TENNESSEE VALLEY AUTHORITY

6N 38A Lookout Place
January 16, 1990

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-327 - FACILITY OPERATING LICENSE DPR-77 - LICENSEE EVENT REPORT (LER) 50-327/89034

The enclosed LER provides details of an event wherein an increased airborne activity level in the auxiliary building resulted in suspension of the hourly fire watch patrol and subsequent noncompliance with Technical Specification 3.7.12. This event is being reported in accordance with 10 CFR 50.73, paragraph a.2.i.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. R. Bynum, Vice President
Nuclear Power Production

Enclosure
cc (Enclosure):
Regional Administration
U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region II
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Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
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NRC Resident Inspector
Sequoyah Nuclear Plant
2600 Igou Ferry Road
Soddy Daisy, Tennessee 37379

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NRC FORM 366 (6-89) | U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Sequoyah Nuclear Plant, Unit 1	0 5 0 0 0 3 2 7	1 OF 0 3

TITLE (4): Increased airborne activity in the auxiliary building resulted in the suspension of fire watch patrols and subsequent noncompliance with Technical Specifications 3.7.12.

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)
									Sequoyah, Unit 2	0 5 0 0 0 3 2 8
1 2	1 5	8 9	8 9	0 3 4	0 0	0 1	1 6	9 0		0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		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 Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	XX 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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Geoffrey Hipp, Compliance Licensing Engineer	AREA CODE 6 1 5 8 3 - 7 7 6 6

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

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

At 1533 Eastern standard time (EST) on December 15, 1989, with Unit 1 at 100 percent power and Unit 2 at 80 percent power, the hourly fire watch patrol through the auxiliary building could not be completed because of increased levels of airborne radioactivity. At 1430 EST a leak was identified from a fitting on a Unit 1 volume control tank (VCT) level transmitter. At 1500 EST entry into the auxiliary building was restricted, and at 1525 EST, the auxiliary building was evacuated. As a result, the fire watch patrol was not allowed to enter the auxiliary building for the hourly rounds required by Action Statement (a) of Limiting Condition for Operation 3.7.12. Personnel were allowed to return to the auxiliary building at 1800 EST when air samples showed airborne activity had returned to an acceptable level, and the hourly fire watch patrol was resumed. The root cause of this event was the VCT level transmitter leak, which was the source of the airborne activity. The corrective action taken to eliminate the source of the airborne activity was to isolate the VCT level transmitter and tighten the leaking fitting. A work request was written to replace the fitting.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Sequoyah Nuclear Plant, Unit 1	0 5 0 0 0 3 2 7	8 9	— 0 3 4	— 0 0	0 2 OF 0 3

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

Description of Event

At 1533 Eastern standard time (EST) on December 15, 1989, with Unit 1 in Mode 1 at 100 percent power, 2,235 pounds per square inch gauge (psig), 578 degrees Fahrenheit (F), and Unit 2 in Mode 1 at 80 percent power, 2,235 psig, 568 degrees F, the hourly fire watch patrol through the auxiliary building (EIIS Code NF) could not be completed because of increased levels of airborne radioactivity. Higher than normal dose rates were first detected at 1415 EST in the Unit 1 Elevation 690 penetration room. At 1430 EST a leak was identified from a sample cap fitting on a Unit 1 volume control tank (VCT) level transmitter (1-LT-62-129A). The VCT is a holding and processing tank for the chemical and volume control system (EIIS Code CB). The Unit 1 operator was notified of the leak, and arrangements were made for instrument mechanics to isolate the level transmitter. At 1500 EST entry into the auxiliary building was restricted, and at 1525 EST the auxiliary building was evacuated. As a result, the fire watch patrol was not allowed to enter the auxiliary building for the hourly rounds as required by Limiting Condition for Operations (LCO) 3.7.12. The VCT level transmitter was isolated, and the leaking fitting tightened. A work request has been written to replace the fitting. The appropriate radiological surveys were made, and air samples were taken and analyzed. Personnel were allowed to reenter the auxiliary building at 1800 EST, and the hourly fire watch patrol was resumed.

Cause of Event

The immediate cause of this event was the failure to complete the required hourly fire patrol because of an increase in the level of airborne radioactivity in the auxiliary building. This condition represented an ALARA (as low as reasonably achievable) concern and access to the area had been restricted.

The root cause of this event was the VCT level transmitter fitting leak that was the source of the airborne activity. The threads on the fitting had deteriorated or been damaged causing the sample cap to leak.

Analysis of Event

This event is being reported in accordance with 10 CFR 50.73, paragraph a.2.i, as an operation prohibited by technical specifications because the action requirements of LCO 3.7.12 were not met.

The hourly fire watch patrol was being performed as required by Action Statement (a) of LCO 3.7.12 because of nonfunctioning fire barriers and as required by commitments to maintain hourly fire watches until certain Appendix R modifications are completed during the Cycle 4 refueling outage for each unit. Although the auxiliary building was not visually inspected for fires during the interval from 1533 to 1800 EST, automatic fire detectors and fire suppression systems were in service and operable during this time. Therefore, there was no significant degradation in the overall level of fire protection at the plant.

Corrective Action

The immediate action taken was to restrict entry to and subsequently evacuate the auxiliary building as a conservative protective action. The corrective action taken to eliminate the source of the airborne activity was to isolate the VCT level transmitter and tighten the leaking fitting. A work request has been written to replace the fitting. Personnel were allowed to return to the auxiliary building when air samples showed airborne activity had returned to an acceptable level.

Additional Information

There have been 36 previous reported occurrences of a failure to perform required fire watch patrols; however, only three of these occurrences were caused by personnel access restrictions resulting from high airborne activity levels. These three occurrences are detailed in LER 50-327/88028, 88031, and Special Report 88-11. Because this airborne event resulted from unexpected equipment degradation, corrective actions for previous events could not be expected to have prevented this event.

Commitments

None.

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