

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 2
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TITLE (4)  
Reactor Trip Due to Loss of Relay Rack

EVENT DATE (6)			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 8	2 7	8 4	8 4	0 5 4		0 9	2 6	8 4			0 5 0 0 0
											0 5 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)

OPERATING MODE (8) 1	20.402(b)	20.406(e)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 1100	20.406(a)(1)(i)	50.36(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	73.71(e)
	20.406(a)(1)(ii)	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.406(a)(1)(iii)	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)	
	20.406(a)(1)(iv)	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(vii)(B)	
	20.406(a)(1)(v)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Heyward R. Rogers, Compliance Section Engineer	TELEPHONE NUMBER
	AREA CODE: 6 1 5 8 7 0   -16 1 4 16

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

At 2033 CST on 8/27/84, at 100% power, SQNP Unit 1 experienced a reactor trip and turbine trip initiated from the steam flow-feed flow mismatch coincident with low steam generator level. Operations personnel complied with AOI-1, "Reactor Trip", and stabilized the unit in mode 3, hot standby, immediately after the trip. Simultaneous with the trip, reactor coolant system pressure channel PI-68-66 failed low. Prior to the trip all vital plant parameters were normal with no indication of steam flow-feed flow deviations or abnormal steam generator levels. Preliminary investigation revealed that the trip was actuated when instrumentation relay rack 1-R-15 experienced a loss of power. The relay rack breaker was reset and the trip cleared.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

With unit 1 operating at 100% reactor power (2235 psig and 578° F) a reactor trip occurred at 2033 CST on 08/27/84. Plant parameters prior to the event indicated all systems to be normal when the inadvertent automatic reactor trip-turbine trip occurred. The trip was initiated (first-out) by the steam flow-feed flow mismatch coincident with low steam generator level in loop 1. Upon the trip all reactor protection systems actuated properly with all rods inserting and turbine stop valves closing. Operations complied with AOI-1, "Reactor Trip," and stabilized the plant in hot standby (mode 3). At the time of the trip RCS pressure channel PI-68-61 failed low.

An investigation into the cause of the initiating trip signal revealed that instrument relay rack 1-R-15 breaker tripped resulting in SG #1 Main Feedwater Regulator Valve closing, which initiated a flow mismatch in conjunction with low level reactor trip. The loss of the rack also resulted in the loss of RCS pressure channel 1-PI-68-66, automatic makeup to the volume control tank (initiated automatic switch over to the RWST); automatic pressurizer heaters for A, B, and C heaters; and the VCT divert valve failed to open to the hold-up tank on demand.

The opening of the relay rack breaker was due to a blown fuse in the rack for a pressurizer channel bistable (1-LS-68-335 D/E). The fuse is designed to open for this particular circuit without adverse effect on the entire relay rack. A comparison of the current versus time curves for the fuse and the 5 amp magnetic breaker for 1-R-15 (manufactured by Airpax, Model APL-1111-1-61-502) showed an overlap of current-carrying properties. This is believed to be the reason for the simultaneous opening of the breaker and the fuse.

An examination by TVA and Bussman Fuse Company indicate that the slow-blow type MDX-2, 2 amp fuse opened due to excessive current flow. However, after extensive trouble-shooting of the relay rack and fuse wiring paths, there were no indications of faults or defects which might have caused the excessive current loading.

A review is being made by our design personnel concerning the overlapping current-carrying properties of this fuse type versus this magnetic breaker.

Resetting of the relay rack breaker restored power to all plant components and/or functions lost due to the loss of power to the rack. After the previously noted troubleshooting, the 2 amp fuse for the pressurizer level circuit was replaced and verified operable.

An evaluation of component and system operations that occurred during this event and after repairs was performed and it was determined that the unit was safe for restart. There was no effect on health and safety of the public and there were no previous occurrences.

TENNESSEE VALLEY AUTHORITY

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

September 26, 1984

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

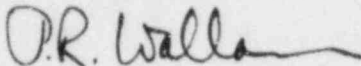
Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 1 - DOCKET NO.  
50-327 - FACILITY OPERATING LICENSE DPR-77 - REPORTABLE OCCURRENCE REPORT  
SQRO-50-327/84054

The enclosed licensee event report provides details concerning the inadvertent reactor trip on August 27, 1984, due to the loss of an instrument relay rack. 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):

James P. O'Reilly, Director  
U.S. Nuclear Regulatory Commission  
Suite 2900  
101 Marietta Street, NW  
Atlanta, Georgia 30323

Records Center  
Institute of Nuclear Power Operations  
Suite 1500  
1100 Circle 75 Parkway  
Atlanta, Georgia 30339

NRC Inspector, NUC PR, Sequoyah

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