

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Sequoyah, Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 2 8				PAGE (3) 1 OF 2		
TITLE (4) Reactor and Generator Trip on Neutral Overvoltage																
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 9	0 9	8 4	8 4	0 1 6	0 0	1 0	0 9	8 4					0 5 0 0 0			
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)														
1		20.402(b)				20.405(c)				<input checked="" type="checkbox"/> 50.73(a)(2)(iv)		73.71(b)				
POWER LEVEL (10)		20.405(a)(1)(i)				50.36(c)(1)				50.73(a)(2)(v)		73.71(c)				
0 9 1 7		20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vii)		OTHER (Specify in Abstract below and in Text, NRC Form 365A)				
		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 Glenn E. Duggin, Compliance Section Engineer										TELEPHONE NUMBER 6 1 5 8 7 0 - 6 1 4 6						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																
CAUSE	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NPDs		CAUSE	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NPDs						
X	E I L	- I I N S W	1 2 1	NO												
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)												<input checked="" type="checkbox"/> NO				
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																

A reactor trip occurred due to a turbine trip which was caused by the generator neutral overvoltage relay actuating. The relay operation was verified as valid, and a megger test of the generator, isolated phase bus, and main and unit station service transformers indicated a ground on the system. The ground was found to be caused by a neoprene gasket/isolating strip that had fallen down onto the isolated phase (IPB). All the strips in the IPB were inspected, removed, and reinstalled with RTV as an adhesive. A preventative maintenance program is being implemented to inspect the isolated phase bus at each refueling outage. The unit stabilized at 547 degrees F following the reactor trip.

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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 1 6	—	0 0	0 2	OF 0 2

TEXT (If more space is required, use additional NRC Form 368A's) (17)

On September 9, 1984 at 0803C the main generator neutral overvoltage relay operated, which tripped the turbine and then the reactor while the unit was operating at 97 percent power (mode 1, 2238 psig, 578 degrees F). The unit stabilized at 547 degrees after the event. All automatic actions were verified and immediate operator actions performed.

A grounded condition existed which caused the neutral overvoltage relay to operate. To find the ground it was necessary to break the generator, isolated phase bus (IPB), and main and unit station service transformers into components. The relay, unit station service transformers and the generator meggered good; therefore, the ground was on the IPB of the main transformers. To isolate the main transformers, the doghouses on each transformer were opened and the shunts to the low side bushings were removed. When the B phase doghouse was opened, a neoprene gasket/isolating strip was found laying at the end of the IPB enclosure at the X-1 bushings. This gasket was causing the grounded condition.

An inspection was made of all other gasket/isolating strips (six total) and none were found dislodged or grounding the IPB. It was noted that the gasket/isolating strips did not fit well between the IPB and the doghouse and most of the free ends of the strips (at the joints) were located at the 12 o'clock position where they could fall on the bus if not secured.

The system was reassembled, meggered acceptably, and returned to service. All strips were removed and reinstalled with RTV as an adhesive. All joints where strips join were located at the 6 o'clock position and all doghouse covers were resealed with RTV. A preventative maintenance program has been written to inspect and clean the isolated phase bus at each refueling outage. The transformers are suspected of settling, causing the poor gasket fit. A program has been instituted to determine the settling rate and corrective action. These corrective actions were implemented for both units.

Immediately after the above discussed reactor trip, a level control valve (LCV), 3-175, to the turbine driven auxiliary feedwater pump (TDAFWP) was discovered to be showing both the red and green lights. (The valve was verified to be closed locally.) The operator determined the problem to be a limit switch failure and declared the TDAFWP inoperable at 0810C on 09/09/84. Investigation revealed that the limit switch (position indicating) actuation arm was loose. The loose arm allowed the valve to change positions without actuating the position indicating limit switch. The loose arm was tightened, the valve functionally tested, and the valve was proved operable at 2300C on 09/10/84 while unit 2 was in mode 3 (0 percent power, 2235 psig, 546 degrees F). The arm had probably vibrated loose during normal operation.

There was no effect on public health or safety, and no safety margins were exceeded.

Previous occurrences: one - SQRO-50-327/84036.

TENNESSEE VALLEY AUTHORITY

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

October 9, 1984

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

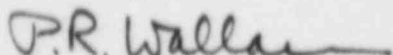
Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 2 - DOCKET NO.
50-328 - FACILITY OPERATING LICENSE DPR-79 - REPORTABLE OCCURRENCE REPORT
SQRO-50-328/84016

The enclosed licensee event report provides details concerning the reactor and generator trip due to the actuation of the generator neutral overvoltage alarm. 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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