

TENNESSEE VALLEY AUTHORITY

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December 6, 1990

U.S. Nuclear Regulatory Commission
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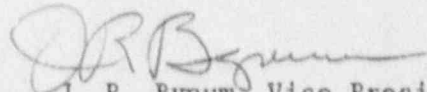
Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 1 - DOCKET NO.
50-327 - FACILITY OPERATING LICENSE DPR-77 - LICENSEE EVENT REPORT (LER)
50-327/90028

The enclosed LER provides details concerning an event wherein a control room isolation occurred as a result of a main control room air intake radiation monitor actuation from an indeterminate source. This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv).

Very truly yours,

TENNESSEE VALLEY AUTHORITY



J. R. Bynum, Vice President
Nuclear Operations

Enclosure
cc (Enclosure):

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Sequoyah Nuclear Plant, Unit 1 DOCKET NUMBER (2) | PAGE (3)
0500031271003

TITLE (4) A main control room isolation occurred as a result of a spurious signal from an indeterminate source

EVENT DAY (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)			
MONTH	DAY	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES			DOCKET NUMBER(S)	
11	06	90	028	0	11	06	90	Sequoyah, Unit 2			050003128	
OPERATING MODE (9) THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following)(11)												
11 06 90			20.402(b)			XX 50.73(a)(2)(iv)			73.71(b)			
POWER LEVEL (10) 11 06 90			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)			73.71(c)
			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii)			OTHER (Specify in
			20.405(a)(1)(iii)			50.73(a)(2)(i)			50.73(a)(2)(viii)(A)			Abstract below and in
			20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(B)			Text, NRC Form 366A)
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(x)			

LICENSEE CONTACT FOR THIS LER (12)

NAME Melissa D. Meade, Compliance Licensing TELEPHONE NUMBER 615843-7766

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)

YES (IF YES, COMPLETE EXPECTED SUBMISSION DATE) | X | NO | EXPECTED SUBMISSION DATE (15) | | | |

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

At 1910 Eastern standard time on November 6, 1990, with Unit 1 in Mode 1, 100 percent power, and Unit 2 in Mode 5, an A train control room isolation occurred because of a spurious signal on the control room air intake Radiation Monitor (RM) 0-RM-90-125. Radiological Control surveyed the area and found no abnormal radiation levels. Operations then returned the control room emergency ventilation system to normal. No problems on the RM were discovered during the subsequent troubleshooting. The chart recorder for the redundant B train RM (0-90-126) showed no radiation increase. The root cause of this event is indeterminate. The probable cause is electro-magnetic interference (EMI) from an undetermined source. Operations' logs were reviewed for work in progress, and no activities were discovered that could have induced the EMI. As a corrective measure, the cables for these RMs were wrapped with EMI shielding tape. TVA will evaluate other RMs that have had spurious signals above their setpoint in the past because of spikes and noise to determine if EMI shielding tape should be installed.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Sequoyah Nuclear Plant Unit 1		1990	028	00	2 of 3

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

DESCRIPTION OF EVENT

At 1910 Eastern standard time (EST) on November 6, 1990, with Unit 1 in Mode 1 (100 percent power, 2,235 pounds per square inch gauge [psig], and 578 degrees Fahrenheit [F]) and Unit 2 in Mode 5 (0 percent power, 3 psig, and 130 degrees F), an A train control room isolation (CRI) occurred because of a spurious signal on control room air intake Radiation Monitor (RM) O-RM-90-125 above its setpoint. Operations notified Radiological Control to obtain an air sample to determine if an actual high radiation condition existed. Operations' personnel verified a total A train isolation according to System Operating Instruction 30.1B, "Isolation of the Control Room Heating, Air Conditioning, and Ventilation System." The Radiological Control samples verified zero activity in the main control room (MCR). The control room emergency ventilation system (CREVS) was returned to normal at 2234 EST. The RM was blocked for troubleshooting, and the action statement for Limiting Condition for Operation (LCO) 3.7.7 was entered at 2236 EST. Troubleshooting revealed no problems on the RMs. Investigation included checking wire terminals for tightness and good crimps, starting and stopping the chart recorder drive motor, activating and deactivating all switches, and starting and stopping the pump motor. Sources of spiking problems have previously been identified by these troubleshooting techniques. However, no problems were discovered. The RM was then returned to service, and LCO 3.7.7 was exited at 1128 EST on November 7, 1990. The chart recorder paper for the redundant B train RM O-RM-90-126 was checked, and no increase was indicated at the time of the A train CRI. This RM was also verified to be functioning properly.

CAUSE OF EVENT

The cause of this event is indeterminate. The probable cause of this event is electro-magnetic interference (EMI) from an undetermined source. Operations' logs and work request history were reviewed to identify ongoing work that could have generated the EMI. No potential activities were discovered.

ANALYSIS OF EVENT

This event is being reported under 10 CFR 50.73(a)(2)(iv) as an automatic engineered safety feature actuation.

The CREVS is designed to maintain control room temperature and humidity to ensure reliability of equipment and instrumentation and allow for constant occupancy of the MCR. It also maintains a positive pressure relative to outdoors and adjacent buildings to minimize air inleakage during an accident. There are two redundant trains--Train A and Train B. RM O-RM-90-125 is the Train A RM on the control room air intake. When the radiation signal increased above its setpoint, a CRI was initiated to protect the MCR from contamination. Therefore, it fulfilled its design function. Because no actual high radiation condition existed, there was no adverse effect on the health and safety of the public by this event.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)		
		YEAR	NUMBER	REVISION NUMBER				
Sequoyah Nuclear Plant Unit 1	0500032790	0	2	8	0	0	0	3 OF 3

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

CORRECTIVE ACTION

After the high radiation signal was determined to be spurious, the CREVS was returned to normal. As a corrective measure to prevent future EMI-induced CRIs, the detector cables were wrapped with EMI shielding tape. TVA will perform an evaluation of other RMs that have had spurious signals above their setpoint in the past because of spikes or noise to determine if EMI shielding tape should be installed. This evaluation will be completed by February 14, 1991. Installation of the EMI tape on the RMs determined to need shielding will be completed for the appropriate RMs by March 1, 1991.

ADDITIONAL INFORMATION

There have been two previous CRIs caused by EMI (50-327/84004 and 50-327/87043). The interference in both of these events was caused by actuations of the flow switches in the RM. During troubleshooting, actuation of these switches did not reproduce the interference observed in this event; therefore, they are considered unrelated occurrences.

COMMITMENTS

1. TVA will perform an evaluation of other RMs that have tripped in the past because of spikes or noise to determine if EMI shielding tape should be installed. This evaluation will be completed by February 14, 1991.
2. Installation of the EMI tape on the RMs determined to need shielding will be completed for the appropriate RMs by March 1, 1991.

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