the unit tripped on loop four steam generator low-low level.

Prior to the recent refueling outage, several reactor trips have occurred due to operator errors in controlling steam generator level at low power levels when operating on the feedwater bypass regulator valves. These valves were manually controlled by the operator using steam generator level indication on the main control board and, due to sudden variations in level from shrink and swell in level due to overfeeding or under-feeding, control was difficult. To reduce low power level reactor trips, modifications were made to the unit 2 bypass regulator valve controller to allow for automatic control of the valves based on feedback of steam generator level. Presently, at low power levels, the automatic bypass valves control steam generator level at 33 percent. During the swapover from the bypass valves to the main regulator valves, the operator slowly opens the main valves using manual controls, and the bypass valves will automatically start to close to maintain a constant steam generator level. When the operator has actual level and setpoint level matching and steady with main valves partially open, he can go to automatic with the main valve controller. This will allow for the operator to go to manual on the bypass valves and close them. A similar reverse order process is used when reducing load at low power levels.

Operations personnel stated that valves seemed sluggish during operation and requested Mechanical Maintenance personnel to lubricate the stems. The valve stem seats were repacked during the recent refueling, and the tight packing caused the valves to be sluggish. Also, Instrument Maintenance fine-tuned the bypass valve controller to improve its automatic capability.

Operations personnel have only had the unit 2 start up following recent refueling activities to use this new system. As operators become more accustomed to using the system, it is expected that low power level trips due to operator error on controlling steam generator level will be eliminated.

Post trip evaluations were made by Operations personnel and the Shift Technical Advisor and no abnormalities were noted. The unit was evaluated to be safe for restart and the unit returned to critical at 00:19 CST on December 30, 1984. There was no effect upon public health and safety.

TENNESSEE VALLEY AUTHORITY

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

January 28, 1985

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

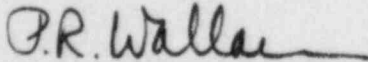
Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 2 - DOCKET NO.  
50-328 - FACILITY OPERATING LICENSE DPR-79 - REPORTABLE OCCURRENCE REPORT  
SQRO-50-328/84021

The enclosed licensee event report provides details concerning a reactor trip on December 29, 1984, from low-low-steam generator water level. This event is reported in accordance with 10 CFR 50.73, paragraph a.2.iv.

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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