

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Sequoyah, Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 2 8 1	PAGE (3) OF 0 3
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TITLE (4) Containment Ventilation Isolation Due To Spike On Radiation Monitor

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 5	1 3	8 6	8 6	0 0 2		0 0	0 6	1 1	8 6		0 5 0 0 0

OPERATING MODE (9) 5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)												
	20.402(b)					20.406(c)					XX	50.73(a)(2)(iv)	73.71(b)
	20.406(a)(1)(i)					50.36(c)(1)						50.73(a)(2)(v)	73.71(c)
	20.406(a)(1)(ii)					50.36(c)(2)						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)						50.73(a)(2)(viii)(A)	
	20.406(a)(1)(iv)					50.73(a)(2)(ii)						50.73(a)(2)(viii)(B)	
20.406(a)(1)(v)					50.73(a)(2)(iii)						50.73(a)(2)(ix)		

LICENSEE CONTACT FOR THIS LER (12)									
NAME Heyward R. Rogers, Compliance Section Engineer								TELEPHONE NUMBER 6 1 5 8 7 0 - 6 1 4 7	

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs

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)

During testing of the control air system check valves inside containment, a containment ventilation isolation (CVI) occurred as a result of a spike on the upper containment ventilation radiation monitor. Operations personnel were performing Surveillance Instruction (SI)-166.29, "Control Air Check Valve Test During Cold Shutdown," on May 13, 1986, when in accordance with the procedure, air pressure on the nonessential air header was partially bled off causing the containment isolation valves for the radiation monitor to drift partially closed. This caused a low-flow condition to the monitor and actuated a low-flow switch in the monitor housing. Actuation of the switch caused some arcing of the contacts and electromagnetic frequency (EMF) noise which was picked up by the monitor's radiation detector as a spike. The spike was of sufficient magnitude to exceed the trip set point, resulting in the CVI.

The Operations personnel acknowledged the CVI and realigned the containment ventilation system to normal after verification that no increase in radiation existed. The event was caused by a cognitive personnel error in that during preparation of the test procedure, there was a failure to anticipate the potential of actuating a CVI on reduced or loss of air pressure from the header.

The SI will be revised to address the potential effect on equipment supplied by the air lines being tested. Personnel writing and revising SIs have been given better guidance in preparing and reviewing procedures. No further action is required.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

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Sequoyah, Unit 2	0 5 0 0 0 3 2 8	8 6	- 0 0 2	- 0 0	0 2	OF 0 3

TEXT (If more space is required, use additional NRC Form 365A's) (17)

DESCRIPTION OF EVENT

On May 13, 1986, with both units in cold shutdown (mode 5), a containment ventilation isolation (CVI) occurred during the performance of testing of the control air system check valves. The isolation occurred as a result of a low-flow condition to the upper containment radiation monitor (2-RM-90-112) when the monitor's containment isolation valves were allowed to drift partially closed during the control air check valve test. Arcing of the radiation monitor low-flow switch resulted in actuation of a high radiation signal due to electromagnetic frequency (EMF) noise from the arcing. The CVI system is an engineered safety features (ESF) system and is designed to automatically provide isolation to purge air supply and exhaust lines penetrating containment. The system also isolates the sample lines for the upper and lower containment ventilation radiation monitors. When the CVI was received, all containment ventilation dampers and valves closed as designed, and the radiation monitor alarmed in the control room. The operator verified that the high radiation signal was invalid, reset the CVI signal, and then realigned the containment ventilation penetrations.

CAUSE OF EVENT

Operations personnel were performing tests on control air check valves using Surveillance Instruction (SI)-166.29, "Control Air Check Valve Test During Cold Shutdown." The procedure requires isolation of the nonessential air supply to the Reactor Building at its penetration and verifying check valve operability by lack of flow through a vent valve upstream of the check valve. After reclosing the upstream vent valve, another vent valve downstream of the check valve is opened to verify that the test was valid by ensuring air pressure downstream of the check valve. When the downstream vent valve is opened, air pressure is partially bled off. This pressure drop allows the containment ventilation radiation isolation valves to drift partially closed. This results in a low flow to the radiation monitor and potential actuation of the flow switch. When the switch contacts close, some arcing occurs. This arcing causes EMF noise which may be sensed by the radiation detector located in the same cabinet as the flow switch. If the effect of the EMF noise is sufficient, a spike may occur on the monitor above the trip set point. When the monitor exceeds its set point, a CVI occurs.

The event is considered to have been caused by a cognitive personnel error in that when the test was written, there was a failure to anticipate the potential of actuating a CVI on reduced or loss of air pressure from the header. The procedure was prepared by the Mechanical Test Section.

ANALYSIS OF EVENT

The CVI is an ESF actuation and is reportable pursuant to 10 CFR 50.73, paragraph a.2.iv. At no time during the event were safety-related systems inoperable. Isolation of the containment ventilation equipment is conservative, and since the monitors actuated a CVI on a detector spike lasting only seconds, this provides additional assurance that had an actual increase in radiation occurred, the ESF systems would have performed their intended function. There were no radiation releases to the environment as a result of this event. Based on the above there was no effect upon the public health and safety.

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TEXT (If more space is required, use additional NRC Form 365A's) (17)

CORRECTIVE ACTION

SI-166.29 will be revised to address the potential effect on equipment supplied by the air lines being tested and to include a method of installing a temporary air supply downstream of the check valve while the header is isolated. This revision will be completed before the next performance of the tests. Personnel writing and revising SIs have been given better guidance in preparing and reviewing procedures by use of a procedural checklist. These actions should preclude recurrence of this event.

ADDITIONAL INFORMATION

This is the first occurrence of a CVI caused by testing of control air check valves and is the first CVI since December 1985 at Sequoyah Nuclear Plant.

TENNESSEE VALLEY AUTHORITY

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

June 12, 1986

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

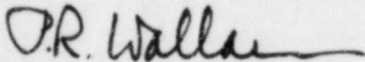
Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 2 - DOCKET NO.
50-328 - FACILITY OPERATING LICENSE DPR-79 - REPORTABLE OCCURRENCE REPORT
SQRO-50-328/86002

The enclosed licensee event report provides details concerning a containment ventilation isolation on May 13, 1986. 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):

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