TENNESSEE VALLEY AUTHORITY Sequoyah Nuclear Plant Post Office Box 2000 Soddy-Daisy, Tennessee 37379

April 28, 1988

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

Gentlemen:

TENNLSSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-327 - FACILITY OPERATING LICENSE DPR-77 - REPORTABLE OCCURRENCE REPORT SQR0-50-327/86022 REVISION 1

The enclosed licensee event report is being revised to update the corrective action section to accurately reflect the recurrence control. This event was previously reported in accordance with 10 CFR 50.73, paragraph a.2.iv, on June 13, 1986.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

S. J. Smith Plant Manager

Enclosure cc (Enclosure):

> J. Nelson Grace, Regional Administrator 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, Sequoyah Nuclear Plant

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RC Form 366 (83)	n 366 LICENSEE EVENT REPORT (LER)				(LER)	U.S. NUCLEAR REGULATORY COMMISSION APPROVED OMB NO. 3150-0104 EXPIRES 8/31/88						
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U.S. NUCLEAR REGULATORY COMMISSION APPROVED OMB NO. 3150-0104

EXPIRES 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)	PAGE (3)	
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DESCRIPTION OF EVENT

IRC Form 364A

This LER is being revised to update the corrective action section to accurately reflect the recurrence control.

During these occurrences, unit 1 was in mode 5 (0 percent power, 270 psig, 119 degrees F) and unit 2 was in mode 5 (0 percent power, 40 psig, 107 degrees F).

At 1040 CST on May 15, 1986, an inadvertent containment ventilation isolation (CVI) occurred on unit 1 while placing the containment purge system in service for the unit 1 Containment Building. The train "A" radiation monitor (RM) for the purge air system (1-RM-90-131) spiked causing the CVI. The spike was caused by electromagnetic interference (EMI) generated by switch chatter on the RM. The switch is for the low-flow and high-vacuum alarms which had actuated in the main control room (MCR) shortly before the CVI occurred. An assistant unit operator (AUO) near the RM when the CVI occurred was sent to investigate the RM alarm. The switch was probably very close to the actuation setpoint after the purge system was actuated because of the extra air flow which would cause more vacuum in the RM sample line than normal. The time-delay relay was found to be 2.2 seconds, and it should have been 3.0 seconds, but this should not have been a major factor in this event.

At 0356 CST on May 15, 1986, another CVI occurred; however, this occurrence was on unit 2. The containment lower compartment RM (2-RM-90-106) was experiencing spikes from welding noise and had been blocked from actuating by the common block switch. In order to work the maintenance request (MR) for 1-RM-90-131, which had just caused a CVI (described above), it was necessary to move the common block switch to prevent another CVI. The determination was made to remove the power from 2-RM-90-106 to avoid an inadvertent CVI when it was unblocked. The personnel involved did not realize that when the RM channels fail on loss of power, they fail in the safe direction and actuate the CVI. When the common block switch was moved away from the 2-RM-90-106 position, a CVI occurred on unit 2.

When a CVI occurs, twenty valves intomatically actuate to provide double isolation to the following systems as they pass through the containment wall; the lower compartment purge air supply and exhaust, the upper compartment purge air supply and exhaust, instrument room purge air supply and exhaust, and the lower compartment pressure relief. The applicable motors are also stopped. The RMs also isolate on a CVI signal. All of the above actions were completed correctly as designed during both CVIs. No radiation levels above normal were discovered during either event on any containment RMs. The CVIs were reset, and all systems were returned to normal. All applicable personnel responded immediately and appropriately to both occurrences and took adequate corrective actions.

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U.S. NUCLEAR REGULATORY COMMISSION APPROVED DME NO 3150-0104

EXPIRES: 8/31/88

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CAUSE OF EVENT

RC Form 366A

In the first event (1-RM-90-131), a test was performed on the RM to attempt to simulate the initiating cause of the CVI. The sample flow pump was placed under a high-vacuum condition. The high vacuum switch was tapped, and high-radiation spikes were created. The additional vacuum created when the purge system started was enough to make the switch chatter and cause an .31. A time delay is on the trip relay to help avoid spurious actuations. It was found to be out of tolerance at 2.2 seconds, and it was corrected to the $3.0\pm.5$ -second range and left at 3.2 seconds. The time delay was not a major factor in this occurrence. The inlet valve on the sample line is used to verify correct vacuum every quarter as part of Surveillance Instruction (SI)-206, "Radiation Monitoring System Sample Flow Calibrations and Functional Tests." SI-302, "Vacuum Switch and Controller Performance Check for Radiation Monitoring Gas Sample Flows (Monthly)," checks the vacuum monthly. The valve setting and the alarm setpoint were found to be in tolerance.

The second event (2-RM-90-106) was due to a personnel error. The shift engineer and an instrument mechanic conferred on how to prevent a CVI on 2-RM-90-166while moving the common block switch to 1-RM-90-131 so that a MR could be worked. They decided to pull the power to 2-RM-90-106 which caused it to fail. When they moved the common block switch, the CVI occurred.

ANALYSIS OF EVENT

A CVI is considered to be an engineered safety features (ESF) actuation, and both occurrences are reported under 10 CFR 50.73, paragraph a.2.iv.

No actual radiation levels above normal existed during either of these occurrences. The RM for the opposite train on the containment purge system did not spike or indicate any changes in radiation levels. At times in modes 5 and 6, the Containment Building is open to the Auxiliary Building (AB). The AB radiation system was operable during these occurrences. Since the AB is part of the secondary containment for both units, the consequences of a CVI would not be more severe in modes 1 through 4 than modes 5 and 6.

CORRECTIVE ACTIONS

Engineering Change Notices (ECNs) 7343 and 7344 were issued and implemented to add seal-in relays to the circuitry of the subject RMs in order to prevent spurious high radiation signals due to FMI.

NRC Form 366A	NT REPORT (LER) TEXT CONTINU	U.S. NUCLEAR RE APPROVED EXIMPES: 8/3	U.S. NUCLEAR REGULATORY COMMISSION APPROVED OMB NO. 3150-0104 EXIMPES: 5/31/88		
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Sequoyah, Unit 1 TEXT (# more space a required, use additional NRC Form 3064 () (17)

> The shift engineer was counseled on the operation of the RM and what actions would cause a CVI. A training letter has been issued to all licensed Operations personnel describing this event and what the correct actions should be in the future.

Previous occurrences - 24 - SQRO-50-327/84001, 84003, 84009, 84012, 85014, 84017, 84020, 84022, 84027, 84035, 84047, 84056, 84058, 85010, 85039, 35042, 85050, 86017, -328/84001, 84002, 84003, 84006, 84011, and 85011. This is the first CVI on unit 1 for 1986.

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